

```
1 // can2 batch for speech processing
2 //
3 // Do "make" first
4 #####
5 #20191118 #20180606の再試行+修正
6 ###
7 # (0) 前処理 (データ正規化) (以前の処理と同じ)
8 ###
9 #at can2m+/can2c
10 #ln -s /media/~/sf_C_DRIVE/cdata/kurolab/data/12voicedata ~/sotu/2012/12voicedata_ueki #kurogi only
11 ###
12 (0,1)ノック作成
13 ###
14 d0=/media/sf_C_DRIVE/cdata/kurolab/data/12voicedata_ueki/12voicedata
15 d0=~/sotu/2012/12voicedata_ueki/
16 dl=~/./12voicedata_ueki_all; mkdir -p $dl
17 for d in zero ichi ni san si go roku nana hachi kyu rei yon sichi ku; do
18   ln -s $(d0)/$(dl)/.* $(dl)/
19 done
20 ###
21 (0,2)パワー正規化
22 ###
23 dn=$(dl)_n; mkdir -p $dn #save normalized speech signal
24 log=$dn/normalize.log
25 #echo "ymin=$ymin" > $log
26 ymin=0
27 for s in fms mck mko mmt mmh mym; do
28   for d in zero ichi ni san si go roku nana hachi kyu rei yon sichi ku; do
29     for i in 1 2 3 4 5 6 7 8 9 10; do
30       cmd="python speechnormalize.py -yin $(dl)/$(s)-$(d){1}.dat -yout $(dn)/$(d){1}.dat -ymin
n $ymin"
31       echo $cmd; $cmd >> $log
32 done
33 done
34 done
35 #err with
36 #python speechnormalize.py -yin ../12voicedata_ueki_all/fhs-hachi5.dat -yout ../12voicedata_ueki_all
_n/fhs-hachi5.dat -ymin 0
37 #python speechnormalize.py -yin ../12voicedata_ueki_all/mnt-san2.dat -yout ../12voicedata_ueki_all_n
/mnt-san2.dat -ymin 0
38
39 #####
40 # (1) 混合音声作成+重み付き極の作成(新しい処理)
41 #####
42 #概要: 時間がかかるのでまず動作チェックする。
43 #下のオプション -dbg 1 で+1数字+処理後デバッグモードに入る。
44 #変数のcheck (print 変数名), 次の数字の処理 (cont)等のデバッグを行う。
45 #動作チェック後、全処理 (時間がかるのでnohup(非表示でバッチ処理))
46 #研究効率のため、まず、
47 # (1-0), (1-1-1), (1-2-1), (1-3-1), (1-4-1)の順に動作チェックを一通り行う(並列では行わない)
48 # 次に
49 # (1-0), (1-1-2), (1-2-2), (1-3-2), (1-4-2)の順に全処理を行う(並列では行わない)
50 #ように行うよい、
51 #結果はすべて dr=~/./12voicedata_ueki_all_k8 の下にできる
52 #####
53 # (1-0) 環境変数設定
54 #####
55 dl=~/./12voicedata_ueki_all;
56 dr=$(dl)_k8; mkdir -p $dr #
57 df=$(dl)_f
58 R=0.8 #R=1:0.8:0.6:0.4:0.2
59
60 #####
61 # (1-1) 混合音声作成+学習+連想行列Mの保存
62 #####
63 # (1-1-1) 混合音声作成+学習+連想行列Mの保存 (動作チェック)。結果は $dr/*-M.dat
64 #####
65 python mkM.py -dr $dr -R $R -DISP 10 -ow 1 -dbg1 1
66 #####
67 # (1-1-2) 混合音声作成+学習+連想行列Mの保存 (全処理)
68 #####
69 rm nohup.out;nohup python mkM.py -dr $dr -R $R -DISP 0 -ow 1 &
70 #or nohup .. >/dev/log 2>&1 </dev/null & #rows.sh
71 #処理状況の確認
72 jobs
73 tail nohup.out
74 wc $dr/*R$(R)*-M.dat #ファイルのsize 確認
75 ls -l $dr/*R$(R)*-M.dat |wc #M.datファイルの個数確認 全部揃えば 698=700-2個
76 #####
77 # (1-2) 連想行列Mから極と係数を計算
78 #####
79 #####
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80 # (1-2-0) 連想行列Mから極と係数を計算 (理論)
81 #####
82 # Nc部分分数 C_i/(1-P_i z^(-1)) に展開。以下、簡単のため
83 # 極 :P_i を P = Px + j Py = exp(a+jw) = r exp(jw)
84 # 係数:C_i を C = Cx + j Cy = c exp(jb)
85 # と表す。M2PC.py は、*-PC.datというファイルを作り、各行には Px Py Cx Cy を 保存。
86 #結果は $dr/*-PC.dat
87 #####
88 # (1-2-1) 連想行列Mから極と係数を計算 (動作チェック)。結果は $dr/*-PC.dat
89 #####
90 python M2PC.py -dr $dr -R $R -ow 1 -DISP 10 -dbg1 1
91 #####
92 (1-2-2) 連想行列Mから極と係数を計算 (全処理)
93 #####
94 xm nohup.out;nohup python M2PC.py -dr $dr -R $R -ow 1 -DISP 0 &
95 #処理状況の確認
96 jobs
97 tail nohup.out
98 grep created nohup.out | wc #ファイルの個数確認 全部揃えば 698=700-2個
99 wc $dr/*R$(R)*-PC.dat #ファイルのsize 確認
100 ls -l $dr/*R$(R)*-PC.dat |wc #ファイルの個数確認 全部揃えば 698=700-2個
101 #####
102 (1-3) (Px,Py,Cx,Xy)から極 (Px,Py)をCで重み付けた特徴ベクトルを作成
103 #####
104 # (1-3-0) (Px,Py,Cx,Xy)から極 (Px,Py)をCで重み付けた特徴ベクトルを作成 (理論)
105 #####
106 # Y_i = Ys = C /(1-P z^(-1)) = c exp(jb)/(1- exp(a+jw)z^(-1)) とし
107 # Y_iの逆Z変換をIZ(Y)=Y(t)とする
108 # (I) w = 0 のとき, b=0となり, IZ(Y)=IZ(c /(1- exp(a)z^(-1))) = c exp(a*t) = Y(t) (t=0, 1,2,...)
109 # (II) w !=0 のとき,YとYの共役 Y^*= C^*/ (1-P^* z^(-1)) = c exp(-jb)/(1- exp(a-jw)z^(-1))が得られるので
110 # IZ(Y+Y^*)=IZ(Y) + IZ(Y^*)
111 # =c exp((a-jw)t+b) + c exp((a-jw)t-b)
112 # =2 c exp(at) cos(wt+b)
113 #事象上の点に対応する(t)は用いず (II)のデータで特徴ベクトル作成。
114 #複素平面上の極の直交座標表示を(Px,Py)。極座標表示を(r,w)とする。
115 # (1) 直交座標 (Px,Py)空間を離散化し、極P=(Px,Py)がある領域をbとおよび
116 #2^c= 2^sqrt((Cx^2+Cy^2)/2)で重み付けた画像を作成し、
117 #後者はGaussianBlurで平滑化した後,$dr/*-pPl.datおよび$dr/*-pPc.datに保存。
118 #さらに、極(Px,Py)をCx=c*cos(b)およびCy=c*sin(b)で重み付けた2つの画像を上下に配置して連結し、
119 #ガウスフィルタで平滑化した後,$dr/*-pPcb.datに保存
120 # (ii) また、極座標 (r,w)空間を離散化し、極P=(r,w)が存在する領域を
121 #おおよび2^c= 2^sqrt((Cx^2+Cy^2)/2)で重み付けた画像を作成し、
122 #後者はGaussianBlurで平滑化した後,$dr/*-pPl.datおよび$dr/*-pPc.datに保存。
123 #さらに、(r,w)をCx=c*cos(b)およびCy=c*sin(b)で重み付けた2つの画像を上下に配置して連結し、
124 #ガウスフィルタで平滑化した後,$dr/*-pPcb.datに保存
125 #
126 #####
127 # (1-3-1) (Px,Py,Cx,Xy)から極 (Px,Py)をCで重み付けた特徴ベクトルを作成 (動作チェック)
128 #####
129 #連想行列1つ毎にストップ
130 #####
131 dr=$(dl)_k8; #mkdir -p $dr #
132 df=$(dl)_f
133 R=0.8 #R=1:0.8:0.6:0.4:0.2
134
135 export nx=6 nr=1 na=18 #nr=1;na=18;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
136 export nx=10 nr=3 na=18 #nr=3;na=18;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
137 export nx=13 nr=5 na=18 #nr=5;na=18;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
138 export nx=15 nr=6 na=18 #nr=6;na=18;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
139 export nx=12 nr=4 na=18 #nr=4;na=18;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
140 export nx=8 nr=2 na=18 #nr=2;na=18;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
141 export nx=9 nr=2 na=19 #nr=2;na=19;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
142 export nx=9 nr=2 na=20 #nr=2;na=20;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
143 export nx=9 nr=2 na=21 #nr=2;na=21;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
144 export nx=9 nr=2 na=22 #nr=2;na=22;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
145 export nx=10 nr=2 na=24 #nr=2;na=24;nx=((nr*na)*2)**(0.5);print int(nx+0.5)
146 #export nx=11 #12 13 14 15
147 export nx=10 nr=2 na=23 #nx=((nr*na)*2)**(0.5);print int(nx+0.5)
148 export nx=10 nr=4 na=23 #nx=((nr*na)*2)**(0.5);print int(nx+0.5)
149 #
150 export ng=1 sg=1.0 #bg: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
151 export ng=3 sg=0.5 #bg: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
152 export mel=1
153 #
154 #####
155 python PC2xPy.py -dr $dr -R $R -rmax 2 -ow 1 -nx $nx -nr $nr -na $na -ng $ng -sg $sg -DISP 11 -dbg1
1 -mel $me
156 #1 数字 (複数の連想行列)毎にストップ
157 python PC2xPy.py -dr $dr -R $R -rmax 2 -ow 1 -nx 11 -nr 2 -na 18 -ng 3 -sg 1 -DISP 10 -dbg1 1
158 #####
159 #python PC2xPy.py -dr $dr -ow 1 -Keize 3 -sK 1 -rmax 2 -R $R -ow 1 -nx 11 -nr 5 -na 18 -DISP 10 -dbg
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1 1 #####
160 #####
161 # (1-3-2) (Ex,Py,Cx,Xy)をで重み付けした特徴ベクトルを作成 (全処理)
162 #####
163 dl=.././12voicedata/ueki_all;
164 dr=${dl}_k8; #mkdrr -p $dr #
165 df=${dl}_f
166 R=0.8 #R=1.0:0.6:0.4:0.2
167 export nx=6 nr=1 na=18 #nr=1,na=18;nx=$((nr*na)*2)**(0.5);print nx # nx is set so that nx * nx/2 ==
168 #####
169 export nx=10 nr=3 na=18 #nr=3,na=18;nx=$((nr*na)*2)**(0.5);print nx
170 export nx=12 nr=4 na=18 #nr=4,na=18;nx=$((nr*na)*2)**(0.5);print nx
171 export nx=13 nr=5 na=18 #nr=5,na=18;nx=$((nr*na)*2)**(0.5);print nx
172 export nx=15 nr=6 na=18 #nr=6,na=18;nx=$((nr*na)*2)**(0.5);print nx
173 export nx=8 nr=2 na=18 #nr=2,na=18;nx=$((nr*na)*2)**(0.5);print nx
174 export nx=9 nr=2 na=19 #nr=2,na=19;nx=$((nr*na)*2)**(0.5);print nx
175 export nx=9 nr=2 na=20 #nr=2,na=20;nx=$((nr*na)*2)**(0.5);print nx
176 export nx=9 nr=2 na=21 #nr=2,na=21;nx=$((nr*na)*2)**(0.5);print nx
177 export nx=9 nr=2 na=22 #nr=2,na=22;nx=$((nr*na)*2)**(0.5);print nx
178 export nx=10 nr=2 na=24 #nr=2,na=24;nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
179 export nx=10 nr=2 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
180 export nx=10 nr=6 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
181 export nx=10 nr=8 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
182 export nx=10 nr=4 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
183 export nx=10 nr=4 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
184 export nx=10 nr=2 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
185 #
186 export ng=1 sg=1.0 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
187 export ng=3 sg=1.0 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
188 export ng=3 sg=0.5 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
189 export mel=1
190 #
191 rm nohup.out;nohup python PC2xPy.py -dr $dr -R $R -rmax 2 -ow 1 -nx $nx -nr $nr -na $na -ng $ng -sg $sg -DISP 0 -mel $mel&
192
193 #処理状況の確認
194 jobs
195 tail nohup.out
196 grep created nohup.out | wc #フアイルの個数 確認
197 for f in rfc rPcb rPl pPc pPcb rPl do
198 echo -n $f&ls -l $dr/$f$[R]*-${F}*.dat|wc:#フアイルの個数 確認 全部揃えば 698-700-2個
199 done
200 for f in rfc rPcb rPl pPc pPcb rPl do
201 echo -n $f:wc $dr/$f$[R]*-${F}.dat #フアイルのsize 確認
202 done
203
204 #####
205 # (1-4) (x,y,C)から極 (x,y,C)の分布を作成 (以前の極分布ベクトルq_nと同じ) (今回は、確認のみで詳しく行わ
206 ない)
207
208 # (1-4-1) (x,y,C)から極 (x,y,C)の分布を作成 (以前の極分布ベクトルq_nと同じ) (動作チェック)結果は $dr/*-
q.dat
209 python PC2q.py -dr $dr -ow 1 -nK 11 -sg 3 -nF 1001 -rmax 2 -R $R -ow 1 -DISP 10 -dbg1 1
210 #####
211 # (1-4-2) (x,y,C)から極 (x,y,C)の分布を作成 (以前の極分布ベクトルq_nと同じ) (動作チェック)
212 #####
213 nohup python PC2q.py -dr $dr -ow 1 -nF 1001 -rmax 2 -R $R -ng 11 -sg 3 -ow 1 -DISP 0 >nohup.out&
214 grep created nohup.out | wc
215
216 #####
217 # (2) 学習と話者識別
218 #####
219 export dl=.././12voicedata/ueki_all;
220 export dr=${dl}_k8; #mkdrr -p $dq #pole new
221 export sx=1,a=1.6;b=10;N=40;# for short time check
222 export sx=1,a=1.6;b=40;N=100; #?
223 export sx=1,a=1.6;b=40;N=400; #?best 18aihc!
224 export sx=1,a=1.6;b=400;N=40; #?
225 export sx=1,a=1.6;b=300;N=50; #?
226 export sx=1,a=1.6;b=100;N=30; #?
227 export sx=1,a=1.6;b=10;N=40; #
228 export mbaas=2;${b}:${a}:${a}:1
229 export mbaas=2;${b}:${a}:1
230 #
231 export L=1.2;3:4:5:6:7:8:9:10
232 export D=zero;ichi:ni:san:si:go:roku:nana:hachi:kyu
233 export S=fms:mkk:mko:mmc:mmh:myhm
234 export R=0.8; RX=0 #R=1
235 nlz=norm
236 #
```

```
237 export nx=6 nr=1 na=18 #nr=1,na=18;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
238 export nx=13 nr=5 na=18 #nr=5,na=18;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
239 export nx=15 nr=6 na=18 #nr=6,na=18;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
240 export nx=12 nr=4 na=18 #nr=4,na=18;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
241 export nx=15 nr=6 na=18 #nr=6,na=18;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
242 export nx=8 nr=2 na=18 #nr=2,na=18;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
243 export nx=9 nr=2 na=19 #nr=2,na=19;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
244 export nx=9 nr=2 na=20 #nr=2,na=20;nx=$((nr*na)*2)**(0.5);print int(nx+0.5)
245 export nx=9 nr=2 na=21 #nr=2,na=21;nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)
246 export nx=9 nr=2 na=22 #nr=2,na=22;nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)
247 #export nx=10 nr=2 na=24 #nr=2,na=24;nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
248 export nx=11 #12 13 14 15 16 17 18 19 20
249 export nx=10 nr=4 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
250 export nx=10 nr=6 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
251 export nx=10 nr=8 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
252 export nx=10 nr=4 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
253 export nx=10 nr=2 na=23 #nx=$((nr*na)*2)**(0.5);print 'nx=',int(nx+0.5)nx= 10
254 #
255 export ng=3 sg=1.0 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
256 export ng=3 sg=0.5 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
257 export ng=1 sg=1.0 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
258 export ng=1 sg=0.5 #ng: size of Gaussian Kernel, sg:sigma of Gaussian Kernel
259 #
260 export FD=rPl #pPl #pPl pPc pPcb rPl rPc rPcb
261 export FD=pPl #pPl #pPl pPc pPcb rPl rPc rPcb
262 export mel=0
263 #
264 rm nohup.out;
265 # (2-0) 上記パラメタを持つxPyフアイルの存在を調べ、なければ作る←(1-3-2)
266 if [ "$FD:0:1" == "p" ] then #xPyフアイルの存在確認
267 fn=${dr}/mym-zero9-R${R}*-${FD}f${nr}${x}${na}${ng}${sg}${mel}.dat
268 else
269 fn=${dr}/mym-zero9-R${R}*-${FD}f${nx}${ng}${sg}${sg}.dat
270 fi
271 if [ ! -e $fn ] then #xPyフアイルがなければ作る(1-3-2)
272 cmd0="python PC2xPy.py -dr $dr -R $R -rmax 2 -ow 1 -nx $nx -nr $nr -na $na -ng $sg -sg $sg -mel $mel
-DISP 0
273 echo "#execute ${cmd0}"
274 f${cmd0} > nohup.out
275 fi
276 # (2-1) 学習と話者識別実行 (時間がかかる)
277 cmd="python obbspeakerdigit+RX.20191113.py -sp $S -tx $D -L $L -dr $dr -R $R -RX $RX -mbas $mbas -s
-1 -N $N] --sx ${sx} -FD ${FD} -nx $nx -nr=$nr -na=$na -ng $ng -sg $sg -mel $mel -nlz $nlz"
278 echo "#execute ${cmd}"
279 nohup ${cmd}&
280
281 # (2-2)実行状況確認
282 grep "time\|start" nohup.out
283 #最終結果確認
284 tail -15 nohup.out
285
286 #####
287 #without mel-scale (mel=0) with N40b100a1.6 optimize nr,na,(nx),ng,sg,
288 #####
289 #TP0.527 TNO.970 FP0.030 PNO.473 ER0.104 RC0.527 PR0.778 F0.629 k46 pPlF2x23G1x1.0m0N40b100a1.6R0.8
3445.891s(0:57:25.890)
290 #TP0.436 TNO.976 FP0.024 PNO.574 ER0.116 RC0.426 PR0.777 F0.550 k92 pPlF4x23G1x1.0m0N40b100a1.6R0.8
8370.371s(2:19:30.370)
291 #TP0.530 TNO.972 FP0.028 PNO.470 ER0.102 RC0.530 PR0.789 F0.634 k92 pPlF4x23G3x0.5m0N40b100a1.6R0.8
8463.674s(2:21:03.674)ER*PR*F*
292 #TP0.552 TNO.962 FP0.038 PNO.448 ER0.106 RC0.552 PR0.745 F0.634 k92 pPlF4x23G3x1.0m0N40b100a1.6R0.8
8496.331s(2:21:36.330)RC*
293
294 #TP0.523 TNO.969 FP0.031 PNO.477 ER0.105 RC0.523 PR0.774 F0.624 k92 pPlF4x23G3x0.5m1N40b100a1.6R0.8
8329.435s(2:18:49.435)xxcmel=1?
295
296 #TP0.778 TNO.982 FP0.018 PNO.222 ER0.047 RC0.778 PR0.879 F0.825 k46 pPlF2x23G1x1.0m0N40b100a1.6R1.40
30.252s(1:07:10.252)
297 #TP0.668 TNO.989 FP0.011 PNO.332 ER0.057 RC0.668 PR0.907 F0.769 k92 pPlF4x23G1x1.0m0N40b100a1.6R1.97
98.331s(2:43:18.331)PR*
298 #TP0.791 TNO.986 FP0.014 PNO.209 ER0.042 RC0.791 PR0.903 F0.843 k92 pPlF4x23G3x0.5m0N40b100a1.6R1.99
40.809s(2:45:40.808)ER*RC*F*
299
300
301 #TP0.795 TNO.986 FP0.014 PNO.205 ER0.041 RC0.795 PR0.905 F0.847 k92 pPlF4x23G3x0.5m1N40b100a1.6R1.97
04.249s(2:41:44.249) m=1
302
303 pPlF2x23G1x1.0m0N40b100a1.6R0.8
304 pPlF4x23G1x1.0m0N40b100a1.6R0.8 +
305 pPlF4x23G3x0.5m0N40b100a1.6R0.8
306 pPlF4x23G3x1.0m0N40b100a1.6R0.8 +
307
```

```
308 pPlF2x23G1x1.0mON40b100a1.6R1
309 pPlF4x23G1x1.5mON40b100a1.6R1
310 pPlF4x23G3x0.5mON40b100a1.6R1
311 pPlF4x23G3x1.0mON40b100a1.6R1
312
313 #####
314 #TPO.476 TNO.984 FPO.016 FNO.524 ER0.101 RCO.476 PR0.858 F0.612 k92 pPlF4x23G3x0.5mON30b100a0.7R0.8
3756.055s(1:10:2:36.054)
315 #TPO.464 TNO.979 FPO.021 FNO.536 ER0.107 RCO.464 PR0.816 F0.592 k92 pPlF4x23G3x0.5m1N30b100a0.7R0.8
3815.816s(1:10:3:35.816)
316 #TPO.457 TNO.980 FPO.020 FNO.530 ER0.107 RCO.457 PR0.820 F0.587 k92 pPlF4x23G3x0.5m2N30b100a0.7R0.8
3839.833s(1:10:3:59.833)
317 #TPO.476 TNO.983 FPO.017 FNO.524 ER0.102 RCO.476 PR0.847 F0.609 k92 pPlF4x23G3x0.5mON30b100a0.7R0.8
3768.561s(1:10:2:48.560) ER**P**?:old
318
319 #TPO.530 TNO.972 FPO.028 FNO.470 ER0.102 RCO.530 PR0.789 F0.634 k92 pPlF4x23G3x0.5mON40b100a1.6R0.8
8471.898s(2:21:11.898)
320 #TPO.507 TNO.968 FPO.032 FNO.493 ER0.109 RCO.507 PR0.761 F0.609 k92 pPlF4x23G3x0.5m1N40b100a1.6R0.8
8525.436s(2:22:05.435)
321 #TPO.520 TNO.968 FPO.032 FNO.480 ER0.107 RCO.520 PR0.763 F0.618 k92 pPlF4x23G3x0.5m2N40b100a1.6R0.8
8535.444s(2:22:15.444)
322 #TPO.532 TNO.974 FPO.026 FNO.468 ER0.099 RCO.532 PR0.807 F0.641 k92 pPlF4x23G3x0.5mON40b100a1.6R0.8
8279.216s(2:17:59.216) ER**PR**P**?:old
323
324 #TPO.537 TNO.969 FPO.031 FNO.463 ER0.103 RCO.537 PR0.775 F0.635 k46 pPlF2x23G1x1.0mON40b100a1.6R0.8
3447.047s(0:57:27.046) ER*RC*F*
325 #TPO.497 TNO.964 FPO.036 FNO.503 ER0.114 RCO.497 PR0.735 F0.593 k46 pPlF2x23G1x1.0m1N40b100a1.6R0.8
3453.604s(0:57:33.604)
326 #TPO.510 TNO.968 FPO.032 FNO.490 ER0.108 RCO.510 PR0.764 F0.612 k46 pPlF2x23G1x1.0m2N40b100a1.6R0.8
3460.884s(0:57:40.883)
327
328 #TPO.470 TNO.984 FPO.016 FNO.530 ER0.102 RCO.470 PR0.852 F0.606 k46 pPlF2x23G1x1.0mON30b100a0.7R0.8
1608.903s(0:26:48.903) m0*
329 #TPO.458 TNO.982 FPO.018 FNO.542 ER0.105 RCO.458 PR0.838 F0.593 k46 pPlF2x23G1x1.0m1N30b100a0.7R0.8
1623.034s(0:27:03.034)
330 #TPO.430 TNO.980 FPO.020 FNO.570 ER0.112 RCO.430 PR0.809 F0.561 k46 pPlF2x23G1x1.0m2N30b100a0.7R0.8
1625.297s(0:27:05.296)
331
332 #TPO.742 TNO.987 FPO.013 FNO.258 ER0.048 RCO.742 PR0.906 F0.816 k46 pPlF2x23G1x1.0mON30b100a0.7R1.18
65.186s(0:31:05.180) ***
333
334 ##### Examination that N30b100a1.6 is better than N30b100a1.6
335 #TPO.532 TNO.966 FPO.034 FNO.468 ER0.106 RCO.532 PR0.757 F0.625 k46 pPlF2x23G1x1.0mON30b100a1.6R0.8
2880.487s(0:48:00.487) N30worsethanN40
336 #TPO.527 TNO.970 FPO.030 FNO.473 ER0.104 RCO.527 PR0.778 F0.629 k46 pPlF2x23G1x1.0mON40b100a1.6R0.8
3445.891s(0:57:25.890)
337 #####
338
339 #####result for R=1.0.8 a=0.7(fast!low precesion?)
340 #parameter tuning --> decide to use N30,b100,a0.7, (reject b=300 with smallest ER0.046, because it is slow)
341 #11 N30,b100,a0.7, b100? R=1
342 #TPO.748 TNO.988 FPO.012 FNO.252 ER0.046 RCO.748 PR0.914 F0.823 k46 pPlF2x23G1x1.0N30b300a0.7R1.5558
.675s(1:32:38.675) b300*ER*RC*F*
343 #TPO.746 TNO.988 FPO.012 FNO.254 ER0.046 RCO.746 PR0.914 F0.822 k46 pPlF2x23G1x1.0N30b200a0.7R1.3690
.229s(1:01:30.229) b200*ER*
344 #TPO.742 TNO.987 FPO.013 FNO.258 ER0.048 RCO.742 PR0.906 F0.816 k46 pPlF2x23G1x1.0N30b100a0.7R1.1865
.160s(0:31:05.180) ***
345 #TPO.736 TNO.987 FPO.013 FNO.264 ER0.049 RCO.736 PR0.903 F0.811 k46 pPlF2x23G1x1.0N40b200a0.7R1.4431
.979s(1:13:51.978)
346 #TPO.741 TNO.986 FPO.014 FNO.259 ER0.049 RCO.741 PR0.901 F0.813 k46 pPlF2x23G1x1.0N35b100a0.7R1.2048
.546s(0:34:08.546)
347 #TPO.738 TNO.986 FPO.014 FNO.262 ER0.050 RCO.738 PR0.896 F0.809 k46 pPlF2x23G1x1.0N25b100a0.7R1.1672
.582s(0:27:52.582)
348 #TPO.729 TNO.987 FPO.013 FNO.271 ER0.050 RCO.729 PR0.902 F0.807 k46 pPlF2x23G1x1.0N20b100a0.7R1.1500
.343s(0:25:00.343)
349 #TPO.741 TNO.985 FPO.015 FNO.259 ER0.050 RCO.741 PR0.893 F0.810 k46 pPlF2x23G1x1.0N40b100a0.7R1.2210
.672s(0:36:50.671) **
350 #TPO.725 TNO.986 FPO.014 FNO.275 ER0.052 RCO.725 PR0.894 F0.801 k46 pPlF2x23G1x1.0N50b100a0.7R1.258
6.258s(0:43:06.257) N=50Worse
351 #
352 #121 F4x23 R1
353 #TPO.683 TNO.988 FPO.012 FNO.317 ER0.055 RCO.683 PR0.907 F0.779 k92 pPlF4x23G1x1.0N40b100a1.6R1.9929
.533s(2:45:29.533)
354 #TPO.607 TNO.992 FPO.008 FNO.393 ER0.063 RCO.607 PR0.928 F0.734 k92 pPlF4x23G1x1.0N30b100a0.7R1.4419
.859s(1:11:39.859) PR*
355 #TPO.752 TNO.988 FPO.012 FNO.248 ER0.045 RCO.752 PR0.915 F0.825 k92 pPlF4x23G3x0.5N30b100a0.7R1.4491
.461s(1:14:51.460) ER*
356 #TPO.766 TNO.986 FPO.014 FNO.234 ER0.045 RCO.766 PR0.904 F0.829 k92 pPlF4x23G3x1.0N30b100a0.7R1.4404
.924s(1:11:34.924) ER*RC*F*
357
358 #131 F4x23 R0.8
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359 #TPO.368 TNO.989 FPO.011 FNO.632 ER0.114 RCO.368 PR0.871 F0.518 k92 pPlF4x23G1x1.0N30b100a0.7R0.8.38
62.550s(1:04:22.549) PR*
360 #TPO.476 TNO.983 FPO.017 FNO.524 ER0.102 RCO.476 PR0.847 F0.609 k92 pPlF4x23G3x0.5N30b100a0.7R0.8.37
68.561s(1:02:48.560) ER*F*
361 #TPO.497 TNO.972 FPO.028 FNO.503 ER0.107 RCO.497 PR0.783 F0.608 k92 pPlF4x23G3x1.0N30b100a0.7R0.8.38
44.216s(1:04:04.216) RC*
362
363 #TPO.474 TNO.982 FPO.018 FNO.526 ER0.102 RCO.474 PR0.842 F0.607 k92 pPlF4x23G3x0.5N30b200a0.7R0.8.75
23.951s(2:05:23.951)?
364 #TPO.532 TNO.974 FPO.026 FNO.468 ER0.099 RCO.532 PR0.807 F0.641 k92 pPlF4x23G3x0.5N40b100a1.6R0.8.82
79.216s(2:17:59.216) ER**PR**P**
365
366 #####
367 #TPO.607 TNO.993 FPO.007 FNO.393 ER0.062 RCO.607 PR0.936 F0.737 k92 pPlF4x23G1x1.0N40b200a0.7R1.1028
1.267s(2:51:21.267) ERb200=ERb100
368 #TPO.615 TNO.992 FPO.008 FNO.385 ER0.062 RCO.615 PR0.931 F0.740 k92 pPlF4x23G1x1.0N50b100a0.7R1.5815
.295s(1:36:55.294)
369 #TPO.470 TNO.981 FPO.019 FNO.530 ER0.105 RCO.470 PR0.828 F0.600 k92 pPlF4x23G3x0.5N40b100.4336.124s(
1:12:16.123) a=0.7 R=0.8
370 #TPO.530 TNO.990 FPO.010 FNO.670 ER0.120 RCO.330 PR0.868 F0.478 k92 pPlF4x23G1x1.0N50b100.4880.124s(
1:21:20.124) N=50bad
371 #TPO.460 TNO.983 FPO.017 FNO.540 ER0.104 RCO.460 PR0.843 F0.595 k92 pPlF4x23G3x0.5N50b100.4883.923s(
1:21:23.923) a=0.7 R=0.8
372
373 #10
374 #####result for R=1 a=1.6 slow
375 #TPO.764 TNO.982 FPO.018 FNO.236 ER0.049 RCO.764 PR0.875 F0.816 k46 pPlF2x23G1x1.0N40b100.3992.138s(
1:06:32.137) a=1.6 R=1
376 #TPO.787 TNO.985 FPO.015 FNO.213 ER0.044 RCO.787 PR0.896 F0.838 k92 pPlF4x23G3x0.5N40b100.9682.246s(
2:41:22.245) a=1.6 R=1
377
378 #10
379 #Result for R0.8 a=1.6=slow
380 #TPO.537 TNO.969 FPO.031 FNO.463 ER0.103 RCO.537 PR0.775 F0.635 k46 pPlF2x23G1x1N40b100.3447.047s(0:
57:27.046) ER*RC*F*
381 #TPO.523 TNO.970 FPO.030 FNO.477 ER0.105 RCO.523 PR0.777 F0.625 k46 pPlF2x23G3x0.2M40b100.3497.300s(
0:58:17.300)
382 #TPO.516 TNO.975 FPO.025 FNO.484 ER0.101 RCO.516 PR0.807 F0.629 k46 pPlF2x23G3x0.3N40b100.3452.820s(
0:57:32.820)ER**
383 #TPO.537 TNO.967 FPO.033 FNO.463 ER0.105 RCO.537 PR0.764 F0.631 k46 pPlF2x23G3x0.5N40b100.3518.382s(
0:58:38.382)
384 #TPO.509 TNO.962 FPO.038 FNO.491 ER0.114 RCO.509 PR0.726 F0.598 k46 pPlF2x23G3x0.7N40b100.3515.321s(
0:58:35.320)
385
386 #TPO.420 TNO.978 FPO.022 FNO.580 ER0.115 RCO.420 PR0.794 F0.549 k92 pPlF4x23G1x1.0N40b100.8392.447s(
2:19:52.447)
387 #TPO.437 TNO.978 FPO.022 FNO.563 ER0.112 RCO.437 PR0.798 F0.565 k92 pPlF4x23G3x0.3N40b100.8429.563s(
2:20:29.563)
388 #TPO.532 TNO.974 FPO.026 FNO.468 ER0.099 RCO.532 PR0.807 F0.641 k92 pPlF4x23G3x0.5N40b100.8279.216s(
2:17:59.216) ER**PR**P**
389 #TPO.517 TNO.966 FPO.034 FNO.483 ER0.109 RCO.517 PR0.754 F0.613 k92 pPlF4x23G3x0.7N40b100.8418.224s(
2:20:18.223)
390 #TPO.537 TNO.964 FPO.036 FNO.463 ER0.107 RCO.537 PR0.747 F0.625 k92 pPlF4x23G3x1.0N40b100.8516.602s(
2:21:56.602) RC*
391
392 #TPO.397 TNO.983 FPO.017 FNO.603 ER0.115 RCO.397 PR0.824 F0.536 k138 pPlF6x23G1x1.0N40b100.14622.620
s(4:03:42.619)
393 #TPO.473 TNO.975 FPO.025 FNO.527 ER0.108 RCO.473 PR0.793 F0.592 k138 pPlF6x23G3x0.5N40b100.15023.247
s(4:10:23.247)
394 #TPO.519 TNO.971 FPO.029 FNO.481 ER0.104 RCO.519 PR0.784 F0.624 k138 pPlF6x23G3x0.7N40b100.14785.650
s(4:06:25.649)
395 #TPO.526 TNO.971 FPO.029 FNO.474 ER0.103 RCO.526 PR0.786 F0.630 k138 pPlF6x23G3x0.8N40b100.14774.535
s(4:06:14.534)
396 #TPO.526 TNO.970 FPO.030 FNO.474 ER0.104 RCO.526 PR0.781 F0.628 k138 pPlF6x23G3x0.9N40b100.15313.228
s(4:15:13.227)
397 #TPO.513 TNO.967 FPO.033 FNO.487 ER0.109 RCO.513 PR0.757 F0.611 k138 pPlF6x23G3x1.0N40b100.15263.163
s(4:14:23.162)
400
401 #TPO.483 TNO.967 FPO.033 FNO.517 ER0.113 RCO.483 PR0.747 F0.587 k184 pPlF8x23G3x1.0N40b100.23445.095
s(6:30:45.094)
402 #TPO.487 TNO.971 FPO.029 FNO.513 ER0.110 RCO.487 PR0.769 F0.596 k184 pPlF8x23G3x0.9N40b100.23566.317
s(6:33:46.316)
403
404 #TPO.468 TNO.942 FPO.058 FNO.532 ER0.137 RCO.468 PR0.617 F0.533 k60 pPlF10G3x0.5N40b100.4634.812s(1:
17:14.811)
405
406 #optimize nX for rPl
407 #TPO.388 TNO.937 FPO.063 FNO.612 ER0.154 RCO.388 PR0.553 F0.456 k32 rPlF8G1x1N40b100.2278.208s(0:37:
408
```

58..207) 409 #?#P0.394 TNO.938 FFO.062 FNO.606 ERO.153 RCO.394 PR0.558 FFO.462 k36 rP1F9G1x1N40b100 2594.752s(0:43:14.751) 410 #?#P0.437 TNO.947 FFO.053 FNO.563 ERO.138 RCO.437 PR0.621 F0.513 k50 rP1F10G1x1N40b100 3701.592s(1:01:41.592) 411 #?#P0.431 TNO.940 FFO.060 FNO.569 ERO.144 RCO.431 PR0.591 F0.499 k55 rP1F11G1x1N40b100 4164.025s(1:09:24.025) 412 #?#P0.404 TNO.952 FFO.048 FNO.596 ERO.139 RCO.404 PR0.629 F0.492 k72 rP1F12G1x1N40b100 5744.459s(1:35:44.458) 413 #?#P0.405 TNO.953 FFO.047 FNO.595 ERO.138 RCO.405 PR0.635 F0.495 k78 rP1F13G1x1N40b100 6489.820s(1:48:09.819) 414 #?#P0.448 TNO.970 FFO.030 FNO.552 ERO.117 RCO.448 PR0.752 F0.562 k98 rP1F14G1x1N40b100 9087.862s(2:31:27.862) ER*F* for rPl 415 #?#P0.427 TNO.968 FFO.032 FNO.573 ERO.122 RCO.427 PR0.729 F0.538 k105 rP1F15G1x1N40b100 9682.354s(2:41:22.354) 416 #?#P0.423 TNO.972 FFO.028 FNO.577 ERO.119 RCO.423 PR0.754 F0.542 k128 rP1F16G1x1N40b100 13337.664s(3:42:17.664) 417 #?#P0.418 TNO.983 FFO.017 FNO.582 ERO.111 RCO.418 PR0.834 F0.557 k200 rP1F20G1x1N40b100 26475.142s(7:21:15.142) ER* 418 #??? 419 #??? 420 #Optimize na for pPl 421 #?#P0.521 TNO.962 FFO.038 FNO.479 ERO.111 RCO.521 PR0.734 F0.610 k36 pP1F2x18G1x1N40b100 2570.162s(0:42:50.162) 422 #?#P0.533 TNO.970 FFO.030 FNO.467 ERO.103 RCO.533 PR0.780 F0.633 k38 pP1F2x19G1x1N40b100 2807.666s(0:46:47.666) ER*PR* 423 #?#P0.519 TNO.966 FFO.034 FNO.481 ERO.108 RCO.519 PR0.754 F0.615 k40 pP1F2x20G1x1N40b100 2956.958s(0:49:16.958) 424 #?#P0.514 TNO.970 FFO.030 FNO.486 ERO.106 RCO.514 PR0.774 F0.618 k42 pP1F2x21G1x1N40b100 3113.306s(0:51:53.305) 425 #?#P0.517 TNO.967 FFO.033 FNO.483 ERO.108 RCO.517 PR0.757 F0.614 k44 pP1F2x22G1x1N40b100 3289.598s(0:54:49.598) 426 #?#P0.537 TNO.969 FFO.031 FNO.463 ERO.103 RCO.537 PR0.775 F0.635 k46 pP1F2x23G1x1N40b100 3447.047s(0:57:27.046) ER*RC*F* 427 #?#P0.526 TNO.963 FFO.037 FNO.474 ERO.110 RCO.526 PR0.738 F0.614 k48 pP1F2x24G1x1N40b100 3626.286s(1:00:26.286) 428 #?#P0.514 TNO.969 FFO.031 FNO.486 ERO.106 RCO.514 PR0.770 F0.617 k50 pP1F2x25G1x1N40b100 3826.842s(1:03:46.841) 429 430 431 #?#P0.533 TNO.970 FFO.030 FNO.467 ERO.103 RCO.533 PR0.780 F0.633 k38 pP1F2x19G1x1N40b100 2807.666s(0:46:47.666) ***** 432 #?#P0.487 TNO.958 FFO.042 FNO.513 ERO.120 RCO.487 PR0.701 F0.575 k38 pPcF2x19G1x1N40b100 2757.566s(0:45:57.565) 433 #?#P0.506 TNO.970 FFO.030 FNO.494 ERO.107 RCO.506 PR0.774 F0.612 k76 pPcBf2x19G1x1N40b100 6500.894s(1:48:20.893) 434 # 435 #?#P0.537 TNO.969 FFO.031 FNO.463 ERO.103 RCO.537 PR0.775 F0.635 k46 pP1F2x23G1x1N40b100 3447.047s(0:57:27.046) *** 436 #?#P0.501 TNO.972 FFO.028 FNO.499 ERO.106 RCO.501 PR0.785 F0.612 k92 pPcBf2x23G1x1N40b100 8396.233s(2:18:56.232) 437 438 # 439 #?#P0.437 TNO.947 FFO.053 FNO.563 ERO.138 RCO.437 PR0.621 F0.513 k50 rP1F10G1x1N40b100 3701.592s(1:01:41.592) 440 # 441 #?#P0.431 TNO.950 FFO.050 FNO.569 ERO.137 RCO.431 PR0.632 F0.513 k100 rPcBf10G1x1N40b100 9191.813s(2:33:11.812) 442 443 #?#P0.533 TNO.970 FFO.030 FNO.467 ERO.103 RCO.533 PR0.780 F0.633 k38 pP1F2x19G1x1N40b100 2807.666s(0:46:47.666) *** 444 445 #?#P0.438 TNO.973 FFO.027 FNO.562 ERO.116 RCO.438 PR0.767 F0.558 k72 pP1F4x18G1x1N40b100 5981.384s(1:39:41.383) 446 #?#P0.420 TNO.970 FFO.030 FNO.580 ERO.122 RCO.420 PR0.734 F0.534 k72 pPcF4x18G1x1N40b100 6110.470s(1:41:50.469) 447 #?#P0.431 TNO.975 FFO.025 FNO.569 ERO.116 RCO.431 PR0.774 F0.554 k144 pPcBf4x18G1x1N40b100 16032.424s(4:27:12.424) 448 # 449 #?#P0.404 TNO.952 FFO.048 FNO.596 ERO.139 RCO.404 PR0.629 F0.492 k72 rP1F12G1x1N40b100 5744.459s(1:35:44.458) 450 #?#P0.420 TNO.951 FFO.049 FNO.580 ERO.137 RCO.420 PR0.633 F0.505 k72 rPcF12G1x1N40b100 5968.307s(1:28.306) 451 #?#P0.438 TNO.961 FFO.039 FNO.562 ERO.126 RCO.438 PR0.694 F0.537 k144 rPcBf12G1x1N40b100 15860.458s(4:24:20.458) 452 #?#P0.415 TNO.947 FFO.053 FNO.585 ERO.142 RCO.415 PR0.609 F0.494 k168 rPcBf12G3x1N40b100 20114.665s(5:36:14.664) 453 454 #?#P0.519 TNO.955 FFO.045 FNO.481 ERO.118 RCO.519 PR0.696 F0.594 k72 pP1F4x18G3x1N40b100 6189.662s(1:43:09.661) pP1Bf4x18G3x1 in can2m/speech 455 456 #?#P0.403 TNO.965 FFO.035 FNO.597 ERO.129 RCO.403 PR0.697 F0.510 k54 pP1F3x18G1x1N40b100 4068.466s(1:

07:48.465) ?? 457 458 #?#P0.521 TNO.962 FFO.038 FNO.479 ERO.111 RCO.521 PR0.734 F0.610 k36 pP1F2x18G1x1N40b100 2570.162s(0:42:50.162) nlznorm 459 #?#P0.473 TNO.960 FFO.040 FNO.527 ERO.121 RCO.473 PR0.704 F0.566 k36 pPcF2x18G1x1N40b100 2574.733s(0:42:54.732) nlznorm 460 #?#P0.486 TNO.971 FFO.029 FNO.514 ERO.110 RCO.486 PR0.772 F0.596 k72 pPcBf2x18G1x1N40b100 5946.615s(1:39:06.615) nlznorm[sin(c)]**minER 461 #?#P0.388 TNO.937 FFO.063 FNO.612 ERO.154 RCO.388 PR0.553 F0.456 k32 rP1F8G1x1N40b100 2278.208s(0:37:58.207) 462 #?#P0.362 TNO.914 FFO.086 FNO.638 ERO.178 RCO.362 PR0.458 F0.404 k32 rPcF8G1x1N40b100 2283.179s(0:38:03.178) 463 #?#P0.351 TNO.926 FFO.074 FNO.649 ERO.170 RCO.351 PR0.488 F0.408 k64 rPcBf8G1x1N40b100 5000.816s(1:23:20.815) 464 465 466 467 #?#?#?#P0.473 TNO.960 FFO.040 FNO.527 ERO.122 RCO.473 PR0.701 F0.565 k36 pP1F2x18G1x1N40b100 2613.952s(0:43:33.952) nlzmax 468 #?? 469 #?#?#?#P0.526 TNO.964 FFO.036 FNO.474 ERO.109 RCO.526 PR0.743 F0.616 k36 pP1F2x18G1x1N40b100 2550.840s(0:42:30.840) nlzi **ER is min,but ... 470 #?#?#?#P0.467 TNO.955 FFO.045 FNO.533 ERO.127 RCO.467 PR0.674 F0.552 k36 pPcF2x18G1x1N40b100 2525.975s(0:42:05.975) nlzi 471 #?#?#?#P0.371 TNO.906 FFO.094 FNO.629 ERO.183 RCO.371 PR0.440 F0.403 k72 pPcBf2x18G1x1N40b100 5842.319s(1:37:22.318) nlzi 472 #?? 473 #?#?#?#P0.521 TNO.962 FFO.038 FNO.479 ERO.111 RCO.521 PR0.734 F0.610 k36 pP1F2x18G1x1N40b100 2583.206s(0:43:03.205) nlznorm 474 #?#?#?#P0.473 TNO.960 FFO.040 FNO.527 ERO.121 RCO.473 PR0.704 F0.566 k36 pPcF2x18G1x1N40b100 2574.733s(0:42:54.732) 475 #?#?#?#P0.331 TNO.948 FFO.052 FNO.669 ERO.155 RCO.331 PR0.561 F0.416 k72 pPcBf2x18G1x1N40b100 5557.163s(1:32:37.163) 476 #?? 477 #?? 478 #?#?#?#P0.514 TNO.965 FFO.035 FNO.486 ERO.110 RCO.514 PR0.748 F0.610 k36 pP1_2x18N40b100 2578.463s(0:42:58.463) 479 #?#?#?#P0.344 TNO.936 FFO.064 FNO.656 ERO.162 RCO.344 PR0.519 F0.414 k72 pPcb_2x18N40b100 5835.279s(1:37:15.278) 480 #?#?#?#P0.504 TNO.934 FFO.066 FNO.496 ERO.137 RCO.504 F0.606 F0.550 k36 pPc_2x18N40b100 2624.876s(0:43:44.876) 481 #?? 482 #?? 483 #?? 484 #?#?#?#P0.510 TNO.967 FFO.033 FNO.490 ERO.109 RCO.510 PR0.757 F0.610 k36 pP1_2x18N40b400 10424.659s(2:53:44.658) b400N40 *** 485 #?? 486 #?#?#?#P0.491 TNO.949 FFO.051 FNO.509 ERO.127 RCO.491 PR0.658 F0.563 k18 pP1_lx18N40b100 1309.965s(0:21:49.965)b100N40 487 #?#?#?#P0.514 TNO.965 FFO.035 FNO.486 ERO.110 RCO.514 PR0.748 F0.610 k36 pP1_2x18N40b100 2578.463s(0:42:58.463) b100N40 488 #?#?#?#P0.507 TNO.964 FFO.036 FNO.493 ERO.112 RCO.507 PR0.738 F0.601 k36 pP1_2x18N50b100 3066.879s(0:51:06.878) b100N50 rPl_2x18 in can2m191122 489 #?? 490 #?#?#?#P0.434 TNO.973 FFO.027 FNO.566 ERO.117 RCO.434 PR0.761 F0.553 k72 pP1_4x18N40b100 5943.480s(1:39:03.479) 491 #?#?#?#P0.408 TNO.976 FFO.024 FNO.592 ERO.119 RCO.408 PR0.770 F0.534 k108 pP1_6x18N40b100 10127.507s(2:48:47.507) 492 #?? 493 #?#?#?#P0.408 TNO.976 FFO.024 FNO.592 ERO.119 RCO.408 PR0.770 F0.534 k108 pP1_6x18 10127.507s(2:48:47.507) 494 #?? 495 #?#?#?#P0.474 TNO.941 FFO.059 FNO.526 ERO.137 RCO.474 PR0.618 F0.536 k18 pP1_lx18 1119.838s(0:18:39.838) 496 #?#?#?#P0.474 TNO.941 FFO.059 FNO.526 ERO.137 RCO.474 PR0.618 F0.536 k18 pP1_lx18 1119.838s(0:18:39.838) 497 #?#?#?#P0.493 TNO.959 FFO.041 FNO.507 ERO.118 RCO.493 PR0.708 F0.581 k36 pP1_2x18 6094.982s(1:41:34.982) 498 #?#?#?#P0.375 TNO.958 FFO.042 FNO.625 ERO.139 RCO.375 PR0.641 F0.473 k54 pP1_3x18 3222.493s(0:53:42.493) 499 #?#?#?#P0.427 TNO.974 FFO.026 FNO.573 ERO.117 RCO.427 PR0.768 F0.549 k72 pP1_4x18 4390.628s(1:13:10.628) 500 #?#?#?#P0.375 TNO.971 FFO.029 FNO.625 ERO.128 RCO.375 PR0.724 F0.494 k90 pP1_5x18 5237.775s(1:27:17.775) 501 #?? 502 #?#?#?#P0.448 TNO.927 FFO.073 FNO.552 ERO.153 RCO.448 PR0.551 F0.494 k36 pPc_2x18 6677.294s(1:51:17.294) 503 #?? 504 #?#?#?#P0.321 TNO.936 FFO.064 FNO.679 ERO.167 RCO.321 PR0.499 F0.391 k72 pPcb_2x18 Time12569.152s(3:29:29.152) 505 #?#?#?#P0.381 TNO.983 FFO.017 FNO.619 ERO.118 RCO.381 PR0.813 F0.519 k496 rPl_??x? Time62833.130s(17:27:13.129) 506 #??


```
774 # sm=${s}-${d}${l}-${rl}
775 echo "\ko\_sprecoq-${sm}_poles0-N24.eps" ${sm}-${q}.eps"
776 #done;done;done;
777 #==> fhs-san mkk-san
778 (1-4-2)
779 df=${dl}_f; mkdir -p $df #figs
780 S=(fhs mkk)
781 R=(0.8 0.6 0.4 0.2)
782 N=24
783 S1=(mkk);S2=(fhs)
784 S1=(fhs);S2=(mkk)
785 D=(nl)
786 D=(zero ichi si roku nana hachi kyu)
787 #
788 D=(go)
789 R=(1);S1=(fhs mkk)
790 D=(san)
791 S1=(fhs);S2=(mkk)
792 R=(1 0.8 0.6 0.4 0.2)
793 L=(1)
794 for s in ${S1[@]}; do
795   for d in ${D[@]}; do
796     for l in ${L[@]}; do
797       if [ "$$r" = "1" ]; then
798         sm=${s}-${d}${l}-${rl}
799       else
800         s2=${S2[0]}
801         d2=${D}
802         l2=1
803       fi
804       sm=${s}-${d}${l}-${s2}-${d2}${l2}-${R}${r}
805       fi
806       cmd="python speechmix.py -y0 $dn/$s}-${d}${l}.dat -y1 $dn/$s2}-${d2}${l2}.dat -r $r"
807       echo "$cmd>$dm/$s${sm}.dat"; $cmd > $dm/$s${sm}.dat
808       cmd="poledistribv2+ st:${sm} N:${N} k:8 m:poles4 dir:${dm} rsa:2:0.7:1:20 DiffMode:0 tt:0:40
0 r:100 DISP:1"
809       echo "$cmd"; $cmd
810       cmd="mkpolepv2+ st:$sm k:8 Np:$N dir:tmp dir:2:$dm} dout:${dq} rsa:2:20 tt:0:400 nt:18 nr
:2 r_max:2 DISP:1"
811       echo $cmd;$cmd
812       cmd="cp tmp/*-poles0.dat ${dp}"/";
813       echo $cmd;$cmd
814       sleep 3
815       cmd="mv tmp/q2.obj ${df}/${sm}-q2.obj";echo $cmd;$cmd
816       cmd="mv tmp/q2.eps ${df}/${sm}-q2.eps";echo $cmd;$cmd
817       cmd="mv tmp/q2.dat ${df}/${sm}-q2.dat";echo $cmd;$cmd
818       cmd="mv tmp\_sprecoq-${sm}_poles0-N${N}.obj ${df}/sprecoq-${sm}_poles0-N${N}.obj" ;echo $cmd;
$cmd
819       cmd="mv tmp\_sprecoq-${sm}_poles0-N${N}.eps ${df}/sprecoq-${sm}_poles0-N${N}.eps" ;echo $cmd;
done;done;done;done;
820
821
822 cd ??
823 for f in *-q.dat; do
824   fb2=${f%.dat}2
825   cat $f|awk '{q[NR]=$1; }END{for(n=0;n<NR;n+=2) printf("%d %d\n",q[n],q[n+1]);}'>${fb2}.dat
826   cat > tmp.plt << EOF
827   set style fill solid border lc rgb "black"
828   set boxwidth 1
829   set term postscript eps enhanced color; set output "${fb2}.eps"
830   plot [0:36][0:300]"${fb2}.dat" using ($0+2:0.5):1 with boxes lw 2 lc rgb "light-red", \
831   "${fb2}.dat" using ($0+2:0.5):2 with boxes lw 2 lc rgb "light-green"
832   set term tgif; set output "${fb2}.obj";replot
833 EOF
834 gnuplot tmp.plt
835 gv ${fb2}.eps&
836 done
837
838 for f in sprecoq-fhs-san1-mkk-san1-R0.8-poles0-N24 \
839 sprecoq-fhs-san1-mkk-san1-R0.4-poles0-N24\
840 sprecoq-fhs-san1-mkk-san1-R0.6-poles0-N24\
841 sprecoq-fhs-san1-mkk-san1-R0.4-poles0-N24\
842 sprecoq-fhs-san1-mkk-san1-R0.2-poles0-N24\
843 sprecoq-mkk-san1-R1-poles0-N24\
844 fhs-san1-R1-q2\
845 fhs-san1-mkk-san1-R0.8-q2\
846 fhs-san1-mkk-san1-R0.6-q2\
847 fhs-san1-mkk-san1-R0.4-q2\
848 fhs-san1-mkk-san1-R0.4-q2\
849 fhs-san1-mkk-san1-R0.2-q2\
850 mkk-san1-R1-q2 ;do
851 cp $df/$f.obj ~/181conip/iconip18speech/draft
```

```
852 done
853
854 for f in \ls $dm/*-dat`; do #for f in \ls $dm/fhs-gol-R1*` ; do
855   make data-clean
856   sm=${f%.dat}
857   cmd="poledistribv2+ st:${sm} N:24 k:8 m:poles4 dir:${dm} rsa:2:0.7:1:20 DiffMode:0 tt:0:400 T:100 D
ISP:0"
858   echo "$cmd"; $cmd
859   cmd="mkpolepv2+ st:$sm k:8 Np:24 dir:tmp dir:2:$dm} dout:${dq} rsa:2:20 tt:0:400 nt:18 nr:2 r_max:
2 DISP:0"
860   echo $cmd;$cmd
861   cmd1="cp tmp/*-poles0.dat ${dp}"/";
862   echo $cmd1;$cmd1
863   done
864
865   #(2)
866
867   20180226+20180209
868   0180209: oob1speakerdigit+sX_2018 (0206版)はtest_xy.datの学習 予測が行われていなかったので、修正。
869   #####
870   # (1) コメント from Tagomori from here
871   #####
872   20180531
873   # (0)
874   d0=/media/sf_C_DRIVE/cdata/kurolab/data/12voicedata_ueki/12voicedata
875   dl=../12voicedata_ueki_all; mkdir -p $dl
876   for d in zero ichi ni san si go roku nana hachi kyu rei yon sichi ku; do
877     ln -s ${d0}/${d}/${s} ${dl}/
878   done
879
880   # (0) power normalization of speech; see the log to see the original difference of the power
881   dn=${dl}_n; mkdir -p $dn #save normalized speech signal
882   log=$dn/normalize.log
883   #echo "ymin=$ymin" > $log
884   ymins=0
885   for s in fhs fms mkk mko mmt mmh mym; do
886     for d in zero ichi ni san si go roku nana hachi kyu rei yon sichi ku; do
887       # for l in 10; do
888         for l in 1 2 3 4 5 6 7 8 9 10; do
889           cmd="python speechnormalize.py -yin ${dl}/${s}-${d}${l}.dat -yout ${dn}/${s}-${d}${l}.dat -yml
n $ymin"
890           echo $cmd; $cmd >> $log
891           done
892         done
893       done
894     #error with python speechnormalize.py -yin ../12voicedata_ueki_all/mmt-san2.dat -yout ../12voicedata
_ueki_all_n/mmt-san2.dat -ymin 100
895     gnuplot
896     plot ".../12voicedata_ueki_all_n/normalize.log" using 0:1 w l
897     quit
898     #python speechnormalize.py -yin ${dl}/${s1}-${d1}${l1}.dat -yout ${dn}/${s1}-${d1}${l1}.dat -ymin 5
899     #python speechnormalize.py -yin ${dl}/${s2}-${d2}${l2}.dat -yout ${dn}/${s2}-${d2}${l2}.dat -ymin 5
900     #plot ".../12voicedata_ueki_all_n/fhs-kyu9.dat" using 0:1 w l, ".../12voicedata_ueki_all_n/mkk-san5.da
t" using 0:1 w l
901
902     # (1) make mixed speech and its pole distribution
903     s1=fhs/d1-san;l1=1
904     s2=mkk/d2-san;l2=1
905     s1=fhs/d1-kyu;l1=9
906     s2=mkk/d2-san;l2=5 #big power
907     sd1=${s1}-${d1}${l1}
908     sd2=${s2}-${d2}${l2}
909     r=0.5
910     r=0.9
911     sm=${s1}-${d1}${l1}-${s2}-${d2}${l2}-R${r}
912     dn=${dl}_n; mkdir -p $dn
913     python speechmix.py -y0 $dn/${s1}-${d1}${l1}.dat -y1 $dn/${s2}-${d2}${l2}.dat -r $r > $dn/${sm}.dat
914     mkdir -p tmp
915     cat > tmp/tmp.plt <<EOF
916     set term postscript eps enhanced color; set output "tmp/tmp.eps";
917     plot "$dn/${s1}-${d1}${l1}.dat" using 0:1 w l, "$dn/${s2}-${d2}${l2}.dat" using 0:1 w lp, "$dn/${sm}
.dat" using 0:1 w l
918     quit
919     EOF
920     gnuplot tmp/tmp.plt
921     gv tmp/tmp.eps&
922
923     poledistribv2 sp:${s1} tx:${dl}${l1} N:24 k:8 m:poles4 dir:$dn rsa:2:0.7:1:20 DISP:1 DiffMode:0 tt:0
:400 T:100
924     poledistribv2 sp:${s2} tx:${d2}${l2} N:24 k:8 m:poles4 dir:$dn rsa:2:0.7:1:20 DISP:1 DiffMode:0 tt:0
:400 T:100
925     poledistribv2+ st:${sm} N:24 k:8 m:poles4 dir:$dn rsa:2:0.7:1:20 DISP:1 DiffMode:0 tt:0:400 T:100
```



```
1060 plot [[]:0.7] "$f.dat" using 0:3 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "FP", "" using 0:4 w lp lt 1 lw
2 pt 10 lc rgb "green" t "FN", "" using 0:5 w lp lt 1 lw 2 pt 6 lc rgb "red" t "ERR"
1061 set term tgif; set output "$f.obj";replot
1062 quit
1063 EOF
1064 gnuplot tmp/tmp.plt
1065 gv $f.eps&
1066 #
1067 f=tmp/SV-R108642
1068 cat > $f.dat <<EOF
1069 0.502 0.962 0.038 0.498 0.155 = 448 2500 98 444 542 #TP,TN,FP,FN,ERR n3490 m=fhs R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1070 0.519 0.961 0.039 0.481 0.153 = 467 2489 101 433 534 #TP,TN,FP,FN,ERR n3490 m=fms R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1071 0.507 0.960 0.040 0.493 0.159 = 464 2471 104 451 555 #TP,TN,FP,FN,ERR n3490 m=mkk R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1072 0.470 0.964 0.036 0.530 0.168 = 440 2463 91 496 587 #TP,TN,FP,FN,ERR n3490 m=mkk R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1073 0.481 0.965 0.035 0.519 0.155 = 416 2533 92 449 541 #TP,TN,FP,FN,ERR n3490 m=mmt R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1074 0.486 0.957 0.043 0.514 0.162 = 429 2495 113 453 566 #TP,TN,FP,FN,ERR n3490 m=mmh R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1075 0.497 0.960 0.040 0.503 0.158 = 443 2495 103 449 552 #TP,TN,FP,FN,ERR n3490 m=nym R1:0.8:0.6:0.4:0.2
RXO mbas2:40:1.6:1 N100
1076 0.495 0.961 0.039 0.505 0.159 #mean TP TN FP FN ERR
1077 EOF
1078 cat > tmp/tmp.plt <<EOF
1079 set xtics ('fhs', 0, 'fms', 1, 'mkk', 2, 'mko', 3, 'mmt', 4, 'mnh', 5, 'nym', 6, 'mean', 7)
1080 set term postscript eps enhanced color; set output "$f.eps";
1081 plot [[]:0.7] "$f.dat" using 0:3 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "FP", "" using 0:4 w lp lt 1 lw
2 pt 10 lc rgb "green" t "FN", "" using 0:5 w lp lt 1 lw 2 pt 6 lc rgb "red" t "ERR"
1082 set term tgif; set output "$f.obj";replot
1083 quit
1084 EOF
1085 gnuplot tmp/tmp.plt
1086 gv $f.eps&
1087 ##### single R
1088 f=tmp/SV-R8
1089 cat > $f.dat <<EOF
1090 0.495 0.976 0.024 0.545 0.166 = 87 495 12 104 116 #TP,TN,FP,FN,ERR n698 m=fhs R0.8 RXO mbas2:40:1.6:1
1091 0.468 0.982 0.018 0.532 0.156 = 88 501 9 100 109 #TP,TN,FP,FN,ERR n698 m=fms R0.8 RXO mbas2:40:1.6:1
1092 0.446 0.984 0.016 0.554 0.173 = 91 486 8 113 121 #TP,TN,FP,FN,ERR n698 m=mkk R0.8 RXO mbas2:40:1.6:1
1093 0.458 0.960 0.040 0.542 0.185 = 92 477 20 109 129 #TP,TN,FP,FN,ERR n698 m=mkko R0.8 RXO mbas2:40:1.6:1
1094 0.438 0.986 0.014 0.562 0.173 = 89 488 7 114 121 #TP,TN,FP,FN,ERR n698 m=mmt R0.8 RXO mbas2:40:1.6:1
1095 0.428 0.978 0.022 0.572 0.186 = 89 479 11 119 130 #TP,TN,FP,FN,ERR n698 m=mmh R0.8 RXO mbas2:40:1.6:1
1096 0.463 0.986 0.014 0.537 0.165 = 93 490 7 108 115 #TP,TN,FP,FN,ERR n698 m=nym R0.8 RXO mbas2:40:1.6:1
1097 0.451 0.979 0.021 0.549 0.172 #mean TP TN FP FN ERR
1098 EOF
1099 cat > tmp/tmp.plt <<EOF
1100 set xtics ('fhs', 0, 'fms', 1, 'mkk', 2, 'mko', 3, 'mmt', 4, 'mnh', 5, 'nym', 6, 'mean', 7)
1101 set term postscript eps enhanced color; set output "$f.eps";
1102 plot [[]:0.7] "$f.dat" using 0:3 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "FP", "" using 0:4 w lp lt 1 lw
2 pt 10 lc rgb "green" t "FN", "" using 0:5 w lp lt 1 lw 2 pt 6 lc rgb "red" t "ERR"
1103 set term tgif; set output "$f.obj";replot
1104 quit
1105 EOF
1106 gnuplot tmp/tmp.plt
1107 gv $f.eps&
1108 f=tmp/SV-R6
1109 cat > $f.dat <<EOF
1110 0.415 0.972 0.028 0.585 0.188 = 83 484 14 117 131 #TP,TN,FP,FN,ERR n698 m=fhs R0.6 RXO mbas2:40:1.6:1
1111 0.433 0.984 0.016 0.567 0.175 = 87 489 8 114 122 #TP,TN,FP,FN,ERR n698 m=fms R0.6 RXO mbas2:40:1.6:1
1112 0.473 0.982 0.018 0.527 0.168 = 97 484 9 108 117 #TP,TN,FP,FN,ERR n698 m=mkk R0.6 RXO mbas2:40:1.6:1
1113 0.441 0.979 0.021 0.559 0.183 = 93 477 10 118 128 #TP,TN,FP,FN,ERR n698 m=mmko R0.6 RXO mbas2:40:1.6:1
1114 0.497 0.975 0.025 0.503 0.150 = 91 502 13 92 105 #TP,TN,FP,FN,ERR n698 m=mmt R0.6 RXO mbas2:40:1.6:1
1115 0.461 0.978 0.022 0.539 0.165 = 89 494 11 104 115 #TP,TN,FP,FN,ERR n698 m=mmh R0.6 RXO mbas2:40:1.6:1
1116 0.433 0.974 0.026 0.567 0.183 = 88 482 13 115 128 #TP,TN,FP,FN,ERR n698 m=nym R0.6 RXO mbas2:40:1.6:1
1117 0.450 0.978 0.022 0.550 0.173 #mean TP TN FP FN ERR
```

```
1118 EOF
1119 cat > tmp/tmp.plt <<EOF
1120 set xtics ('fhs', 0, 'fms', 1, 'mkk', 2, 'mko', 3, 'mmt', 4, 'mnh', 5, 'nym', 6, 'mean', 7)
1121 set term postscript eps enhanced color; set output "$f.eps";
1122 plot [[]:0.7] "$f.dat" using 0:3 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "FP", "" using 0:4 w lp lt 1 lw
2 pt 10 lc rgb "green" t "FN", "" using 0:5 w lp lt 1 lw 2 pt 6 lc rgb "red" t "ERR"
1123 set term tgif; set output "$f.obj";replot
1124 quit
1125 EOF
1126 gnuplot tmp/tmp.plt
1127 gv $f.eps&
1128 f=tmp/SV-R4
1129 cat > $f.dat <<EOF
1130 0.426 0.980 0.020 0.574 0.181 = 86 486 10 116 126 #TP,TN,FP,FN,ERR n698 m=fhs R0.4 RXO mbas2:40:1.6:1
1131 0.401 0.968 0.032 0.599 0.196 = 81 480 16 121 137 #TP,TN,FP,FN,ERR n698 m=fms R0.4 RXO mbas2:40:1.6:1
1132 0.451 0.972 0.028 0.549 0.181 = 92 480 14 112 126 #TP,TN,FP,FN,ERR n698 m=mkk R0.4 RXO mbas2:40:1.6:1
1133 0.436 0.973 0.027 0.564 0.196 = 96 465 13 124 137 #TP,TN,FP,FN,ERR n698 m=mkko R0.4 RXO mbas2:40:1.6:1
1134 0.426 0.978 0.022 0.574 0.170 = 80 499 11 108 119 #TP,TN,FP,FN,ERR n698 m=mmt R0.4 RXO mbas2:40:1.6:1
1135 0.463 0.947 0.053 0.537 0.185 = 88 481 27 102 129 #TP,TN,FP,FN,ERR n698 m=mmh R0.4 RXO mbas2:40:1.6:1
1136 0.468 0.963 0.037 0.532 0.172 = 89 489 19 101 120 #TP,TN,FP,FN,ERR n698 m=nym R0.4 RXO mbas2:40:1.6:1
1137 0.439 0.969 0.031 0.561 0.183 #mean TP TN FP FN ERR
1138 EOF
1139 cat > tmp/tmp.plt <<EOF
1140 set xtics ('fhs', 0, 'fms', 1, 'mkk', 2, 'mko', 3, 'mmt', 4, 'mnh', 5, 'nym', 6, 'mean', 7)
1141 set term postscript eps enhanced color; set output "$f.eps";
1142 plot [[]:0.7] "$f.dat" using 0:3 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "FP", "" using 0:4 w lp lt 1 lw
2 pt 10 lc rgb "green" t "FN", "" using 0:5 w lp lt 1 lw 2 pt 6 lc rgb "red" t "ERR"
1143 set term tgif; set output "$f.obj";replot
1144 quit
1145 EOF
1146 gnuplot tmp/tmp.plt
1147 gv $f.eps&
1148 f=tmp/SV-R2
1149 cat > $f.dat <<EOF
1150 0.390 0.972 0.028 0.610 0.195 = 78 484 14 122 136 #TP,TN,FP,FN,ERR n698 m=fhs R0.2 RXO mbas2:40:1.6:1
1151 0.435 0.971 0.029 0.565 0.189 = 91 475 14 118 132 #TP,TN,FP,FN,ERR n698 m=fms R0.2 RXO mbas2:40:1.6:1
1152 0.431 0.966 0.034 0.569 0.189 = 87 479 17 115 132 #TP,TN,FP,FN,ERR n698 m=mkk R0.2 RXO mbas2:40:1.6:1
1153 0.397 0.972 0.028 0.603 0.196 = 81 480 14 123 137 #TP,TN,FP,FN,ERR n698 m=mkko R0.2 RXO mbas2:40:1.6:1
1154 0.422 0.964 0.036 0.578 0.185 = 81 488 18 111 129 #TP,TN,FP,FN,ERR n698 m=mmt R0.2 RXO mbas2:40:1.6:1
1155 0.435 0.961 0.039 0.565 0.183 = 83 487 20 108 128 #TP,TN,FP,FN,ERR n698 m=mmh R0.2 RXO mbas2:40:1.6:1
1156 0.460 0.954 0.046 0.540 0.186 = 91 477 23 107 130 #TP,TN,FP,FN,ERR n698 m=nym R0.2 RXO mbas2:40:1.6:1
1157 0.424 0.966 0.034 0.576 0.189 #mean TP TN FP FN ERR
1158 EOF
1159 cat > tmp/tmp.plt <<EOF
1160 set xtics ('fhs', 0, 'fms', 1, 'mkk', 2, 'mko', 3, 'mmt', 4, 'mnh', 5, 'nym', 6, 'mean', 7)
1161 set term postscript eps enhanced color; set output "$f.eps";
1162 plot [[]:0.7] "$f.dat" using 0:3 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "FP", "" using 0:4 w lp lt 1 lw
2 pt 10 lc rgb "green" t "FN", "" using 0:5 w lp lt 1 lw 2 pt 6 lc rgb "red" t "ERR"
1163 set term tgif; set output "$f.obj";replot
1164 quit
1165 EOF
1166 gnuplot tmp/tmp.plt
1167 gv $f.eps&
1168 ###Recall and precision
1169 for R in 10 8 6 4 2 ;do
1170 f=tmp/SV-R${R}
1171 head -7 $f.dat awk 'BEGIN{ar=ap=0;}{TP=$7;TN=$8;FP=$9;FN=$10;R=TP/(TP+FN);P=TP/(TP+FP);ar+=R;ap+=
P;printf("%3f %3f %3f #recall precision\n",TP/(TP+FN),TP/(TP+FP),(TP+TN)/(TP+TN+FP+FN))};END{printf("##.3
f %3f #mean for NR=%d\n",ar/NR,ap/NR,NR)}}' > ${f}-rp.dat;
1172 cat > tmp/tmp.plt <<EOF
1173 set xtics ('fhs', 0, 'fms', 1, 'mkk', 2, 'mko', 3, 'mmt', 4, 'mnh', 5, 'nym', 6, 'mean', 7)
1174 set term postscript eps enhanced color; set output "$f-rp.eps";
1175 set term postscript eps enhanced color; set output "$f-rp-eps";
1176 plot [[]:0.3:1] "$f-rp.dat" using 0:2 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "P", "" using 0:1 w lp lt 1
lw 2 pt 10 lc rgb "green" t "R"
1177 set term tgif; set output "$f-rp.obj";replot
1178 set term postscript eps enhanced color; set output "$f-rpA.eps";
1179 plot [[]:0.3:1] "$f-rp.dat" using 0:2 w lp lt 1 lw 2 pt 8 lc rgb "blue" t "P", "" using 0:1 w lp lt 1
```

```
lw 2 pt 10 lc rgb "green" t "R", "" using 0:3 w lp lt 1 lw 2 pt 6 lc rgb "red" t "A"
l180 set term tgif; set output "$f-RPA.obj";replot
l181 quit
l182 EOF
l183 gnuplot tmp/tmp.plt
l184 gv $f-RP.eps&
l185 cp $f-RP.* ~/181iconip/iconipl8speech/draft
l186 gv $f-RPA.eps&
l187 cp $f-RPA.* ~/181iconip/iconipl8speech/draft
l188 done
l189 #
l190 for R in 10 8 6 4 2 ;do
l191 f=tmp/SV-R${R}
l192 echo -n "$f "; tail -1 $f-RP.dat
l193 done
l194 tmp/SV-R10 0.938 0.936 #mean for NR=6
l195 tmp/SV-R8 0.449 0.891 #mean for NR=6
l196 tmp/SV-R6 0.453 0.892 #mean for NR=6
l197 tmp/SV-R4 0.434 0.854 #mean for NR=6
l198 tmp/SV-R2 0.418 0.838 #mean for NR=6
l199 #
l200 ###
l201 cat > tmp/SV-R86.dat <<EOF
l202 0.504 0.966 0.034 0.496 0.172 = 215 971 34 212 246 #TP,TN,FP,FN,ERR nl432 m=fhs R0:8:0.6@0.4:0.2 RX0
mbas2:40:1.6:1 N100
l203 0.463 0.953 0.047 0.537 0.183 = 184 986 49 213 262 #TP,TN,FP,FN,ERR nl432 m=fhs R0:8:0.6@0.4:0.2 RX0
mbas2:40:1.6:1 N100
l204 0.443 0.958 0.042 0.557 0.201 = 196 948 42 246 288 #TP,TN,FP,FN,ERR nl432 m=nkk R0:8:0.6@0.4:0.2 RX0
mbas2:40:1.6:1 N100
l205 0.474 0.955 0.045 0.526 0.181 = 192 981 46 213 259 #TP,TN,FP,FN,ERR nl432 m=nko R0:8:0.6@0.4:0.2 RX0
mbas2:40:1.6:1 N100
l206 0.471 0.951 0.049 0.529 0.182 = 186 986 51 209 260 #TP,TN,FP,FN,ERR nl432 m=mt R0:8:0.6@0.4:0.2 RX0
mbas2:40:1.6:1 N100
l207 0.446 0.972 0.028 0.554 0.175 = 178 1004 29 221 250 #TP,TN,FP,FN,ERR nl432 m=nh R0:8:0.6@0.4:0.2 RX
0 mbas2:40:1.6:1 N100
l208 0.431 0.966 0.034 0.569 0.183 = 172 998 35 227 262 #TP,TN,FP,FN,ERR nl432 m=ny R0:8:0.6@0.4:0.2 RX0
mbas2:40:1.6:1 N100
l209 0.462 0.960 0.040 0.538 0.182 #mean TP TN FP FN ERRkuo@kurolab-VB:~/sotu/2017/can2b$
l210 EOF
l211 cat > tmp/SV-R86.dat <<EOF
l212 0.480 0.956 0.044 0.520 0.186 = 205 961 44 222 266 #TP,TN,FP,FN,ERR nl432 m=fhs R0:8:0.6 RX0 mbas2:4
0:1.6:1 N100
l213 0.460 0.969 0.031 0.540 0.169 = 179 1011 32 210 242 #TP,TN,FP,FN,ERR nl432 m=fms R0:8:0.6 RX0 mbas2:
40:1.6:1 N100
l214 0.434 0.972 0.028 0.566 0.196 = 193 959 28 252 280 #TP,TN,FP,FN,ERR nl432 m=nkk R0:8:0.6 RX0 mbas2:4
0:1.6:1 N100
l215 0.466 0.961 0.039 0.534 0.182 = 192 980 40 220 260 #TP,TN,FP,FN,ERR nl432 m=nko R0:8:0.6 RX0 mbas2:4
0:1.6:1 N100
l216 0.479 0.962 0.038 0.521 0.168 = 185 1006 40 201 241 #TP,TN,FP,FN,ERR nl432 m=mt R0:8:0.6 RX0 mbas2:
40:1.6:1 N100
l217 0.459 0.952 0.048 0.541 0.186 = 184 981 50 217 267 #TP,TN,FP,FN,ERR nl432 m=nh R0:8:0.6 RX0 mbas2:4
0:1.6:1 N100
l218 0.408 0.971 0.029 0.592 0.188 = 165 998 30 239 269 #TP,TN,FP,FN,ERR nl432 m=ny R0:8:0.6 RX0 mbas2:4
0:1.6:1 N100
l219 0.455 0.963 0.037 0.545 0.182 #mean TP TN FP FN ERRkuo@kurolab-VB:~/sotu/2017/can2b$ kuo@kurolab-V
B:~/sotu/2017/can2b$
l220
l221 dl=~/12voicedata_ueki_all;
l222 dn=${dl}_n; mkdir -p $dn #normalized
l223 dm=${dl}_m; mkdir -p $dm #mixed signal
l224 dq=${dl}_q; mkdir -p $dq #pole new
l225 sx=-l:a=1.6;b=300;N=30;
l226 sx=-l:a=1.6;b=300;N=40;
l227 sx=-l:a=1.6;b=40;N=40; #for short time check
l228 mbas=2:$(b):$(a):1
l229 L=1:2:3:4:5:6:7:8:9:10
l230 S=zero:ichi:ni:san:si:go:roku:nana:hachi:kyu
l231 S=fhs:fms:mkk:mko:mt:nh:ny
l232 R=1:0.8 #1:0.8:0.6 #1:0.8:0.6:0.4
l233 cmd=python oob4speakerdigit+sx_20180602.py -sp $S -tx $D -L $L -R $R -k 36 -mbas $mbas -dir $dq -s
-l -N ${N} -sx ${sx} -j;$cmd
l234 sx=-l:a=1.6;b=300;N=30;
l235 cat .~/12voicedata_ueki_all/q/oob4sd-result.dat
l236 0.631 0.967 0.033 0.369 0.102 = 183 1070 36 107 143 #TP,TN,FP,FN,ERR nl396 m=fhs R1:0.8 S:fhs:fms:nk
k:mko:mt:nh:ny
l237 0.639 0.977 0.023 0.361 0.093 = 184 1082 26 104 130 #TP,TN,FP,FN,ERR nl396 m=fms R1:0.8 S:fhs:fms:nk
k:mko:mt:nh:ny
l238 0.625 0.976 0.024 0.375 0.100 = 190 1066 26 114 140 #TP,TN,FP,FN,ERR nl396 m=nkk R1:0.8 S:fhs:fms:nk
k:mko:mt:nh:ny
l239 0.591 0.971 0.029 0.409 0.111 = 178 1063 32 123 155 #TP,TN,FP,FN,ERR nl396 m=nko R1:0.8 S:fhs:fms:nk
k:mko:mt:nh:ny
l240 0.626 0.963 0.037 0.374 0.110 = 189 1053 41 113 154 #TP,TN,FP,FN,ERR nl396 m=mt R1:0.8 S:fhs:fms:nk
```

```
k:mko:mt:nh:ny
l241 0.568 0.964 0.036 0.432 0.123 = 175 1049 39 133 172 #TP,TN,FP,FN,ERR nl396 m=nh R1:0.8 S:fhs:fms:mkk
k:mko:mt:nh:ny
l242 0.608 0.970 0.030 0.392 0.108 = 183 1062 33 118 151 #TP,TN,FP,FN,ERR nl396 m=ny R1:0.8 S:fhs:fms:mkk
k:mko:mt:nh:ny
l243 0.613 0.970 0.030 0.387 0.107 #mean TP TN FP FN ERR
l244 #cat .~/12voicedata_ueki_all/q/oob4sd-result.dat|awk 'BEGIN{in=0;TP=TN=FP=FN=ERR=0}{in++;TP+=$1;TN+=$2
;FN+=$3;FN+=$4;ERR+=$5}END{printf("%3f %3f %3f %3f %3f\n",TP/n,TN/n,FP/n,FN/n,ERR
/n)}'
l245
l246
l247 cat .~/12voicedata_ueki_all/q/oob4sd-result.dat
l248 0.970 0.982 0.018 0.030 0.020 = 96 588 11 3 14 #TP,TN,FP,FN,ERR n698 m=fhs R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l249 0.950 0.983 0.017 0.050 0.021 = 95 588 10 5 15 #TP,TN,FP,FN,ERR n698 m=fms R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l250 0.920 0.973 0.027 0.080 0.034 = 92 582 16 8 24 #TP,TN,FP,FN,ERR n698 m=nkk R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l251 0.950 0.977 0.023 0.050 0.027 = 95 584 14 5 19 #TP,TN,FP,FN,ERR n698 m=nko R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l252 0.980 0.973 0.027 0.020 0.026 = 97 583 16 2 18 #TP,TN,FP,FN,ERR n698 m=mt R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l253 0.940 0.975 0.025 0.060 0.030 = 94 583 15 6 21 #TP,TN,FP,FN,ERR n698 m=nh R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l254 0.950 0.957 0.043 0.050 0.044 = 95 572 26 5 31 #TP,TN,FP,FN,ERR n698 m=ny R1 S:fhs:fms:mkk:mko:mt:
nh:ny
l255
l256 0.497 0.976 0.024 0.503 0.155 = 95 495 12 96 108 #TP,TN,FP,FN,ERR n698 m=fhs R0.8 S:fhs:fms:mkk:mko:
mt:nh:ny
l257 0.479 0.969 0.031 0.521 0.163 = 90 494 16 98 114 #TP,TN,FP,FN,ERR n698 m=fms R0.8 S:fhs:fms:mkk:mko:
mt:nh:ny
l258 0.461 0.980 0.020 0.539 0.172 = 94 484 10 110 120 #TP,TN,FP,FN,ERR n698 m=nkk R0.8 S:fhs:fms:mkk:mko
:mt:nh:ny
l259 0.463 0.958 0.042 0.537 0.185 = 93 476 21 108 129 #TP,TN,FP,FN,ERR n698 m=nko R0.8 S:fhs:fms:mkk:mko
:mt:nh:ny
l260 0.443 0.982 0.018 0.557 0.175 = 90 486 9 113 122 #TP,TN,FP,FN,ERR n698 m=mt R0.8 S:fhs:fms:mkk:mko:
mt:nh:ny
l261 0.433 0.945 0.055 0.567 0.208 = 90 463 27 118 145 #TP,TN,FP,FN,ERR n698 m=nh R0.8 S:fhs:fms:mkk:mko
:mt:nh:ny
l262 0.488 0.948 0.052 0.512 0.185 = 98 471 26 103 129 #TP,TN,FP,FN,ERR n698 m=ny R0.8 S:fhs:fms:mkk:mko
:mt:nh:ny
l263
l264 0.480 0.968 0.032 0.520 0.172 = 96 482 16 104 120 #TP,TN,FP,FN,ERR n698 m=fhs R0.6 S:fhs:fms:mkk:mko
:mt:nh:ny
l265 0.483 0.958 0.042 0.517 0.179 = 97 476 21 104 125 #TP,TN,FP,FN,ERR n698 m=fms R0.6 S:fhs:fms:mkk:mko
:mt:nh:ny
l266 0.420 0.951 0.049 0.580 0.205 = 86 469 24 119 143 #TP,TN,FP,FN,ERR n698 m=nkk R0.6 S:fhs:fms:mkk:mko
:mt:nh:ny
l267 0.488 0.949 0.051 0.512 0.191 = 103 462 25 108 133 #TP,TN,FP,FN,ERR n698 m=nko R0.6 S:fhs:fms:mkk:mko
:mt:nh:ny
l268 0.514 0.940 0.060 0.486 0.172 = 94 484 31 89 120 #TP,TN,FP,FN,ERR n698 m=mt R0.6 S:fhs:fms:mkk:mko:
mt:nh:ny
l269 0.477 0.954 0.046 0.523 0.178 = 92 482 23 101 124 #TP,TN,FP,FN,ERR n698 m=nh R0.6 S:fhs:fms:mkk:mko
:mt:nh:ny
l270 0.414 0.935 0.065 0.586 0.216 = 84 463 32 119 151 #TP,TN,FP,FN,ERR n698 m=ny R0.6 S:fhs:fms:mkk:mko
:mt:nh:ny
l271
l272 0.455 0.944 0.056 0.545 0.198 = 92 468 28 110 138 #TP,TN,FP,FN,ERR n698 m=fhs R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l273 0.411 0.946 0.054 0.589 0.209 = 83 469 27 119 146 #TP,TN,FP,FN,ERR n698 m=fms R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l274 0.426 0.962 0.038 0.574 0.195 = 87 475 19 117 136 #TP,TN,FP,FN,ERR n698 m=nkk R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l275 0.382 0.946 0.054 0.618 0.232 = 84 452 26 136 162 #TP,TN,FP,FN,ERR n698 m=nko R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l276 0.468 0.951 0.049 0.532 0.179 = 88 485 25 100 125 #TP,TN,FP,FN,ERR n698 m=mt R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l277 0.411 0.967 0.033 0.589 0.185 = 78 491 17 112 129 #TP,TN,FP,FN,ERR n698 m=nh R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l278 0.411 0.955 0.045 0.589 0.193 = 78 485 23 112 135 #TP,TN,FP,FN,ERR n698 m=ny R0.4 S:fhs:fms:mkk:mko
:mt:nh:ny
l279
l280 0.460 0.942 0.058 0.540 0.196 = 92 469 29 108 137 #TP,TN,FP,FN,ERR n698 m=fhs R0.2 S:fhs:fms:mkk:mko
:mt:nh:ny
l281 0.411 0.928 0.072 0.589 0.226 = 86 454 35 123 158 #TP,TN,FP,FN,ERR n698 m=fms R0.2 S:fhs:fms:mkk:mko
:mt:nh:ny
l282 0.416 0.948 0.052 0.584 0.206 = 84 470 26 118 144 #TP,TN,FP,FN,ERR n698 m=nkk R0.2 S:fhs:fms:mkk:mko
:mt:nh:ny
l283 0.441 0.935 0.065 0.559 0.209 = 90 462 32 114 146 #TP,TN,FP,FN,ERR n698 m=nko R0.2 S:fhs:fms:mkk:mko
:mt:nh:ny
l284 0.516 0.931 0.069 0.484 0.183 = 99 471 35 93 128 #TP,TN,FP,FN,ERR n698 m=mt R0.2 S:fhs:fms:mkk:mko:
mt:nh:ny
```

1285 0.455 0.945 0.055 0.545 0.189 = 87 479 28 104 132 #TP, TN, FP, FN, ERR n698 m=mnh R0.2 S:fhs: fms: mkk: mko
:mnt: mnt: mym
1286 0.460 0.936 0.064 0.540 0.199 = 91 468 32 107 139 #TP, TN, FP, FN, ERR n698 m=mnym R0.2 S:fhs: fms: mkk: mko
:mnt: mnt: mym
1287
1288 0.628 0.988 0.012 0.372 0.087 = 182 1093 13 108 121 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1289 0.639 0.980 0.020 0.361 0.090 = 184 1086 22 104 126 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1290 0.599 0.985 0.015 0.401 0.099 = 182 1076 16 122 138 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1291 0.598 0.966 0.034 0.402 0.113 = 180 1058 37 121 158 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1292 0.606 0.985 0.015 0.394 0.097 = 183 1078 16 119 135 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1293 0.568 0.969 0.031 0.432 0.120 = 175 1054 34 133 167 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1294 0.618 0.982 0.018 0.382 0.097 = 186 1075 20 115 135 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 S:fhs: fms: mk
k: mko: mnt: mnt: mym
1295 python ob4spakedigit+sx.20180602.py -sp fhs: fms: mkk: mko: mnt: mnt: mym -tx zero: ichi: ni: san: si: go: ro
ku: nana: fha: ky -L 1: 2: 3: 4: 5: 6: 7: 8: 9: 10 -R 1: 0.8: 0.6 -k 36 -mbas 2: 300: 1: 6: 1 -dir ../l2voicdata_ukel_all_
q -s -l -N 30 -sx -l
1296 0.516 0.979 0.021 0.484 0.129 = 253 1571 33 237 270 #TP, TN, FP, FN, ERR n2094 n=fhs R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1297 0.495 0.982 0.018 0.505 0.132 = 242 1576 29 247 276 #TP, TN, FP, FN, ERR n2094 n=fms R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1298 0.499 0.982 0.018 0.501 0.136 = 254 1556 29 255 284 #TP, TN, FP, FN, ERR n2094 n=mnkk R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1299 0.475 0.979 0.021 0.525 0.145 = 243 1548 34 269 303 #TP, TN, FP, FN, ERR n2094 n=mko R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1300 0.499 0.988 0.012 0.501 0.125 = 242 1590 19 243 262 #TP, TN, FP, FN, ERR n2094 n=mnt R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1301 0.467 0.976 0.024 0.533 0.146 = 234 1554 39 267 306 #TP, TN, FP, FN, ERR n2094 n=mnh R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1302 0.472 0.976 0.024 0.528 0.145 = 238 1552 38 266 304 #TP, TN, FP, FN, ERR n2094 n=mnym R1:0.8:0.6 S:fhs: fm
s: mkk: mko: mnt: mnt: mym
1303
1304 #####
1305 #####
1306 0.607 0.981 0.019 0.393 0.097 = 176 1085 21 114 135 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1307 0.594 0.978 0.022 0.406 0.101 = 171 1084 24 117 141 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1308 0.582 0.973 0.027 0.418 0.112 = 177 1063 29 127 156 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1309 0.591 0.972 0.028 0.409 0.110 = 178 1064 31 123 154 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1310 0.596 0.969 0.031 0.404 0.112 = 180 1060 34 122 156 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1311 0.532 0.965 0.035 0.468 0.130 = 164 1050 38 144 182 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1312 0.591 0.969 0.031 0.409 0.112 = 178 1061 34 123 157 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:40
:1:0:1 NI00
1313 0.585 0.972 0.028 0.415 0.111 #mean TP TN FP FN ERR
1314
1315 0.631 0.976 0.024 0.369 0.095 = 183 1080 26 107 133 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1316 0.628 0.985 0.015 0.372 0.089 = 181 1091 17 107 124 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1317 0.648 0.989 0.011 0.352 0.085 = 197 1080 12 107 119 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1318 0.618 0.978 0.022 0.382 0.100 = 186 1071 24 115 139 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1319 0.636 0.979 0.021 0.364 0.095 = 192 1071 23 110 133 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1320 0.597 0.980 0.020 0.403 0.105 = 184 1066 22 124 146 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1321 0.641 0.974 0.026 0.359 0.097 = 193 1067 28 108 136 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:60
:1:6:1 NI00
1322 0.628 0.980 0.020 0.372 0.095 #mean TP TN FP FN ERR
1323
1324 0.590 0.969 0.031 0.410 0.110 = 171 1072 34 119 153 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:40
:0:7:1 NI00
1325 0.556 0.977 0.023 0.444 0.110 = 160 1082 26 128 154 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:40
:0:7:1 NI00
1326 0.569 0.963 0.037 0.431 0.122 = 173 1052 40 131 171 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:40
:0:7:1 NI00
1327 0.581 0.957 0.043 0.419 0.124 = 175 1048 47 126 173 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:40
:0:7:1 NI00
1328 0.576 0.962 0.038 0.424 0.122 = 174 1052 42 128 170 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:40
:0:7:1 NI00
1329 0.500 0.946 0.054 0.500 0.153 = 154 1029 59 154 213 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:40

:0:7:1 NI00
1330 0.585 0.940 0.060 0.415 0.137 = 176 1029 66 125 191 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:40
:0:7:1 NI00
1331 0.565 0.959 0.041 0.435 0.125 #mean TP TN FP FN ERR
1332
1333 0.555 0.971 0.029 0.445 0.127 = 272 1557 47 218 265 #TP, TN, FP, FN, ERR n2094 n=fhs R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1334 0.577 0.970 0.030 0.423 0.122 = 282 1557 48 207 255 #TP, TN, FP, FN, ERR n2094 n=fms R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1335 0.558 0.974 0.026 0.442 0.127 = 284 1544 41 225 266 #TP, TN, FP, FN, ERR n2094 n=mnkk R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1336 0.588 0.962 0.038 0.412 0.129 = 301 1522 60 211 271 #TP, TN, FP, FN, ERR n2094 n=mko R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1337 0.577 0.970 0.030 0.423 0.121 = 280 1561 48 205 253 #TP, TN, FP, FN, ERR n2094 n=mnt R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1338 0.545 0.970 0.030 0.455 0.132 = 273 1545 48 228 276 #TP, TN, FP, FN, ERR n2094 n=mnh R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1339 0.563 0.974 0.026 0.437 0.125 = 284 1549 41 220 261 #TP, TN, FP, FN, ERR n2094 n=mnym R1:0.8:0.6 RX0 mbas
2:60:1:6:1 NI00
1340 0.566 0.970 0.030 0.434 0.126 #mean TP TN FP FN ERR
1341
1342 0.652 0.984 0.016 0.348 0.085 = 189 1088 18 101 119 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1343 0.642 0.991 0.009 0.358 0.081 = 185 1098 10 103 113 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1344 0.622 0.989 0.011 0.378 0.091 = 189 1080 12 115 127 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1345 0.638 0.981 0.019 0.362 0.093 = 192 1074 21 109 130 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1346 0.609 0.992 0.008 0.391 0.091 = 184 1085 9 118 127 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:40:
1:6:1 NI00
1347 0.627 0.991 0.009 0.373 0.090 = 193 1078 10 115 125 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1348 0.615 0.989 0.011 0.385 0.092 = 185 1083 12 116 128 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1349 0.629 0.988 0.012 0.371 0.089 #mean TP TN FP FN ERR0
1350 0.652 0.976 0.024 0.348 0.091 = 189 1080 26 101 127 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1351 0.642 0.977 0.023 0.358 0.092 = 185 1083 25 103 128 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1352 0.609 0.970 0.030 0.391 0.109 = 185 1059 33 119 152 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1353 0.628 0.974 0.026 0.372 0.101 = 189 1066 29 112 141 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1354 0.616 0.984 0.016 0.384 0.096 = 186 1076 18 116 134 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1355 0.620 0.972 0.028 0.380 0.105 = 191 1058 30 117 147 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1356 0.605 0.958 0.042 0.395 0.118 = 182 1049 46 119 165 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1357 0.625 0.973 0.027 0.375 0.102 #mean TP TN FP FN ERR
1358 0.655 0.982 0.018 0.345 0.086 = 190 1086 20 100 120 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1359 0.635 0.986 0.014 0.365 0.086 = 183 1093 15 105 120 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1360 0.625 0.984 0.016 0.375 0.095 = 190 1074 18 114 132 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1361 0.571 0.975 0.025 0.429 0.112 = 172 1068 27 129 156 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1362 0.596 0.990 0.010 0.404 0.095 = 180 1083 11 122 133 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1363 0.584 0.967 0.033 0.416 0.117 = 180 1052 36 128 164 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1364 0.568 0.980 0.020 0.432 0.109 = 171 1073 22 130 152 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1365 0.605 0.981 0.019 0.395 0.100 #mean TP TN FP FN ERR
1366
1367 0.652 0.976 0.024 0.348 0.091 = 189 1080 26 101 127 #TP, TN, FP, FN, ERR nl396 n=fhs R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1368 0.642 0.977 0.023 0.358 0.092 = 185 1083 25 103 128 #TP, TN, FP, FN, ERR nl396 n=fms R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1369 0.609 0.970 0.030 0.391 0.109 = 185 1059 33 119 152 #TP, TN, FP, FN, ERR nl396 n=mnkk R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1370 0.628 0.974 0.026 0.372 0.101 = 189 1066 29 112 141 #TP, TN, FP, FN, ERR nl396 n=mko R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1371 0.616 0.984 0.016 0.384 0.096 = 186 1076 18 116 134 #TP, TN, FP, FN, ERR nl396 n=mnt R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1372 0.620 0.972 0.028 0.380 0.105 = 191 1058 30 117 147 #TP, TN, FP, FN, ERR nl396 n=mnh R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1373 0.605 0.958 0.042 0.395 0.118 = 182 1049 46 119 165 #TP, TN, FP, FN, ERR nl396 n=mnym R1:0.8 RX0 mbas2:40
:1:6:1 NI00
1374 0.625 0.973 0.027 0.375 0.102 #mean TP TN FP FN ERR

```
1375 cat ../12voicedata_ueki_all_g/speaker-verif-result.dat #BGIN(n=0:TP=TN,FP=FN,ERR=0){n++;TP+=$1;
1376 FN,ERR/n};
1377 0.648 0.985 0.015 0.352 0.085 = 188 1089 17 102 119 #TP,TN,FP,FN,ERR nl396 m=fhs Rl:0.8 RX0 mbas2:40
1378 0.639 0.990 0.010 0.361 0.082 = 184 1097 11 104 115 #TP,TN,FP,FN,ERR nl396 m=fms Rl:0.8 RX0 mbas2:40
1379 0.628 0.993 0.007 0.372 0.087 = 191 1084 8 113 121 #TP,TN,FP,FN,ERR nl396 m=mkk Rl:0.8 RX0 mbas2:40:
1380 1.6:1 N300
1381 0.635 0.987 0.013 0.365 0.089 = 191 1081 14 110 124 #TP,TN,FP,FN,ERR nl396 m=eko Rl:0.8 RX0 mbas2:40
1382 0.626 0.990 0.010 0.374 0.089 = 189 1083 11 113 124 #TP,TN,FP,FN,ERR nl396 m=mt Rl:0.8 RX0 mbas2:40
1383 0.604 0.989 0.011 0.396 0.096 = 186 1076 12 122 134 #TP,TN,FP,FN,ERR nl396 m=mnh Rl:0.8 RX0 mbas2:40
1384 0.618 0.991 0.009 0.382 0.090 = 186 1085 10 115 125 #TP,TN,FP,FN,ERR nl396 m=ny Rl:0.8 RX0 mbas2:40
1385 0.628 0.989 0.011 0.372 0.088 #mean TP TN FP FN ERR
```

```
1386 sX=-1:a=1.6:b=300:N=40;
1387 cat ../12voicedata_ueki_all_g/speaker-verif-result.dat #oob prediction of training data
1388 0.939 0.977 0.013 0.061 0.020 = 46 295 4 3 7 #TP,TN,FP,FN,ERR n348 m=fhs Rl RX1
1389 0.940 0.977 0.023 0.060 0.029 = 47 291 3 10 #TP,TN,FP,FN,ERR n348 m=fms Rl RX1
1390 0.860 0.983 0.017 0.140 0.034 = 43 293 7 12 #TP,TN,FP,FN,ERR n348 m=eko Rl RX1
1391 0.860 0.977 0.023 0.140 0.026 = 48 291 7 2 9 #TP,TN,FP,FN,ERR n348 m=mt Rl RX1
1392 0.878 0.987 0.013 0.122 0.029 = 43 295 4 6 10 #TP,TN,FP,FN,ERR n348 m=mt Rl RX1
1393 0.860 0.990 0.010 0.140 0.029 = 43 295 3 7 10 #TP,TN,FP,FN,ERR n348 m=mnh Rl RX1
1394 0.880 0.970 0.030 0.120 0.043 = 44 289 9 6 15 #TP,TN,FP,FN,ERR n348 m=ny Rl RX1
1395 cat ../12voicedata_ueki_all_g/speaker-verif-result-X.dat #prediction of test data
1396 0.760 0.990 0.010 0.240 0.043 = 38 297 3 12 15 #TP,TN,FP,FN,ERR n350 m=fhs Rl RX1
1397 0.760 0.990 0.010 0.240 0.043 = 38 297 3 12 15 #TP,TN,FP,FN,ERR n350 m=fms Rl RX1
1398 0.860 0.960 0.040 0.320 0.080 = 34 288 12 26 #TP,TN,FP,FN,ERR n350 m=eko Rl RX1
1399 0.560 0.953 0.047 0.440 0.103 = 28 286 14 22 #TP,TN,FP,FN,ERR n350 m=mt Rl RX1
1400 0.400 0.997 0.003 0.360 0.054 = 32 299 1 18 19 #TP,TN,FP,FN,ERR n350 m=mt Rl RX1
1401 0.580 0.980 0.020 0.420 0.077 = 29 294 6 21 27 #TP,TN,FP,FN,ERR n350 m=mnh Rl RX1
1402 0.560 0.960 0.040 0.440 0.097 = 28 288 12 22 34 #TP,TN,FP,FN,ERR n350 m=ny Rl RX1
1403 sX=-1:a=1.6:b=300:N=40;
1404 cat ../12voicedata_ueki_all_g/speaker-verif-result.dat #oob prediction of training data
1405 0.939 0.977 0.013 0.061 0.020 = 46 295 4 3 7 #TP,TN,FP,FN,ERR n348 m=fhs Rl RX0.8
1406 0.940 0.977 0.023 0.060 0.029 = 47 291 3 10 #TP,TN,FP,FN,ERR n348 m=fms Rl RX0.8
1407 0.860 0.983 0.017 0.140 0.034 = 43 293 7 12 #TP,TN,FP,FN,ERR n348 m=eko Rl RX0.8
1408 0.860 0.977 0.023 0.140 0.026 = 48 291 7 2 9 #TP,TN,FP,FN,ERR n348 m=mt Rl RX0.8
1409 0.878 0.987 0.013 0.122 0.029 = 43 295 4 6 10 #TP,TN,FP,FN,ERR n348 m=mt Rl RX0.8
1410 0.860 0.990 0.010 0.140 0.029 = 43 295 3 7 10 #TP,TN,FP,FN,ERR n348 m=mnh Rl RX0.8
1411 0.880 0.970 0.030 0.120 0.043 = 44 289 9 6 15 #TP,TN,FP,FN,ERR n348 m=ny Rl RX0.8
1412 cat ../12voicedata_ueki_all_g/speaker-verif-result-X.dat #prediction of test data
1413 0.387 0.984 0.016 0.673 0.200 = 32 248 4 66 70 #TP,TN,FP,FN,ERR n350 m=fhs Rl RX0.8
1414 0.380 0.989 0.011 0.920 0.240 = 7 259 3 81 84 #TP,TN,FP,FN,ERR n350 m=fms Rl RX0.8
1415 0.309 0.996 0.004 0.691 0.220 = 34 239 1 76 77 #TP,TN,FP,FN,ERR n350 m=eko Rl RX0.8
1416 0.344 0.938 0.062 0.676 0.251 = 35 227 15 73 88 #TP,TN,FP,FN,ERR n350 m=mt Rl RX0.8
1417 0.232 0.984 0.016 0.768 0.229 = 23 247 4 76 80 #TP,TN,FP,FN,ERR n350 m=mt Rl RX0.8
1418 0.907 0.988 0.012 0.903 0.274 = 10 244 3 93 96 #TP,TN,FP,FN,ERR n350 m=mnh Rl RX0.8
1419 0.351 0.973 0.027 0.649 0.194 = 33 249 7 61 68 #TP,TN,FP,FN,ERR n350 m=ny Rl RX0.8
1420 sX=-1:a=1.6:b=40:N=40;
1421 cat ../12voicedata_ueki_all_g/speaker-verif-result.dat #oob prediction of training data
1422 0.939 0.993 0.007 0.061 0.014 = 46 297 2 3 5 #TP,TN,FP,FN,ERR n348 m=fhs Rl RX0.8
1423 0.900 1.000 0.000 0.100 0.014 = 45 298 0 5 5 #TP,TN,FP,FN,ERR n348 m=fms Rl RX0.8
1424 0.920 0.990 0.010 0.080 0.020 = 46 295 3 4 7 #TP,TN,FP,FN,ERR n348 m=eko Rl RX0.8
1425 0.900 0.990 0.010 0.100 0.023 = 45 295 3 5 8 #TP,TN,FP,FN,ERR n348 m=mt Rl RX0.8
1426 0.939 0.980 0.020 0.061 0.026 = 46 293 6 9 #TP,TN,FP,FN,ERR n348 m=mt Rl RX0.8
1427 0.960 0.973 0.027 0.040 0.029 = 48 290 2 10 #TP,TN,FP,FN,ERR n348 m=mnh Rl RX0.8
1428 0.880 0.990 0.010 0.120 0.026 = 44 295 3 6 9 #TP,TN,FP,FN,ERR n348 m=ny Rl RX0.8
1429 cat ../12voicedata_ueki_all_g/speaker-verif-result-X.dat #prediction of test data
1430 0.357 0.988 0.012 0.643 0.189 = 35 249 3 63 66 #TP,TN,FP,FN,ERR n350 m=fhs Rl RX0.8
1431 0.301 0.992 0.008 0.909 0.234 = 8 260 2 80 82 #TP,TN,FP,FN,ERR n350 m=fms Rl RX0.8
1432 0.300 0.992 0.008 0.700 0.226 = 33 238 2 77 79 #TP,TN,FP,FN,ERR n350 m=eko Rl RX0.8
1433 0.330 0.930 0.070 0.667 0.223 = 36 225 17 72 89 #TP,TN,FP,FN,ERR n350 m=mt Rl RX0.8
1434 0.242 0.988 0.012 0.758 0.223 = 24 248 3 75 78 #TP,TN,FP,FN,ERR n350 m=mt Rl RX0.8
1435 0.107 0.984 0.016 0.893 0.274 = 11 243 4 92 96 #TP,TN,FP,FN,ERR n350 m=mnh Rl RX0.8
1436 0.309 0.957 0.043 0.691 0.217 = 29 245 11 65 76 #TP,TN,FP,FN,ERR n350 m=ny Rl RX0.8
1437 sX=-1:a=1.6:b=40:N=40;
1438 cat ../12voicedata_ueki_all_g/speaker-verif-result.dat #oob prediction of training data
1439 0.527 0.961 0.039 0.473 0.155 = 49 245 10 44 54 #TP,TN,FP,FN,ERR n348 m=fhs Rl RX0.8
1440 0.400 0.988 0.012 0.520 0.155 = 48 245 3 52 55 #TP,TN,FP,FN,ERR n348 m=fms Rl RX0.8
1441 0.500 0.969 0.031 0.500 0.158 = 47 246 8 47 55 #TP,TN,FP,FN,ERR n348 m=eko Rl RX0.8
1442 0.484 0.949 0.051 0.516 0.175 = 45 242 13 48 61 #TP,TN,FP,FN,ERR n348 m=mt Rl RX0.8
1443 0.433 0.992 0.008 0.567 0.175 = 45 242 2 59 61 #TP,TN,FP,FN,ERR n348 m=mt Rl RX0.8
1444 0.410 0.975 0.025 0.590 0.195 = 43 237 6 62 68 #TP,TN,FP,FN,ERR n348 m=mnh Rl RX0.8
1445 0.374 0.979 0.021 0.626 0.207 = 40 236 5 67 72 #TP,TN,FP,FN,ERR n348 m=ny Rl RX0.8
1446 0.458 0.973 0.027 0.542 0.175 #mean TP TN FP FN ERR
1447 cat ../12voicedata_ueki_all_g/speaker-verif-result-X.dat #prediction of test data
```

```
1448 0.245 0.960 0.040 0.755 0.240 = 24 242 10 74 84 #TP,TN,FP,FN,ERR n350 m=fhs Rl:0.8 RX0.8
1449 0.193 0.973 0.027 0.807 0.223 = 17 255 7 71 78 #TP,TN,FP,FN,ERR n350 m=fms Rl:0.8 RX0.8
1450 0.218 0.975 0.025 0.782 0.263 = 24 234 6 86 92 #TP,TN,FP,FN,ERR n350 m=eko Rl:0.8 RX0.8
1451 0.241 0.963 0.037 0.759 0.260 = 26 233 9 82 91 #TP,TN,FP,FN,ERR n350 m=mt Rl:0.8 RX0.8
1452 0.212 0.984 0.016 0.788 0.234 = 21 247 4 78 82 #TP,TN,FP,FN,ERR n350 m=mt Rl:0.8 RX0.8
1453 0.107 0.965 0.016 0.893 0.274 = 11 243 4 92 96 #TP,TN,FP,FN,ERR n350 m=mnh Rl:0.8 RX0.8
1454 0.191 0.965 0.035 0.809 0.243 = 18 247 9 76 85 #TP,TN,FP,FN,ERR n350 m=ny Rl:0.8 RX0.8
1455 0.201 0.972 0.028 0.799 0.248 #mean TP TN FP FN ERR
1456 cat ../12voicedata_ueki_all_g/speaker-verif-result.dat #oob prediction of training data
1457 0.641 0.971 0.029 0.359 0.096 = 91 538 16 51 67 #TP,TN,FP,FN,ERR n696 m=fhs Rl:0.8 RX1:0.8
1458 0.593 0.980 0.020 0.407 0.103 = 89 543 11 61 72 #TP,TN,FP,FN,ERR n696 m=fms Rl:0.8 RX1:0.8
1459 0.639 0.960 0.016 0.361 0.088 = 92 543 9 52 61 #TP,TN,FP,FN,ERR n696 m=eko Rl:0.8 RX1:0.8
1460 0.678 0.960 0.040 0.322 0.098 = 97 531 22 46 68 #TP,TN,FP,FN,ERR n696 m=mt Rl:0.8 RX1:0.8
1461 0.608 0.972 0.028 0.392 0.108 = 93 528 15 60 75 #TP,TN,FP,FN,ERR n696 m=mt Rl:0.8 RX1:0.8
1462 0.523 0.974 0.026 0.477 0.126 = 81 527 14 74 88 #TP,TN,FP,FN,ERR n696 m=mnh Rl:0.8 RX1:0.8
1463 0.523 0.963 0.037 0.408 0.112 = 93 519 20 64 84 #TP,TN,FP,FN,ERR n696 m=ny Rl:0.8 RX1:0.8
1464 0.592 0.963 0.037 0.408 0.112 = 93 519 20 64 84 #TP,TN,FP,FN,ERR n696 m=ny Rl:0.8 RX1:0.8
1465 0.611 0.972 0.028 0.369 0.106 #mean TP TN FP FN ERR
1466 0.439 0.980 0.020 0.561 0.134 = 65 541 11 83 94 #TP,TN,FP,FN,ERR n700 m=fhs Rl:0.8 RX1:0.8
1467 0.428 0.975 0.025 0.572 0.133 = 59 548 14 79 93 #TP,TN,FP,FN,ERR n700 m=fms Rl:0.8 RX1:0.8
1468 0.425 0.985 0.015 0.575 0.143 = 68 532 8 92 100 #TP,TN,FP,FN,ERR n700 m=eko Rl:0.8 RX1:0.8
1469 0.418 0.941 0.059 0.582 0.177 = 66 510 32 92 124 #TP,TN,FP,FN,ERR n700 m=mt Rl:0.8 RX1:0.8
1470 0.416 0.989 0.011 0.584 0.133 = 62 545 6 87 93 #TP,TN,FP,FN,ERR n700 m=mt Rl:0.8 RX1:0.8
1471 0.281 0.980 0.020 0.719 0.173 = 43 536 11 110 121 #TP,TN,FP,FN,ERR n700 m=mnh Rl:0.8 RX1:0.8
1472 0.410 0.971 0.029 0.590 0.144 = 59 540 16 85 101 #TP,TN,FP,FN,ERR n700 m=ny Rl:0.8 RX1:0.8
1473 0.402 0.974 0.026 0.598 0.148 #mean TP TN FP FN ERR
1474 #search lack
1475 #ls $(dq)/*R0.*6* > ../wc.txt
1476 #for ((n=10;n<700;n+=100)); do
1477 # echo -n "L8n "; cat ../wc.txt |head -$n |tail -1
1478 #done
1479 #wc $(dq)/*R0.*6* > ../wc.txt
1480 #for ((n=10;n<700;n+=100)); do
1481 # echo -n "L8n "; cat ../wc.txt |head -$n |tail -1
1482 #done
1483 #wc $(dq)/*R0.*6* > ../wc.txt
1484 #for ((n=10;n<700;n+=100)); do
1485 # echo -n "L8n "; cat ../wc.txt |head -$n |tail -1
1486 #done
1487 #rm ../wc.txt
1488 #L10 1 36 101 ../12voicedata_ueki_all_g/fhs-go9-nko-kyu10-R0.8-p.dat
1489 #L110 1 36 102 ../12voicedata_ueki_all_g/fms-hachil1-mmt-zero10-R0.8-p.dat no ../12voicedata_
1490 #L110 1 36 100 ../12voicedata_ueki_all_g/mkk-hachil1-fms-kyu4-R0.8-p.dat
1491 #L210 1 36 100 ../12voicedata_ueki_all_g/mkk-hachil1-fms-kyu4-R0.8-p.dat
1492 #L310 1 36 101 ../12voicedata_ueki_all_g/mko-hachil1-mnh-kyu3-R0.8-p.dat
1493 #L410 1 36 100 ../12voicedata_ueki_all_g/mmt-hachil1-mym-go5-R0.8-p.dat
1494 #L510 1 36 98 ../12voicedata_ueki_all_g/mnh-hachil10-mkk-san10-R0.8-p.dat
1495 #L610 1 36 105 ../12voicedata_ueki_all_g/mym-hachil10-mkk-si3-R0.8-p.dat
1496 #
1497 #L10 1 36 102 ../12voicedata_ueki_all_g/fhs-go9-fms-si3-R0.6-p.dat
1498 #L110 1 36 101 ../12voicedata_ueki_all_g/fms-hachil1-fhs-kyu10-R0.6-p.dat
1499 #L210 1 36 99 ../12voicedata_ueki_all_g/mkk-hachil10-fhs-si1-R0.6-p.dat no ../12voicedata_
1500 #L310 1 36 102 ../12voicedata_ueki_all_g/mko-hachil10-mmt-go10-R0.6-p.dat
1501 #L410 1 36 104 ../12voicedata_ueki_all_g/mmt-hachil10-mkk-si3-R0.6-p.dat
1502 #L510 1 36 104 ../12voicedata_ueki_all_g/mnh-hachil2-mko-si8-R0.6-p.dat
1503 #L610 1 36 102 ../12voicedata_ueki_all_g/mym-hachil2-mnh-san9-R0.6-p.dat
1504 #wc $(dq)/fhs*R0.6* $(dq)/fhs*R0.8*
1505 ##notup sh/mkq2.sh &
1506 ## ( ( RANDOM % n ) + 1 ) #0-32767
1507 ##
1508 #export LANG=C
1509 #dl=../12voicedata_ueki_all;
1510 #dn=${dl}_n; mkdir -p $dn #normalized
1511 #dm=${dl}_m; mkdir -p $dm #mixed signal
1512 #dp=${dl}_p; mkdir -p $dp #pole
1513 #S=(fhs fms mkk mko mnh mym)
1514 #L=(1 2 3 4 5 6 7 8 9)
1515 #D=(zero ichi ni san si go roku nana hachi kyu)
1516 #R=(0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9)
1517
1518 ##S=(fhs mkk)
1519 #L=(9 5)
1520 #D=(zero)
1521 #for s in fhs; do
1522 # for d in kyu; do
1523 # for l in y; do
1524 # for r in 0.5; do
1525 # for i in 1 2 3 4 5 6 7 8 9; do
1526 #
```

```
1528 # for s2 in mkk; do
1529 #   if [ "$s2" != "$s" ]; then
1530 #     for d in san; do
1531 #       for l2 in 5; do
1532 #         sm=${s}-${d}${l2}-${s2}-${d2}${l2}-rs${l}
1533 #         cmd="python speechmix.py -y0 $dn/${s}-${d}${l2}.dat -y1 $dm/${s2}-${d2}${l2}.dat -r $r"
1534 #         echo "$cmd>$dm/${sm}.dat"; $cmd > $dm/${sm}.dat
1535 #         cmd1="poledistribv2+ st:${sm} N:24 k:8 m:poles4 dir:${dm} rsa:2:0.7:1:20 DiffMode:0 tt:0:400 T
1536 #         echo "$cmd1"; $cmd1
1537 #         cmd2="mkpoleptv2+ st:$sm k:8 Np:24 dir:tmp dir2:${dm} dout:${dp} rsa:2:20 tt:0:400 nt:18 nr:2
1538 #         echo "$cmd2"
1539 #         echo "$cmd2"; $cmd2
1540 #         cmd="cp tmp/q.dat "
1541 #         make data-clean
1542 #         done;
1543 #         fi
1544 #         done;
1545 #         done;
1546 #         done;
1547 #         done;
1548 #         done;
1549 #         done;
1550 #20140502 at mesaho
1551 #1551
1552 pair.datに基幹となるデータとランダムに選んだデータの
1553 ペアを書き込んでいる。
1554 0.5～0.9のフォルダには基幹となるデータとa=0.5～0.9倍したデータと
1555 ランダムに選んだデータを1-a倍して見し合わせたデータをそれぞれ入れている。
1556 #####
1557 # (2)実行コマンド from Tagonori, modified by Kurogi
1558 #####
1559 make
1560 make data-clean
1561 sX=-1:a=1.6;b=300:N=40;
1562 sX=-1:a=1.6;b=300:N=30;
1563 mbaas=2:${D}:${a}:1
1564 #####tagonori's PC
1565 dir=../12voicedata/allpole
1566 dir2=../0.9/allpole
1567 #####kurogi's PC
1568 dir=../2012/12voicedata/allpole
1569 dir2=/media/sf_C_DRIVE/cdata/kurolab/data/20180206onsei/0.9/allpole
1570 dir2=../2012/12voicedata/allpole_fake
1571 #####for simply check the program with two speakers
1572 cmd="oob4speakerdigit+sx.2018 sp:fms:tx:zero:ichi ntxi:9 k:36 mbaas:$mbas dir:$dir1 dir2:$dir2 s:
-1 N:${sx}"
1573 #####for final check of all speakers
1574 cmd="oob4speakerdigit+sx.2018 sp:fms:tx:zero:ichi ni: san:si:go:roku:nana:hac
hi:kyu ntxi:9 k:36 mbaas:2:${b}:${a}:1 dir:$dir1 dir2:$dir2 s:-1 N:${N} sx:${sx}"
1575 echo $cmd>$cmd
1576 cmd1="cat $(dir1)/oob4s:-1N${N}mbas${sx}${sx}.ystat" #cmd1="cat $(dir1)/oob4s:-1N${N}mbas2:300:
1.6:1sx-1.ystat
1577 echo $cmd1;$cmd1
1578 #####
1579 #####
1580 # (3) 結果例 executed by Kurogi from here
1581 #####
1582
1583
1584
20171124
1585 # (0) 12voicedataの音声ファイルはkurolab2の植木君のディレクトリにあった
1586 # http://home/kurolab/sotu/2012/12voicedata_ueki.7zに保存した
1587 # (1) 1.2,3,...の値を抽出する
1588 make
1589 sp=fms:mkk:mko:mnt:mmh:my
1590 tx=zero:ichi ni: san:si:go:roku:sichi:kyu:rei:yon:nana:ku
1591 dir=../2012/12voicedata/zero #←自分のPCのフォルダの構造に合わせて設定すべし！
1593 dir=/media/sf_C_DRIVE/cdata/kurolab/data/12voicedata_ueki/12voicedata/zero
1594 cmd="poledistribv2 sp:${sp} tx:${tx} N:24 k:8 m:poles4 dir:${dir} rsa:2:0.7:1:20 DISP:1 DiffMode:0 t
t:0:400 T:100"
1595 $cmd
1596 #20180531 short exp
1597 #poledistribv2 sp:fms tx:zero: N:24 k:8 m:poles4 dir:/media/sf_C_DRIVE/cdata/kurolab/data/12voicedat
a_ueki/12voicedata/zero rsa:2:0.7:1:20 DISP:1 DiffMode:0 tt:0:400 T:100
1598
1599 # (2) この極配置をベクトル化する
1600 dirp=$(dir)p
1601 cmd="mkpoleptv2 sp:${sp} tx:${tx} k:8 Np:24 dir:tmp dir2:${dir} data:${dirp} rsa:2:20 tt:0:400 nt:18
1602
```

```
nr:2 r_max:2"
1603 $cmd
1604 #short exp
1605 #mkpoleptv2 sp:fms tx:zero: k:8 Np:24 dir:tmp dir2:/media/sf_C_DRIVE/cdata/kurolab/data/12voicedata_
ueki/12voicedata/zero data:/media/sf_C_DRIVE/cdata/kurolab/data/12voicedata_ueki/12voicedata/zerop rsa:2:20
tt:0:400 nt:18 nr:2 r_max:2
1606 #mkpoleptv2 calles
1607 #mkpoleptv1 sp:fms tx:zero: k:8 N:24 dir:tmp data:/media/sf_C_DRIVE/cdata/kurolab/data/12voicedata_u
eki/12voicedata/zerop rsa:2:20 tt:0:3170 nt:18 nr:2 r_max:2.000000 > /dev/null
1608
1609 (4) dirpの -p.datファイルはallpoleディレクトリに保存
1610 cp $(dirp)/*-p.dat ../2012/12voicedata/allpole/
1611
1612 #####new(5).(6)
1613 (5) oob4speakerdigit+sx:
1614 各話者の zero, kyuの 特徴ベクトルves[q] (極配置ベクトルを入力し、
1615 CANVAS(S)の出力ベクトルv(S)を求めるプログラム)
1616 この出力ファイル(?)には入力と出力のペアが保存されているはず
1617 #see 「20140502 at mesaho」 for oob4speakerdigit+sx to make ../2012/12voicedata/iconip14data/oob4
s:-1N40mbas2:300:1.6:1sx${sx}.y
1618 出力ファイル名: ../2012/12voicedata/allpole/oob4s:-1N${N}mbas2:${b}:${a}:1sx${sx}n${N}nd${nd}.y
stat
1619
1620 (6)
1621 #20160515 ICONIP2016の整理
1622 # [0] sh/iconip16expl.sh(speakerdigit_v8.cを使用) のオプションの説明
1623
1624 #old(5)
1625 (5) 話者認識・数字認識実験をする
1626 cmd="loo4aprecogv1 sp:${sp} tx:${tx} k:36 N:20 dir:${dirp} rsa:2:0.7:1:20"
1627 $cmd
1628 #話者 CAN2
1629 #dira=../2012/12voicedata/allpole
1630 cmd="oob4speakerdigit+ sp:fms:tx:zero:ichi ni: san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 mbaas:2:300:1.6:1 dir:$dira s:-1 N:40"#$cmd
1631 数字 CAN2
1632 cmd="oob4speakerdigit+ sp:fms:tx:zero:ichi ni: san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 mbaas:2:300:1.6:1 dir:$dira d:-1 N:40"#$cmd
1633
1634 cmd="oob4speakerdigit+ sp:fms:tx:zero:ichi ni: san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 mbaas:2:300:1.6:1 dir:$dira d:-1 N:40"#$cmd
1635
1636 #see 「20140502 at mesaho」 for oob4speakerdigit+sx to make ../2012/12voicedata/iconip14data/oob4
s:-1N40mbas2:300:1.6:1sx${sx}.y
1637 a=1.6;b=300:N=40;sX=-1
1638 cmd="oob4speakerdigit+sx sp:fms:tx:zero:ichi ni: san:yon:go:roku:nana:hachi:k
yu ntxi:10 k:36 mbaas:2:${b}:${a}:1 dir:../2012/12voicedata/allpole s:-1 N:${N} sx:${sx}"
1639 echo $cmd;time $cmd
1640 0.920 0.967 0.033 0.080 1.619e-04 700 6 #TP,TN,FP,ERR,n,sm6 for check.
1641 #result in ../2012/12voicedata/allpole/oob4s:-1N40mbas2:300:1.6:1sx-1.y' and ' ../2012/12voice
data/allpole/oob4s:-1N40mbas2:300:1.6:1sx-1.ystat'. reall51m7.810s user147m4.488s gcc
1642 0.920 0.967 0.033 0.080 1.619e-04 700 6 #TP,TN,FP,ERR,n,sm6 for check.
1643 #result in ../2012/12voicedata/allpole/oob4s:-1N40mbas2:300:1.6:1sx-1.y' and ' ../2012/12voice
data/allpole/oob4s:-1N40mbas2:300:1.6:1sx-1.ystat'. real42m54.198s user30m44.935s gcc
1644
1645
1646
20171122
1647 # (0) 極配置ベクトルを作るプログラムの詳細は、readme-mineishi.txtを参照のこと
1648 # (1) 値を抽出する
1649 sp=fms:mkk
1650 tx=daigaku:daigaku2 #09voicedata involves fms:mkk:mhy:mkk:mno:msm:mtm:mkw:my
1651 dir=../can2_voicedata/09voicedata/daigaku #←自分のPCのフォルダの構造に合わせて設定すべし！
1652 # フォルダ ../can2_voicedata/1
1653 # http://kurolab.cnti.kyutech.ac.jp/~kuro/sotu/2012/can2_voicedata.7zを解凍したもの
1655 # 元々はkurolab2サーバの/home/mineishi/can2dataを圧縮したもの(can2bの中身は少し変えてる)
1656 cmd="poledistribv2 sp:${sp} tx:${tx} N:24 k:8 m:poles4 dir:${dir} rsa:2:0.7:1:20 DISP:1 DiffMode:0 t
t:0:400 T:100"
1657 #cmd="poledistribv2 sp:${sp} tx:${tx} N:24 k:8 m:poles4 dir:${dir} rsa:2:0.7:1:20 DISP:1 DiffMode:0
tt:0:400 T:100 DISP:0"
1658 $cmd
1659 # (2) この極配置をベクトル化する
1660 sp=fms:mkk #09voicedata has fms:mkk:mhy:mkk:mno:msm:mtm:mkw:my
1661 tx=daigaku:daigaku2 #daigaku has daigaku:daigaku2:daigaku3:daigaku4:daigaku5 #
1663 dir=../can2_voicedata/09voicedata/daigaku
1664 dirp=$(dir)p
1665 cmd="mkpoleptv2 sp:${sp} tx:${tx} k:8 Np:24 dir:tmp dir2:${dir} data:${dirp} rsa:2:20 tt:0:400 nt:18
nr:2 r_max:2"
1666 $cmd
1667
1668 (3) 話者認識実験をする
1669 cmd="loo4aprecogv1 sp:${sp} tx:${tx} k:36 N:20 dir:${dirp} rsa:2:0.7:1:20"
1670
```

```
1670 $cmd
1671
1672 #####
1673 #####
1674 20161104
1675 ###
1676 (1) speakerdigit_v8.cのバグを修正した。
1677 主なバグは、訓練およびテストの時系列の長さを変えたと、エラーがでることであり、次の2つの変数：
1678 #define MAX_nutCoop 200 //111#define line MAX_nutCoop 500
1679 #define MAX_nt 3000
1680 #define 音と関連する箇所の修正を行った。
1681 指定話者の出現パターン (DTCCoP)を訓練時とテスト時で異なる設定ができるスクリプト
1682 sh/iconipl6post.shを作成した。
1683 以下に示す実験例では、
1684 手順2-1(訓練)：指定話者の出現パターンをL50(非指定話者1000の後、20:50,15:50,10:50,5:50を繰り返す)と
1685 手順2-2(テスト)：指定話者の出現パターンをL11(10:30の繰返)、L12(20:30の繰返)、L13(30:30)、L14(5:30)
1686 ,
1687 結果を示している
1688 L15(15:300の繰返)としg-GBEI(gibbs:1:1:0.3:500)とg-BI(gibbs:1:1:0.25:0)で行い、その
1689 (3)上の例では、g-GBEI(gibbs:1:1:0.3:500)とし、g-GBEIの初期化の時刻は500となっているが、これを
1690 越え幅300,400,500,600などに対し、500が良いことも確かめられる(ういっつかの実験例で確かめただけで、
1691 これが上の各例で言えるかどうか追加実験して下さい)
1692
1693 #ハードディスクの容量オーバーのため訓練データを残して再実験のときは以下の2行を行う
1694 #chmod 555 ../result-speakerdetect/*L50*
1695 #rm -rf ../result-speakerdetect/*
1696 #####L50 original
1697 ##手順2-1(訓練)g-GBEI(gibbs:1:1:0.3:500)&L50 (L50に対するテストも行われる)
1698 export fgpr="rm nshop.out/nshop.sh sh/iconipl6post.sh gibbs:1:1:0.3:500 L50 3 2 4& #g-GBEI, after t
1699 he finish, tail -9 nshop.out
1700 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3;SiCs=2:tDR=4
1701 0.810 0.130 0.057 0.003 798000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1702 0.296 0.418 0.279 0.002 252000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1703 0.012 0.248 0.567 0.174 259000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1704 0.001 0.004 0.086 0.909 4277000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1705 0.994 0.006 #pC01C0 pC01C3 nC01Detected/nC01all= 725130/1050000=0.691
1706 0.002 0.998 #pC23C0 pC23C3 nC23Detected/nC23all=3940244/4536000=0.869
1707 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L50tr3Su2td4
1708 ##手順2-1(訓練)g-BI(gibbs:1:0.25:0)&L50 (L50Cに対するテストも行われる)
1709 export fgpr="rm nshop.out/nshop.sh ../sh/iconipl6post.sh gibbs:1:1:0.25:0 L50 3 2 4& #g-BI, after the
1710 finish, tail -9 nshop.out
1711 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2:tDR=4
1712 0.750 0.199 0.048 0.003 798000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1713 0.446 0.464 0.085 0.005 252000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1714 0.032 0.022 0.713 0.234 259000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1715 0.004 0.009 0.055 0.933 4277000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1716 # C0 C3 N #Confusion Matrix using undecidable
1717 0.995 0.005 #pC01C0 pC01C3 nC01Detected/nC01all= 714546/1050000=0.681
1718 0.006 0.994 #pC23C0 pC23C3 nC23Detected/nC23all=4076443/4536000=0.899
1719 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L50tr3Su2td4
1720 #####
1721 ##手順2-2(テスト)g-GBEItail better than g-BI below
1722 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L50tr3Su2td4/ProbbDistSpeaker
1723 rm nshop.out/nshop.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:0.3:500 L11 3 2 4& #g-GBEI, aft
er the finish, tail -9 nshop.out
1724 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3;SiCs=2:tDR=4
1725 0.740 0.205 0.053 0.002 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1726 0.346 0.392 0.257 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1727 0.011 0.266 0.604 0.119 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1728 0.002 0.007 0.140 0.851 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1729 0.995 0.005 #pC01C0 pC01C3 nC01Detected/nC01all= 655935/1050000=0.625
1730 0.004 0.996 #pC23C0 pC23C3 nC23Detected/nC23all=2800462/3556000=0.788
1731 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L11tr3Su2td4
1732 ##手順2-2(テスト)g-BItail
1733 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:0.25:0L50tr3Su2td4/ProbbDistSpeaker
1734 rm nshop.out/nshop.sh ../sh/iconipl6post.sh gibbs:1:1:0.25:0 L11 3 2 4& #g-BI, after the finish, tail -
9 nshop.out
1735 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2:tDR=4
1736 0.644 0.311 0.043 0.001 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1737 0.496 0.423 0.076 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1738 0.039 0.024 0.772 0.165 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1739 0.006 0.014 0.089 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1740 # C0 C3 N #Confusion Matrix using undecidable
1741 0.996 0.004 #pC01C0 pC01C3 nC01Detected/nC01all= 631890/1050000=0.602
1742 0.011 0.989 #pC23C0 pC23C3 nC23Detected/nC23all=2963352/3556000=0.833
1743 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L11tr3Su2td4
1744 #####L12
1745 ##手順2-2(テスト)g-GBEIL12
```

```
1746 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L50tr3Su2td4/ProbbDistSpeaker
1747 rm nshop.out/nshop.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:0.3:500 L12 3 2 4& #g-GBEI, aft
er the finish, tail -9 nshop.out
1748 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3;SiCs=2:tDR=4
1749 0.900 0.083 0.017 0.000 1785000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1750 0.336 0.391 0.268 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1751 0.015 0.328 0.561 0.096 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1752 0.003 0.008 0.150 0.839 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1753 # C0 C3 N #Confusion Matrix using undecidable
1754 0.999 0.001 #pC01C0 pC01C3 nC01Detected/nC01all=1713915/2100000=0.816
1755 0.005 0.995 #pC23C0 pC23C3 nC23Detected/nC23all=2758770/3556000=0.776
1756 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L12tr3Su2td4
1757 ##手順2-2(テスト)g-BI L12
1758 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L50tr3Su2td4/ProbbDistSpeaker
1759 rm nshop.out/nshop.sh ../sh/iconipl6post.sh gibbs:1:1:0.25:0 L12 3 2 4& #g-BI, after the finish, tail -
9 nshop.out
1760 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2:tDR=4
1761 0.835 0.149 0.016 0.000 1785000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1762 0.497 0.424 0.075 0.004 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1763 0.039 0.024 0.782 0.155 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1764 0.006 0.014 0.090 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1765 # C0 C3 N #Confusion Matrix using undecidable
1766 0.999 0.001 #pC01C0 pC01C3 nC01Detected/nC01all=1648290/2100000=0.785
1767 0.011 0.989 #pC23C0 pC23C3 nC23Detected/nC23all=2960132/3556000=0.832
1768 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L12tr3Su2td4
1769 ##手順2-2(テスト)g-GBEI L13
1770 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L50tr3Su2td4/ProbbDistSpeaker
1771 rm nshop.out/nshop.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:1:0.3:500 L13 3 2 4& #g-GBEI, aft
er the finish, tail -9 nshop.out
1772 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:1:0.3:500:DTCT=3;SiCs=2:tDR=4
1773 0.937 0.054 0.010 0.000 2835000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1774 0.354 0.382 0.259 0.006 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1775 0.016 0.331 0.081 0.322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1776 0.003 0.008 0.150 0.839 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1777 # C0 C3 N #Confusion Matrix using undecidable
1778 0.999 0.001 #pC01C0 pC01C3 nC01Detected/nC01all=2769795/3150000=0.879
1779 0.005 0.995 #pC23C0 pC23C3 nC23Detected/nC23all=2754262/3556000=0.775
1780 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.3:500L13tr3Su2td4
1781 ##手順2-2(テスト)g-BI L13
1782 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L50tr3Su2td4/ProbbDistSpeaker
1783 rm nshop.out/nshop.sh ../sh/iconipl6post.sh gibbs:1:1:0.25:0 L13 3 2 4& #g-BI, after the finish, tail -
9 nshop.out
1784 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2:tDR=4
1785 0.884 0.105 0.010 0.000 2835000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1786 0.496 0.423 0.077 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1787 0.039 0.025 0.782 0.154 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1788 0.006 0.014 0.090 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1789 # C0 C3 N #Confusion Matrix using undecidable
1790 0.999 0.001 #pC01C0 pC01C3 nC01Detected/nC01all=2663955/3150000=0.846
1791 0.011 0.989 #pC23C0 pC23C3 nC23Detected/nC23all=2959810/3556000=0.832
1792 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L13tr3Su2td4
1793 ##手順2-2(テスト)g-GBEI L14 worse than g-BI !!!
1794 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:1:0.3:500L50tr3Su2td4/ProbbDistSpeaker
1795 rm nshop.out/nshop.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:1:0.3:500 L14 3 2 4& #g-GBEI, aft
er the finish, tail -9 nshop.out
1796 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:1:0.3:500:DTCT=3;SiCs=2:tDR=4
1797 0.011 0.180 0.746 0.063 180000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1798 0.225 0.419 0.346 0.010 270000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1799 0.001 0.008 0.464 0.527 276000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1800 0.002 0.007 0.086 0.905 2772000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1801 # C0 C3 N #Confusion Matrix using undecidable
1802 0.817 0.183 #pC01C0 pC01C3 nC01Detected/nC01all= 767770/ 450000=0.171
1803 0.002 0.998 #pC23C0 pC23C3 nC23Detected/nC23all=2659932/3048000=0.873
1804 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:1:0.3:500L14tr3Su2td4
1805 ##手順2-2(テスト)g-BI L14
1806 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L50tr3Su2td4/ProbbDistSpeaker
1807 rm nshop.out/nshop.sh ../sh/iconipl6post.sh gibbs:1:1:0.25:0 L14 3 2 4& #g-BI, after the finish, tail -
9 nshop.out
1808 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2:tDR=4
1809 0.223 0.274 0.453 0.050 180000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1810 0.303 0.576 0.113 0.008 276000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1811 0.010 0.013 0.535 0.442 276000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1812 0.005 0.015 0.083 0.898 2772000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costatnary
1813 # C0 C3 N #Confusion Matrix using undecidable
1814 0.916 0.084 #pC01C0 pC01C3 nC01Detected/nC01all= 133110/ 450000=0.296
1815 0.006 0.994 #pC23C0 pC23C3 nC23Detected/nC23all=2627868/3048000=0.862
1816 cp nshop.out ../result-speakerdetect/iconipl6post.gibbs:1:1:0.25:0L14tr3Su2td4
1817
1818 ##手順2-2(テスト)g-GBEI L15
1819 export fgpr=../result-speakerdetect/iconipl6post.gibbs:1:1:1:0.3:500L50tr3Su2td4/ProbbDistSpeaker
1820 rm nshop.out/nshop.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:1:0.3:500 L15 3 2 4& #g-GBEI, aft
er the finish, tail -9 nshop.out
```

```
1821 #手順2-2(テスト) g-BI L15
1822 export fpgs../result-speakerdetect/iconipl6post_gibbs:1:0.25:0L10tr3Su2td4/ProbDistSpeaker
1823 rm nhup.out/nhup.sh ./sh/iconipl6post.sh gibbs:1:0.25:0 L15 3 2 4 & #g-BI, after the finish, tail -
9 nhup.out
1824 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
1825 0.856 0.119 0.025 0.000 126000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1826 0.342 0.396 0.257 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1827 0.014 0.308 0.577 0.100 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1828 0.003 0.007 0.148 0.842 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1829 # CO C3 N #Confusion Matrix using undecidable
1830 0.999 0.001 #pC01C0 pC01C3 nC01Detected/nc01all=1187865/1575000=0.754
1831 0.005 0.995 #pC23C0 pC23C3 nC23Detected/nc23all=2769438/3556000=0.779
1832 cp nhup.out ../result-speakerdetect/iconipl6post_gibbs:1:1:0.3:500L15tr3Su2td4
1833 #####
1834 #####g-GEBI with fpg for L13
1835
1836 ##export fpgs../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:100L10tr3Su2td4/ProbDistSpeaker
1837 ##rm nhup.out/nhup.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:0.3:500 L13 3 2 4 & #g-GEBI,
after the finish, tail -9 nhup.out
1838 ## CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
1839 ##0.868 0.103 0.008 0.000 283500 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1840 ##0.446 0.293 0.236 0.006 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1841 ##0.298 0.072 0.549 0.081 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1842 ##0.010 0.001 0.149 0.839 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1843 ## CO C3 N #Confusion Matrix using undecidable
1844 ##0.999 0.001 #pC01C0 pC01C3 nC01Detected/nc01all=2666160/3150000=0.846
1845 ##0.045 0.955 #pC23C0 pC23C3 nC23Detected/nc23all=2867704/3556000=0.806
1846 ##cp nhup.out ../result-speakerdetect/iconipl6post_gibbs:1:1:0.3:500L13tr3Su2td4
1847 #####g-BI with fpg for L13
1848 ##export fpgs../result-speakerdetect/iconipl6expl+_gibbs:1:0.25:0L10tr3Su2td4/ProbDistSpeaker
1849 ##rm nhup.out/nhup.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:0.25:0 L13 3 2 4 & #g-BI, after
the finish, tail -9 nhup.out
1850 ## CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3:SiCs=2:tDR=4
1851 ##0.894 0.105 0.010 0.000 283500 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1852 ##0.436 0.423 0.077 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1853 ##0.039 0.025 0.782 0.154 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1854 ##0.006 0.014 0.090 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1855 ## CO C3 N #Confusion Matrix using undecidable
1856 ##0.999 0.001 #pC01C0 pC01C3 nC01Detected/nc01all=2666395/3150000=0.846
1857 ##0.011 0.989 #pC23C0 pC23C3 nC23Detected/nc23all=2959810/3556000=0.832
1858 ##cp nhup.out ../result-speakerdetect/iconipl6post_gibbs:1:0.25:0L13tr3Su2td4
1859 #####
1860 #####g-GEBI with fpg for L12
1861 ##export fpgs../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:100L10tr3Su2td4/ProbDistSpeaker
1862 ##rm nhup.out/nhup.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:0.3:500 L12 3 2 4 & #g-GEBI,
after the finish, tail -9 nhup.out
1863 ## CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
1864 ##0.878 0.095 0.026 0.001 1785000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1865 ##0.293 0.317 0.366 0.024 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1866 ##0.009 0.180 0.636 0.175 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1867 ##0.003 0.004 0.079 0.915 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1868 ## CO C3 N #Confusion Matrix using undecidable
1869 ##0.994 0.006 #pC01C0 pC01C3 nC01Detected/nc01all=1668870/2100000=0.795
1870 ##0.004 0.996 #pC23C0 pC23C3 nC23Detected/nc23all=3028060/3556000=0.852
1871 ##cp nhup.out ../result-speakerdetect/iconipl6post_gibbs:1:1:0.3:500L12tr3Su2td4
1872 #####
1873 ##g-BI with fpg for L12
1874 ##export fpgs../result-speakerdetect/iconipl6expl+_gibbs:1:0.25:0L10tr3Su2td4/ProbDistSpeaker
1875 ##rm nhup.out/nhup.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:0.25:0 L12 3 2 4 & #g-BI, after
the finish, tail -9 nhup.out
1876 ## CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3:SiCs=2:tDR=4
1877 ##0.835 0.149 0.016 0.000 1785000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1878 ##0.497 0.424 0.075 0.004 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1879 ##0.039 0.024 0.782 0.155 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1880 ##0.006 0.014 0.090 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1881 ## CO C3 N #Confusion Matrix using undecidable
1882 ##0.999 0.001 #pC01C0 pC01C3 nC01Detected/nc01all=1648290/2100000=0.785
1883 ##0.011 0.989 #pC23C0 pC23C3 nC23Detected/nc23all=2869132/3556000=0.852
1884 ##cp nhup.out ../result-speakerdetect/iconipl6post_gibbs:1:0.25:0L12tr3Su2td4
1885 #####
1886 ##g-GEBI with fpg for L11 worse than g-BI???
1887 ##export fpgs../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:100L10tr3Su2td4/ProbDistSpeaker
1888 ##rm nhup.out/nhup.sh ~/sotu/2015/can2b/sh/iconipl6post.sh gibbs:1:1:0.3:500 L11 3 2 4 & #g-GEBI,
after the finish, tail -9 nhup.out
1889 ## CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
1890 ##0.624 0.329 0.045 0.002 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
1891 ##0.458 0.299 0.238 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
1892 ##0.248 0.050 0.963 0.119 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1893 ##0.008 0.002 0.139 0.881 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1894 ## CO C3 N #Confusion Matrix using undecidable
1895 ##0.995 0.005 #pC01C0 pC01C3 nC01Detected/nc01all= 605955/1050000=0.577
1896 ##0.037 0.963 #pC23C0 pC23C3 nC23Detected/nc23all=2896180/3556000=0.814
```

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1973 ###
1974 ###
1975 ###
1976 #####L11( repetition of 30,10)
1977 #####BI for L11
1978 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:0.25:0:DTCT=3;SiCs=2;tDR=4
r the finish, tail -9 nhup.out
1979 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:0.25:0:DTCT=3;SiCs=2;tDR=4
1980 #####.702 0.258 0.039 0.001 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
1981 #####.525 0.396 0.074 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
1982 #####.048 0.018 0.769 0.016 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1983 #####.011 0.012 0.087 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1984 ##### CO C3 N #Confusion Matrix using undecidable
1985 #####.917 0.003 #PC01C0 PC01C3 nC01Detected/nC01all= 683655/1050000=0.651
1986 #####.017 0.983 #PC23C0 PC23C3 nC23Detected/nC23all=2982420/3556000=0.839
1987 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:0.25:0:110tr3Su2td4
1988 #####
1989 #####GEBI better than above g-BI (C0x0=0.792>0.702
1990 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:500 L11 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
1991 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3;SiCs=2;tDR=4
1992 #####.792 0.133 0.072 0.003 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
1993 #####.402 0.253 0.332 0.014 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
1994 #####.020 0.150 0.665 0.165 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
1995 #####.002 0.004 0.097 0.897 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
1996 ##### CO C3 N #Confusion Matrix using undecidable
1997 #####.991 0.009 #PC01C0 PC01C3 nC01Detected/nC01all= 715365/1050000=0.681
1998 #####.004 0.996 #PC23C0 PC23C3 nC23Detected/nC23all=2966936/3556000=0.834
1999 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:500L11tr3Su2td4
2000 #####
2001 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:600 L11 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2002 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:600:DTCT=3;SiCs=2;tDR=4
2003 #####.799 0.109 0.088 0.004 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2004 #####.347 0.200 0.436 0.017 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2005 #####.028 0.148 0.655 0.169 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2006 #####.002 0.003 0.098 0.897 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2007 ##### CO C3 N #Confusion Matrix using undecidable
2008 #####.988 0.012 #PC01C0 PC01C3 nC01Detected/nC01all= 704865/1050000=0.671
2009 #####.005 0.995 #PC23C0 PC23C3 nC23Detected/nC23all=2970800/3556000=0.835
2010 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:600L11tr3Su2td4
2011 #####
2012 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:400 L11 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2013 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:400:DTCT=3;SiCs=2;tDR=4
2014 #####.790 0.135 0.072 0.003 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2015 #####.470 0.244 0.272 0.010 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2016 #####.017 0.127 0.668 0.188 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2017 #####.003 0.006 0.097 0.894 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2018 ##### CO C3 N #Confusion Matrix using undecidable
2019 #####.993 0.007 #PC01C0 PC01C3 nC01Detected/nC01all= 735000/1050000=0.700
2020 #####.005 0.995 #PC23C0 PC23C3 nC23Detected/nC23all=2966908/3556000=0.837
2021 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:400L11tr3Su2td4
2022 #####
2023 #####GEBI for L10
2024 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh g000 L10 3 2 4k #g-BI, after the fini
sh, tail -9 nhup.out
2025 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:0.25:0:DTCT=3;SiCs=2;tDR=4
ter the finish, tail -9 nhup.out
2026 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:0.25:0:DTCT=3;SiCs=2;tDR=4
2027 #####.750 0.199 0.047 0.003 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2028 #####.447 0.464 0.084 0.005 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2029 #####.032 0.021 0.720 0.227 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2030 #####.006 0.015 0.089 0.890 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2031 ##### CO C3 N #Confusion Matrix using undecidable
2032 #####.995 0.005 #PC01C0 PC01C3 nC01Detected/nC01all=1072197/1575000=0.681
2033 #####.010 0.990 #PC23C0 PC23C3 nC23Detected/nC23all=3505411/4186000=0.837
2034 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:0.25:0:110tr3Su2td4
2035 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:0.25:0 L1 3 2 4k #g-BI, after
the finish, tail -9 nhup.out
2036 #####
2037 #####Best GEBI 0.825=C00 for L10
2038 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:500 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2039 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3;SiCs=2;tDR=4
2040 #####.825 0.113 0.059 0.004 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2041 #####.329 0.423 0.241 0.006 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2042 #####.014 0.275 0.501 0.211 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2043 #####.002 0.011 0.132 0.885 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2044 ##### CO C3 N #Confusion Matrix using undecidable
2045 #####.994 0.006 #PC01C0 PC01C3 nC01Detected/nC01all=1118943/1575000=0.710
2046 #####.004 0.996 #PC23C0 PC23C3 nC23Detected/nC23all=3344082/4186000=0.799
```

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2047 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:500L10tr3Su2td4
2048 #####
2049 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:600 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2050 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:600:DTCT=3;SiCs=2;tDR=4
2051 #####.820 0.127 0.049 0.004 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2052 #####.281 0.545 0.167 0.007 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2053 #####.014 0.389 0.392 0.205 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2054 #####.002 0.014 0.128 0.856 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2055 ##### CO C3 N #Confusion Matrix using undecidable
2056 #####.993 0.007 #PC01C0 PC01C3 nC01Detected/nC01all=1095192/1575000=0.695
2057 #####.004 0.996 #PC23C0 PC23C3 nC23Detected/nC23all=3345573/4186000=0.799
2058 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:600L10tr3Su2td4
2059 #####
2060 #####GEBI best t.00=200? best for 0.999=C3detected?
2061 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:200 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2062 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:200:DTCT=3;SiCs=2;tDR=4
2063 #####.696 0.228 0.073 0.003 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2064 #####.382 0.495 0.119 0.005 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2065 #####.000 0.066 0.662 0.271 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2066 #####.001 0.015 0.103 0.881 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2067 ##### CO C3 N #Confusion Matrix using undecidable
2068 #####.994 0.006 #PC01C0 PC01C3 nC01Detected/nC01all= 982989/1575000=0.624
2069 #####.001 0.999 #PC23C0 PC23C3 nC23Detected/nC23all=3456817/4186000=0.826
2070 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:200L10tr3Su2td4
2071 #####
2072 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:1e8 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2073 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:1e8:DTCT=3;SiCs=2;tDR=4
2074 #####.749 0.073 0.149 0.029 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2075 #####.083 0.265 0.362 0.290 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2076 #####.000 0.086 0.009 0.905 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2077 ##### CO C3 N #Confusion Matrix using undecidable
2078 #####.935 0.065 #PC01C0 PC01C3 nC01Detected/nC01all= 988344/1575000=0.628
2079 #####.009 0.991 #PC23C0 PC23C3 nC23Detected/nC23all=3376800/4186000=0.856
2080 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:1e8L10tr3Su2td4
2081 #####
2082 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:400 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2083 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:400:DTCT=3;SiCs=2;tDR=4
2084 #####.690 0.167 0.060 0.004 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2085 #####.296 0.511 0.187 0.006 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2086 #####.004 0.224 0.545 0.227 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2087 #####.009 0.009 0.126 0.861 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2088 ##### CO C3 N #Confusion Matrix using undecidable
2089 #####.993 0.007 #PC01C0 PC01C3 nC01Detected/nC01all=1039437/1575000=0.660
2090 #####.005 0.995 #PC23C0 PC23C3 nC23Detected/nC23all=3376800/4186000=0.857
2091 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:400L10tr3Su2td4
2092 #####
2093 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:300 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2094 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:300:DTCT=3;SiCs=2;tDR=4
2095 #####.699 0.228 0.070 0.003 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2096 #####.316 0.528 0.150 0.005 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2097 #####.001 0.113 0.617 0.270 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2098 #####.004 0.011 0.112 0.873 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2099 ##### CO C3 N #Confusion Matrix using undecidable
2100 #####.994 0.006 #PC01C0 PC01C3 nC01Detected/nC01all= 961632/1575000=0.611
2101 #####.005 0.995 #PC23C0 PC23C3 nC23Detected/nC23all=3437812/4186000=0.821
2102 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:300L10tr3Su2td4
2103 #####
2104 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:300L10tr3Su2td4
2105 #####
2106 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.3:100 L10 3 2 4k #g-GEBI,
after the finish, tail -9 nhup.out
2107 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:100:DTCT=3;SiCs=2;tDR=4
2108 #####.768 0.153 0.074 0.005 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2109 #####.070 0.279 0.048 0.004 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
2110 #####.033 0.008 0.536 0.424 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2111 #####.026 0.013 0.069 0.892 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2112 ##### CO C3 N #Confusion Matrix using undecidable
2113 #####.994 0.006 #PC01C0 PC01C3 nC01Detected/nC01all=1180053/1575000=0.749
2114 #####.030 0.970 #PC23C0 PC23C3 nC23Detected/nC23all=3665263/4186000=0.876
2115 #####nhup.out ../result-speakerdetect/iconipl6expl+_gibbs:1:1:0.3:100L10tr3Su2td4
2116 #####
2117 #####
2118 #####nhup.out:nhup sh ~/sotu/2015/can2b/sh/iconipl6expl+_sh gibbs:1:1:0.25:0 L11 3 2 4k #g-BI, afte
r the finish, tail -9 nhup.out
2119 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2;tDR=4
2120 #####.702 0.258 0.039 0.001 735000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crsstationary
2121 #####.525 0.396 0.074 0.005 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Cttransient
```



```
2122 ##### 0.048 0.018 0.769 0.165 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2123 ##### 0.011 0.012 0.087 0.890 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2124 ##### CO C3 N #Confusion Matrix using undecidable
2125 ##### 0.997 0.003 #pC01C0 pC01C3 nC01Detected/nc01all= 683655/1050000=0.651
2126 ##### 0.017 0.983 #pC23C0 pC23C3 nC23Detected/nc23all=298240/3556000=0.839
2127 ##### nohup.out ../result-speakerdetect/iconip16expl+_gibbs:1:0.25:0L11tr3Su2td4
2128 ###
2129 ##### nohup.out/nohup.sh ~/sotu/2015/can2b/sh/iconip16expl+_sh gibbs:1:0.25:0 L12 3 2 4k #g-BI, afte
r the finish, tail -9 nohup.out
2130 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:0.25:0:DTCT=3:SiCs=2:tDR=4
2131 ##### 0.860 0.127 0.010 0.002 2835000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2132 ##### 0.433 0.484 0.077 0.006 315000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2133 ##### 0.006 0.057 0.782 0.156 322000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2134 ##### 0.000 0.020 0.090 0.891 3234000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2135 ##### CO C3 N #Confusion Matrix using undecidable
2136 ##### 0.997 0.003 #pC01C0 pC01C3 nC01Detected/nc01all=2582055/3150000=0.820
2137 ##### 0.001 0.999 #pC23C0 pC23C3 nC23Detected/nc23all=2933698/3556000=0.825
2138 ##### nohup.out ../result-speakerdetect/iconip16expl+_gibbs:1:0.25:0L11tr3Su2td4
2139 ##### nohup.out/nohup.sh ~/sotu/2015/can2b/sh/iconip16expl+_sh gibbs:1:0.25:0 L14 3 2 4k #g-BI, afte
r the finish, tail -9 nohup.out
2140 ##### nohup.out/nohup.sh ~/sotu/2015/can2b/sh/iconip16expl+_sh gibbs:1:0.25:0 L15 3 2 4k #g-BI, afte
r the finish, tail -9 nohup.out
2141 ###
2142 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g101 L10 3 2 4k #g-GBE1, after the finish, tail -9
nohup.out
2143 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
2144 ##### 0.838 0.081 0.070 0.011 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2145 ##### 0.268 0.432 0.272 0.028 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2146 ##### 0.034 0.318 0.408 0.239 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2147 ##### 0.002 0.038 0.070 0.890 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2148 ##### CO C3 N #Confusion Matrix using undecidable
2149 ##### 0.979 0.021 #pC01C0 pC01C3 nC01Detected/nc01all=1128141/1575000=0.716
2150 ##### 0.006 0.994 #pC23C0 pC23C3 nC23Detected/nc23all=3495597/4166000=0.835
2151 ##### nohup.out ../result-speakerdetect/iconip16expl_g101L10tr3Su2td4
2152 ###
2153 ##### nohup.out .....
2154 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g104 L10 3 2 4k #g-GBE1, after the finish, tail -9
nohup.out
2155 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:300:DTCT=3:SiCs=2:tDR=4
2156 ##### 0.760 0.166 0.070 0.004 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2157 ##### 0.328 0.479 0.184 0.008 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2158 ##### 0.005 0.207 0.589 0.198 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2159 ##### 0.004 0.011 0.130 0.855 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2160 ##### CO C3 N #Confusion Matrix using undecidable
2161 ##### 0.992 0.008 #pC01C0 pC01C3 nC01Detected/nc01all=1041516/1575000=0.661
2162 ##### 0.005 0.995 #pC23C0 pC23C3 nC23Detected/nc23all=3343214/4166000=0.799
2163 ##### nohup.out ../result-speakerdetect/iconip16expl_g104L10tr3Su2td4
2164 ###
2165 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g102 L10 3 2 4k #g-GBE1, after the finish, tail -9
nohup.out
2166 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:200:DTCT=3:SiCs=2:tDR=4
2167 ##### 0.730 0.197 0.069 0.004 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2168 ##### 0.312 0.509 0.171 0.008 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2169 ##### 0.002 0.114 0.699 0.185 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2170 ##### 0.000 0.011 0.123 0.866 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2171 ##### CO C3 N #Confusion Matrix using undecidable
2172 ##### 0.992 0.008 #pC01C0 pC01C3 nC01Detected/nc01all= 999558/1575000=0.635
2173 ##### 0.000 1.000 #pC23C0 pC23C3 nC23Detected/nc23all=3363661/4166000=0.804
2174 ##### nohup.out ../result-speakerdetect/iconip16expl_g102L10tr3Su2td4
2175 ###
2176 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g103 L10 3 2 4k #g-GBE1, after the finish, tail -9
nohup.out
2177 ##### CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:100:DTCT=3:SiCs=2:tDR=4
2178 ##### 0.743 0.187 0.067 0.003 1197000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2179 ##### 0.541 0.368 0.085 0.006 378000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2180 ##### 0.027 0.028 0.657 0.288 385000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2181 ##### 0.008 0.017 0.092 0.883 3801000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2182 ##### CO C3 N #Confusion Matrix using undecidable
2183 ##### 0.992 0.005 #pC01C0 pC01C3 nC01Detected/nc01all=1099728/1575000=0.698
2184 ##### 0.012 0.988 #pC23C0 pC23C3 nC23Detected/nc23all=3507966/4166000=0.838
2185 ##### nohup.out ../result-speakerdetect/iconip16expl_g103L10tr3Su2td4
2186 ###
2187
2188
2189 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g1 L1 3 3 4k
2190 ##### 0.60515 ICONIP2016の整理
2191 #101 sh/iconip16expl.sh (speakerdigit_v8.cを 使用) のオプションの説明
2192 (a)g10:BI
2193 (b)g11:GBE1
2194 (c)g0:g-BI
2195 (d)g1:g-GBE1 t_0=500 (p4の式)(e):初期化する時刻 t_0:論文 P.6 の下から2行目 t-t_0=>500)
2196 (e)g2:g-GBE1 t_0=200 (論文 P.6 の下から2行目 t-t_0=>500) ICONIP2016では使用してない。
```

```
2197 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g1 L1 3 2 4k
2198 ##### (1) BI
2199 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g10 L1 3 2 4k
2200 ##### -->Fig2(a)
2201
2202 # (2) GEBI
2203 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g11 L1 3 2 4k
2204 ##### -->Fig2(b) GEBI
2205
2206 # (3) g-BI
2207 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g0 L1 3 2 4k
2208 ##### -->Fig2(c), Fig3(a), Table1(a)
2209
2210 # (4) g-GBE1
2211 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g1 L1 3 2 4k
2212 ##### -->Fig2(d), Fig3(b), #Table 1(b)
2213
2214 以下、結果
2215
2216 #20160411->20160515 ICONIP2016
2217 #Usage: nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh <gl> <ln> <DTCT> <SiCs> <tDR> &
2218 # <gl>: g0, g1,g2
2219 # <ln>: L0, L1, L2, ...
2220 # <DTCT>:length of transient period
2221 # <SiCs>:2 for registered only 3 for unregistered
2222 # <tDR>: delay of Detaction
2223
2224 #ICONIP2016 Table1(a)
2225 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g0 L1 3 2 4k
2226 tail -8 ../result-speakerdetect/iconip16expl_g0L1tr3Su2td4/nohup.out
2227 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3:SiCs=2:tDR=4
2228 0.752 0.200 0.045 0.003 266000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2229 0.445 0.462 0.087 0.006 84000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2230 0.031 0.020 0.675 0.273 91000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2231 0.006 0.011 0.065 0.918 1155000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2232 # CO C3 N #Confusion Matrix using undecidable
2233 0.993 0.005 #pC01C0 pC01C3 nC01Detected/nc01all= 238714/ 350000=0.682
2234 0.009 0.991 #pC23C0 pC23C3 nC23Detected/nc23all=1094884/1246000=0.879
2235
2236 #ICONIP2016 Table 1(b)
2237 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g1 L1 3 2 4k
2238 tail -8 ../result-speakerdetect/iconip16expl_g1L1tr3Su2td4/nohup.out
2239 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
2240 0.784 0.156 0.056 0.004 266000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2241 0.197 0.579 0.218 0.007 84000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2242 0.005 0.269 0.509 0.217 91000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2243 0.000 0.005 0.101 0.894 1155000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2244 # CO C3 N #Confusion Matrix using undecidable
2245 0.993 0.007 #pC01C0 pC01C3 nC01Detected/nc01all= 226744/ 350000=0.648
2246 0.000 1.000 #pC23C0 pC23C3 nC23Detected/nc23all=1052772/1246000=0.845
2247
2248 ##### <SiCs>=3:unregistered speaker not used in iconip2016
2249 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g0 L1 3 3 4k
2250 tail -8 ../result-speakerdetect/iconip16expl_g0L1tr3Su3td4/nohup.out
2251 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3:SiCs=3:tDR=4
2252 0.867 0.022 0.103 0.007 266000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2253 0.882 0.104 0.177 0.037 84000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2254 0.413 0.091 0.355 0.141 91000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2255 0.213 0.047 0.178 0.562 1155000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2256 # CO C3 N #Confusion Matrix using undecidable
2257 0.983 0.017 #pC01C0 pC01C3 nC01Detected/nc01all= 292880/ 350000=0.837
2258 0.300 0.700 #pC23C0 pC23C3 nC23Detected/nc23all= 945539/1246000=0.759
2259
2260 nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g1 L1 3 3 4k
2261 tail -8 ../result-speakerdetect/iconip16expl_g1L1tr3Su3td4/nohup.out
2262 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=3:tDR=4
2263 0.895 0.037 0.060 0.008 266000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
2264 0.576 0.258 0.117 0.049 84000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtstationary
2265 0.483 0.202 0.194 0.121 91000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2266 0.239 0.171 0.094 0.496 1155000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2267 # CO C3 N #Confusion Matrix using undecidable
2268 0.979 0.021 #pC01C0 pC01C3 nC01Detected/nc01all= 292698/ 350000=0.836
2269 0.354 0.646 #pC23C0 pC23C3 nC23Detected/nc23all= 903889/1246000=0.725
2270 ##### nohup sh ~/sotu/2015/can2b/sh/iconip16expl.sh g1 L9 3 2 4
2271 tail -8 ../result-speakerdetect/iconip16expl_g1L9tr3Su2td4/nohup.out
2272 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:500:DTCT=3:SiCs=2:tDR=4
2273 0.503 0.260 0.157 0.080 140000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crtstationary
```

参照

```
2279 0.244 0.681 0.059 0.015 210000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
2280 0.131 0.018 0.382 0.469 217000 100 #p20 p21 p22 p23 n2 wp2 for C2=Cotransient
2281 0.029 0.008 0.050 0.013 228900 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2282 # CO C1 C2 C3 N #Confusion Matrix using undecidable
2283 0.894 0.106 #PC01C0 PC01C3 nC01Detected/nC01all= 136010/ 350000=0.389
2284 0.041 0.959 #PC23C0 PC23C3 nC23Detected/nC23all=2286438/2506000=0.912
2285
2286 tail -8 ../result-speakerdetect/iconipl6expl_g1Ltr3Su2td4/nohup.out
2287 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:100:DTCT=3;SiCs=2;tDR=4
2288 0.768 0.154 0.073 0.005 266000 100 #p00 p01 p02 p03 n0 wp0 for C0=Crstationary
2289 0.667 0.078 0.051 0.004 84000 100 #p10 p11 p12 p13 n1 wp1 for C1=Crtransient
2290 0.031 0.007 0.508 0.455 91000 100 #p20 p21 p22 p23 n2 wp2 for C2=Costationary
2291 0.019 0.009 0.053 0.919 1155000 100 #p30 p31 p32 p33 n3 wp2 for C3=Costationary
2292 # CO C3 N #Modified Confusion Matrix
2293 0.994 0.006 #PC01C0 PC01C3 nC01Detected/nC01all= 261982/ 350000=0.749
2294 0.022 0.978 #PC23C0 PC23C3 nC23Detected/nC23all=1127616/1246000=0.905
2295
2296 #####
2297 #####
2298 #####
2299 #####
2300
2301 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g10 L1 3 2 4&
2302 tail ../result-speakerdetect/iconipl6expl_g10Ltr3Su2td4/nohup.out
2303 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0:DTCT=3;SiCs=2;tDR=4 #result of
original B1
2304 0.028 0.758 0.207 0.007 266000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2305 0.027 0.957 0.009 0.007 84000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2306 0.001 0.001 0.985 0.013 91000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2307 0.001 0.046 0.915 0.037 1155000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2308 # CO C3 N #Modified Confusion Matrix
2309 0.799 0.201 12166 #p00 p03 N0 for target C0=Cp
2310 0.028 0.972 45164 #p30 p33 N3 for target C3=Co
2311 0.964 0.036 1596000 #PNT 1-PNT num-of-all-data
2312
2313 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g0 L1 3 2 4&
2314 tail ../result-speakerdetect/iconipl6expl_g0Ltr3Su2td4/nohup.out
2315 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2;tDR=4
2316 0.752 0.200 0.045 0.003 266000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2317 0.445 0.462 0.087 0.076 84000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2318 0.031 0.020 0.675 0.273 91000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2319 0.006 0.011 0.065 0.918 1155000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2320 # CO C3 N #Modified Confusion Matrix
2321 0.995 0.005 238714 #p00 p03 N0 for target C0=Cp
2322 0.009 0.991 1.0948e+06 #p30 p33 N3 for target C3=Co
2323 0.164 0.836 1596000 #PNT 1-PNT num-of-all-data
2324
2325 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g1 L1 3 2 4&
2326 tail ../result-speakerdetect/iconipl6expl_g1Ltr3Su2td4/nohup.out
2327 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:50:DTCT=3;SiCs=2;tDR=4
2328 0.784 0.156 0.056 0.004 266000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2329 0.197 0.579 0.218 0.007 84000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2330 0.005 0.269 0.509 0.217 91000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2331 0.000 0.005 0.101 0.894 1155000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2332 # CO C3 N #Modified Confusion Matrix
2333 0.993 0.007 226744 #p00 p03 N0 for target C0=Cp
2334 0.000 1.000 1.05277e+06 #p30 p33 N3 for target C3=Co
2335 0.198 0.802 1596000 #PNT 1-PNT num-of-all-data
2336
2337 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g0 L1 3 3 4
2338 tail ../result-speakerdetect/iconipl6expl_g0Ltr3Su3td4/nohup.out
2339 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=3;tDR=4
2340 0.867 0.022 0.103 0.007 266000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2341 0.682 0.104 0.177 0.037 84000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2342 0.413 0.091 0.355 0.141 91000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2343 0.213 0.047 0.178 0.562 1155000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2344 # CO C3 N #Modified Confusion Matrix
2345 0.993 0.017 292880 #p00 p03 N0 for target C0=Cp
2346 0.300 0.700 945539 #p30 p33 N3 for target C3=Co
2347 0.224 0.776 1596000 #PNT 1-PNT num-of-all-data
2348
2349 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g1 L1 3 3 4&
2350 tail ../result-speakerdetect/iconipl6expl_g1Ltr3Su3td4/nohup.out
2351 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:50:DTCT=3;SiCs=3;tDR=4
2352 0.895 0.037 0.060 0.008 266000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2353 0.576 0.258 0.117 0.049 84000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2354 0.483 0.202 0.194 0.121 91000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2355 0.239 0.171 0.094 0.496 1155000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2356 # CO C3 N #Modified Confusion Matrix
2357 0.979 0.021 292698 #p00 p03 N0 for target C0=Cp
2358 0.354 0.646 903889 #p30 p33 N3 for target C3=Co
2359 0.250 0.750 1596000 #PNT 1-PNT num-of-all-data
```

```
2360 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g2 L1 3 2 4
2361 tail ../result-speakerdetect/iconipl6expl_g2Ltr3Su2td4/nohup.out
2362 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:10000:DTCT=3;SiCs=2;tDR=4
2363 0.784 0.156 0.056 0.004 266000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2364 0.197 0.579 0.218 0.007 84000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2365 0.005 0.269 0.509 0.217 91000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2366 0.000 0.005 0.101 0.894 1155000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2367 # CO C3 N #Modified Confusion Matrix
2368 0.993 0.007 226744 #p00 p03 N0 for target C0=Cp
2369 0.000 1.000 1.05277e+06 #p30 p33 N3 for target C3=Co
2370 0.198 0.802 1596000 #PNT 1-PNT num-of-all-data
2371
2372 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g0 L1 0 2 4&
2373 tail ../result-speakerdetect/iconipl6expl_g0Ltr0Su2td4/nohup.out
2374 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=0;SiCs=2;tDR=4
2375 0.973 0.000 0.000 0.027 350000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2376 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2377 nan nan nan nan 0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2378 0.035 0.000 0.000 0.965 1246000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2379 # CO C3 N #Modified Confusion Matrix
2380 nan nan nan #p00 p03 N0 for target C0=Cp
2381 nan nan nan #p30 p33 N3 for target C3=Co
2382 nan nan 1596000 #PNT 1-PNT num-of-all-data
2383
2384 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g1 L1 0 2 4&
2385 tail ../result-speakerdetect/iconipl6expl_g1Ltr0Su2td4/nohup.out
2386 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:50:DTCT=0;SiCs=2;tDR=4
2387 0.939 0.000 0.000 0.061 350000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2388 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2389 nan nan nan nan 0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2390 0.043 0.000 0.000 0.957 1246000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2391 # CO C3 N #Modified Confusion Matrix
2392 nan nan nan #p00 p03 N0 for target C0=Cp
2393 nan nan nan #p30 p33 N3 for target C3=Co
2394 nan nan 1596000 #PNT 1-PNT num-of-all-data
2395
2396 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g0 L1 0 2 0&
2397 tail ../result-speakerdetect/iconipl6expl_g0Ltr0Su2td0/nohup.out
2398 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=0;SiCs=2;tDR=0
2399 0.885 0.000 0.000 0.115 350000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2400 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2401 nan nan nan nan 0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2402 0.118 0.000 0.000 0.882 1256500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2403 # CO C3 N #Modified Confusion Matrix
2404 nan nan nan #p00 p03 N0 for target C0=Cp
2405 nan nan #p30 p33 N3 for target C3=Co
2406 nan nan 1606500 #PNT 1-PNT num-of-all-data
2407
2408 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g1 L1 0 2 0&
2409 tail ../result-speakerdetect/iconipl6expl_g1Ltr0Su2td0/nohup.out
2410 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:50:DTCT=0;SiCs=2;tDR=0
2411 0.898 0.000 0.000 0.102 350000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2412 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2413 nan nan nan nan 0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2414 0.181 0.000 0.000 0.819 1256500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2415 # CO C3 N #Modified Confusion Matrix
2416 nan nan nan #p00 p03 N0 for target C0=Cp
2417 nan nan nan #p30 p33 N3 for target C3=Co
2418 nan nan 1606500 #PNT 1-PNT num-of-all-data
2419
2420 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g0 L7 3 2 4&
2421 tail ../result-speakerdetect/iconipl6expl_g0Ltr3Su2td4/nohup.out
2422 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.25:0:DTCT=3;SiCs=2;tDR=4
2423 0.936 0.060 0.003 0.000 679000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2424 0.432 0.491 0.073 0.004 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2425 0.001 0.048 0.605 0.346 28000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2426 0.000 0.005 0.027 0.967 833000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2427 # CO C3 N #Modified Confusion Matrix
2428 1.000 0.000 644700 #p00 p03 N0 for target C0=Cp
2429 0.000 1.000 815227 #p30 p33 N3 for target C3=Co
2430 0.065 0.935 1561000 #PNT 1-PNT num-of-all-data
2431
2432 nohup sh ~/sotu/2015/can2b/sh/iconipl6expl.sh g1 L7 3 2 4
2433 tail ../result-speakerdetect/iconipl6expl_g1Ltr3Su2td4/nohup.out
2434 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:50:DTCT=3;SiCs=2;tDR=4
2435 0.957 0.039 0.004 0.000 679000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
2436 0.217 0.534 0.240 0.008 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
2437 0.002 0.163 0.570 0.265 28000 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
2438 0.000 0.002 0.035 0.963 833000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
2439 # CO C3 N #Modified Confusion Matrix
2440 1.000 0.000 654528 #p00 p03 N0 for target C0=Cp
2441
```



```
s ver:-2 pApAd:$[pAs]:$[pAd] LAR:0:0:-1 test:8:2000:$[iCs]:3:30,20:20,15:20,10:20,5:20 sX:$sX sP:$sP void:0"
;
2589 #cmda=$prog fs:$[d2]/oob4s:-lN40mbas2:300:1.6:1sX$[sX].y nSDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibb
2590 #cmda=$[pAs]:$[pAd] LAR:0:0:-1 test:8:2000:$[iCs]:20:20:20:20 sX:$sX sP:$sP void:0";
2590 #cmda=$prog fs:$[d2]/oob4s:-lN40mbas2:300:1.6:1sX$[sX].y nSDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibb
s beta ver:-2 pApAd:$[pAs]:$[pAd] LAR:0:0:-1 test:7:2000:$[iCs]:0:20:100:20:2 sX:$sX sP:$sP void:0";
2591 else
2592 #cmda=$prog fs:$[d2]/oob4s:-lN40mbas2_300_1.6:1sX$[sX].y nSDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibbs
$beta ver:-2 pApAd:$[pAs]:$[pAd] LAR:0:0:-1 test:7:2000:$[iCs]:0:20:100:20:2 sX:$sX sP:$sP void:0";$cmd > /
dev/null
2593 fi
2594 echo "Exec $cmd";$cmd > /dev/null
2595 cat $tmp/tested.stat.dat >> ${resultsum}.dat
2596 echo "e "\n" >> ${resultsum}.dat #####
2597 echo "e "\n" >> ${psum}.dat #####
2598 cat $tmp/psd.dat >> ${psum}.dat #####
2598 cat tmp/tested.stat.dat |awk 'BEGIN{d=0}{if(d=0){if(substr($1,1,3)=="###") d=1;}else print $0;}>'> ${tes
tsum}.dat
2599 #echo "##wc psum.dat tmp/psd.dat"
2600 #wc psum.dat tmp/psd.dat
2601 done #for sX excluded speaker
6,
2602 done # for iCs
2603 #####
2604 #####
2605 ## obtained psum.dat consists of lines involving (1)t(step),(2)n(number of data),(3)test->pgc[n][t
](pCs),(4)test->pgCd[n][t](pG),(5)sX
2606 #####
2607 #####
2608 #show t vs. pG of resultsum.dat
2609 fntPg="$d1/t-pGmean"
2610 gnuplot <<EOF
2611 set term tgif;set output "$fntPg.obj";plot "$${resultsum}.dat" using 1:2:(\$2-\$4):(\$2+\$5) w errorb
ars, "" using 1:2 w l lc rgb "blue"
2612 set term postscript;set output "$fntPg.eps";replot
2613 quit
2614 EOF
2615 ## the following takes a lot of time to display via gnuplot
2616 cmd="gnuplot.eps";echo "Exec $cmd."; $cmd&
2617 #1) 各ノストにおけるC-pd曲線の表示(2つの角度からの表示):10テスト毎に間引き
+match($2,"t.*");t=substr($2,RSTART+1,RSTART+3); if(n$10==0) print n,t,$3;}}' > $[d1]/tpg.dat
2619 gnuplot <<EOF
2620 set xlabel "test"; set ylabel "t"; set xlabel "pG";
2621 set view 21,73
2622 set term tgif;set output "$d1/tpG1.obj";replot "$d1/tpG.dat" using 1:2:3 w l
2623 set term postscript;set output "$d1/tpG1.eps";replot
2624 set view 16,108
2625 set term tgif;set output "$d1/tpG2.obj";replot "$d1/tpG2.dat" using 1:2:3 w l
2626 set term postscript;set output "$d1/tpG2.eps";replot
2627 quit
2628 EOF
2629 ## the following takes a lot of time to display via gnuplot
2630 cmd="gv $d1/tpG1.eps"; echo "Exec $cmd."; $cmd&
2631 cmd="gv $d1/tpG2.eps"; echo "Exec $cmd."; $cmd&
2632 #####
2633 export Ctotp="cat tmp/Ctotp.dat"
2634 #12]
2635 #####
2636 ## making training histogram for probabilistic prediction
2637 ## class Cp: prompted speaker's digits, Co:other speaker's, Ct:transient
2638 ## generate (0)$d1/resultp.Ct.co.dat,
2639 (1)$d1/resultp.Co.dat,
2640 (2)$d1/resultp.Cp.dat,
2641 (3)$d1/resultp.Cp.dat,
2642 #####
2643 #####
2644 for CpG in "p" "tp" "to" "o"; do #CLASS of pG: p(prompted), tp(transient of prompted), o(other), to
(transient of other) #LoopLevel1: for CpG
2645 export CpG
2646 fb0=cS[CpG]
2647 fbr=$[d1]/resultp_$(fb0)
2648 #####
2649 #Why donot we suppose predict 3 steps before
2650 #1-t-
2651 #####
2652 ## $1:時刻 C[n]:クラスCpg-to,o,tp,pGの開始時刻
2653 ## 時刻0の入力のクラスはt+tdR時刻に判断する
2654 cat /dev/null > $[fb0].dat /cat /cat $psum.dat |
2655 awk 'BEGIN{CpG=ENVIRON["CpG"];Ctotp=ENVIRON["Ctotp"];nmax=split(Ctotp,C).tdR=ENVIRON["tdR"];}{
if($1>tdR){
for(n=1;n<=nmax;n++){
if($1<C[n]+tdR){
2656
2657
2658
```

```
n4=(n-1)%4;
if((CpG=="to" && n4==0)||
(CpG=="o" && n4==1)||
(CpG=="tp" && n4==2)||
(CpG=="p" && n4==3)){ print $3,$0; }
break;
}
}
}' >> $[fb0].dat ; #pG, t,
cmd1="cp ${fb0}.dat $[fbr].dat"
2668 echo $cmd1;$cmd1
2669 #nd="wc ${fb0}.dat|awk '{print $1}';' #nd='wc psum.dat|awk '{print $1}';'
2670 #nd0="expr $nd \ / 7 \ 2,"
2671 #echo "#nd=$nd nd0=$nd0"
2672 #do cat /dev/null > $[fbr]_pPrain.dat #pp:Probabilistic Prediction
2673 cat /dev/null > $[fbr]_pPtest.dat
2675 cat $[fbr].dat|awk 'BEGIN{l=0;}{if(l++%2==0) print $0;}>' >> $[fbr]_pPrain.dat
2676 cat $[fbr].dat|awk 'BEGIN{l=0;}{if(l++%2==1) print $0;}>' >> $[fbr]_pPtest.dat
2677 #for sX_ in 0 1 2 3 4 5 6; do
2678 #export sX_0='expr $sX_ \ $nd0 \ * 2',
2679 #sed -n -e '\,expr ${sX_0} + 1',expr ${sX_0} + $nd0 * p" $[fbr].dat >> $[fbr]_pPrain.dat
2680 #sed -n -e '\,expr ${sX_0} + $nd0 + 1',expr ${sX_0} + $nd0 \ * 2*p" $[fbr].dat >> $[fbr]_pPtest.dat
2681 #done #for sX_
2682 2 3 4 5 6;
2683 #[2-2]
2684 #####
2685 ## Likelihood P(c_i|p_G) for Probabilistic Prediction
2686 ## Histogram by moving average of each class?
2687 #####
2688 #export wp0=100 wp1=100 wp2=100 wp3=100; #weight of posterior distribution of probabilistic predicti
on
2689 export x0=0 ndiv=100 nmav=3
2690 cmd="histmavl-onsei $x0 $ndiv $nmav $[fbr]_pPrain.dat"
2691 echo $cmd;$cmd
2692 fhe=$[d1]/hist-cS[CpG]
2693 cp $tmp/hist.eps $fhe.eps
2694 #gv $fhe.eps; #dislp result
2695 cp $fhe.dat $tmp/histtmp.dat
2696 cat tmp/hist.dat |awk '{print $3}'> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fhg.dat #
##
2697 sleep 2;
2698 done #for CpG in "p" "tp" "to" "o"; do #CLASS of pG: p(prompted), tp(transient of prompted), o(oth
er), to(transient of other) #LoopLevel1: for CpG
2699 #####
2700 #####
2701 #####
2702 ## insert first column to be the value of pG, while 2,3,4 columns P(c_i|p_G) for c_i=Cp, Ct, Co, ze
spectively
2703 fpdG=$d1/ProbstSpeaker
2704 cp $fhg.dat $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}';> tmp/hist1.dat;paste $tmp/histtmp.da
t tmp/hist1.dat > $fhg.dat ##
2705 cat /dev/null > $fpdG.dat
2706 #cat $fhg.dat |awk 'BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["wp3"]
};[p0=$1*wp0;p1=$2*wp1;p2=$3*wp2;p3=$4*wp3;psum=p0+p1+p2+p3;
2707 #if(psum=0) printf("%e %e %e %e\n",$5, p0/psum,p1/psum,p2/psum,p3/psum);}'>> $fpdG.dat
2708 cat $fhg.dat |awk 'BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["wp3"];
}[p0=$1*wp0;p1=$2*wp1;p2=$3*wp2;p3=$4*wp3;psum=p0+p1+p2+p3;
2709 if(psum==0)[p0=pl=p2=p3=1;psum=4;]
2710 printf("%e %e %e %e\n",$5, p0/psum,p1/psum,p2/psum,p3/psum);}'>> $fpdG.dat
2711
2712 ##cat $fhg.dat|awk '{p0sum=$1;p1sum=$2;p2sum=$3;psum=p0sum+p1sum+p2sum;printf("%e %e %e %e\n",$4, p0
sum/psum,p1sum/psum,p2sum/psum);}'>> $fpdG.dat
2713 #[3]
2714 #####
2715 ## Show Likelihood P(c_i|p_G), and p(p_G)
2716 #####
2717 #####
2718 gnuplot <<EOF
2719 set xrange [0:1.3]; set style data boxes; #set style data histograms
2720 set style fill solid border lc rgb "black"
2721 set term tgif;set output "$fpdG.obj";
2722 plot "$fpdG.dat" using 1:(\$2+\$3+\$4+\$5) lc rgb "blue" t "PromptedSpeaker", "" using 1:(\$3+\$4+\$
5) lc rgb "green" t "TransientPrompted", "" using 1:(\$4+\$5) lc rgb "yellow" t "TransientOther", "" using 1
:(\$5) lc rgb "red" t "Other"
2723 set term postscript;set output "$fpdG.eps";replot
2724 set term postscript;set output "$fpdG-pdlist.eps";plot "$fhg.dat" using 5:(\$1-\$2+\$3+\$4) lc rgb "
green" t "p(p_G)"
2725 quit
2726 EOF
2727 #####show
```

```
2728 cmd="gv $fdg-eps"; echo "Exec $cmd."; $cmd&
2729 #cmda="gv $fdg-pdlist-eps"; echo "Exec $cmd."; $cmd& #show p(pg
2730 # [4]
2731 #####
2732 # evalloss
2733 #####
2734 # evalloss
2735 # evalloss
2736 # evalloss
2737 # evalloss
2738 # evalloss
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2790 # evalloss
2791 # evalloss
2792 # evalloss
2793 # evalloss
```

```
2794 N0=P00+P03;P00=N0;P03=N0;
2795 P30=(1-p[2])*n[2]+(1-p[3])*n[3];
2796 P33=(1-p[14])*n[2]+(1-p[15])*n[3];
2797 N3=P30+P33;P30=N3;P33=N3;
2798 P3T=1-P30-P33;
2799 NT=nsum-N0-N3;
2800 printf("# C0 C3 N #Modified Confusion Matrix\n");
2801 printf("%.3f %.3f %.3f %g #p00 p03 N0 for target C0=Op\n",P00,P03,N0);
2802 printf("%.3f %.3f %.3f %g #p30 p03 N3 for target C3=Co\n",P30,P33,N3);
2803 printf("%.3f %.3f %.3f %g.0f #PNT 1-PNT num-of-all-data\n",NT/nsum,1-NT/nsum,nsum);
2804 },
2805 #####
2806 #####
2807 #####
2808 #####
2809 #####
2810 #####
2811 #####
2812 #####
2813 #####
2814 #####
2815 #####
2816 #####
2817 #####
2818 #####
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2821 #####
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2861 #####
2862 #####
2863 #####
2864 #####
2865 #####
2866 #####
2867 #####
2868 #####
2869 #####
```



```
3006 cp $fhg.dat $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.da
t tmp/hist1.dat > $fhg.dat ###
3007 cat /dev/null > $fpdg.dat
3008 #cat $fhg.dat |BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["wp3"]}
;}do-$1*wp0;pl=p2=$3*wp2;$4*wp3;psum=p0+pl+p2+p3;
3009 #if(psum=0) printf("%e %e %e\n",$5, p0/psum,pl/psum,p2/psum,p3/psum);}' >> $fpdg.dat
3010 cat $fhg.dat |awk |BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["wp3"];
}{p0=$1*wp0;pl=p2=$3*wp2;p3=$4*wp3;psum=p0+pl+p2+p3;
3011 if(psum=0){p0=pl=p2=p3=1;psum=4;}}
3012 printf("%e %e %e\n",$5, p0/psum,pl/psum,p2/psum,p3/psum);}' >> $fpdg.dat
3013
3014 #cat $fhg.dat |awk '{p0sum=$1;p1sum=$2;p2sum=$3;psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$4, p0
sum/psum,p1sum/psum,p2sum/psum);}' >> $fpdg.dat
3015
3016 #[3]
3017 #####
3018 ## Show Likelihood P(c|l|P,G), and p(P,G)
3019 #####
3020 gnuplot <<EOF
3021 set xrange [0:1.3]; set style data boxes; #set style data histograms
3022 set term fill solid border lc rgb "black"
3023 set term tgif;set output "$fhg.obj";
3024 plot "$fhg.dat" using 1:($2*$3+$4*$5) lc rgb "blue" t "PromptedSpeaker", "" using 1:($3+$4+$
5) lc rgb "green" t "TransientPrompted", "" using 1:($4+$5) lc rgb "yellow" t "TransientOther", "" using 1
:($5) lc rgb "red" t "Other";
3025 set term postscript;set output "$fpdg.eps";replot
3026 set term postscript;set output "$fpdg-pdlist.eps";plot "$fhg.dat" using 5:($1+$2+$3+$4) lc rgb "
green" t "p(p,G)"
3027 quit
3028 EOF
3029 #####show
3030 cmd="gv $fpdg.eps"; echo "Exec $cmd."; $cmd& #show p(c,i|p_g)
3031 cmd="gv $fpdg-pdlist.eps"; echo "Exec $cmd."; $cmd& #show p(p_g)
3032
3033 #[4]
3034 #####
3035 ## evalloss
3036 #####
3037 do=-/socu/2015/can2b
3038 fdg=$dl/ProbabitSpeaker #defined above
3039 fgtall=pGall/cat /dev/null > $ftgtall;.output ##all
3040 fgtall=Ctgtall/cat /dev/null > $ftgtall;.target ##all
3041 for Cpg in "p" "tp" "to" "o"; do #CLASS of pG: p(prompted), tp(transient of prompted), o(other), to
(transient of other) #Looplevel1: for Cpg
3042 if [ $Cpg = "p" ]; then export Ctgt=0; fi #prompted speaker
3043 if [ $Cpg = "tp" ]; then export Ctgt=1; fi #transient of prompted speaker
3044 if [ $Cpg = "to" ]; then export Ctgt=2; fi #transient of other speaker
3045 if [ $Cpg = "o" ]; then export Ctgt=3; fi #other speaker
3046 fout=pG$Cpg)/cp $dl)/resultp_C$Cpg)_Ptest.dat ${fout};.output;#
3047 export ntest="wc ${fout}";.output |awk '{print $1}';
3048 export fgt=C$Ctgt;
3049 awk 'BEGIN{Ctgt=ENVIRON["Ctgt"];ntest=ENVIRON["ntest"];for(i=0;i<ntest;i++) print Ctgt;}' > ${ftgt};.
target
3050 cmd=evalloss4pg p:$fpdg.dat t:$ftgt;.target o:$ftgt;.output vth:0.5:0"echo -n "#${cmd}##";$cmd
3051 cat ${fout};.output >> ${ftgtall};.output; ##all
3052 cat ${ftgt};.target >> ${ftgtall};.target; ##all
3053 done #for Cpg in "p" "tp" "to" "o"; do #CLASS of pG: p(prompted), tp(transient of prompted), o(othe
r), to(transient of other) #Looplevel1: for Cpg
3054 cmd=evalloss4pg p:$fpdg.dat t:$ftgtall};.target o:$ftgtall};.output vth:0.5:0"echo -n "#${cmd}##
";$cmd
3055
3056 #[5]
3057 #####
3058 ## evalloss for confusion matrix
3059 #####
3060 do=-/socu/2015/can2b
3061 fdg=$dl/ProbabitSpeaker #defined above
3062 fgtall=pGall/cat /dev/null > $ftgtall};.output ##all
3063 fgtall=Ctgtall/cat /dev/null > $ftgtall};.target ##all
3064 #
3065 cat /dev/null > cfm.dat
3066 for Ctgt in 0 1 2 3; do #target class
3067
3068 export Ctgt;
3069 for Cpg in "p" "tp" "to" "o"; do #CLASS of pG: p(prompted), tp(transient of prompted), o(other), to
(transient of other) #Looplevel1: for Cpg
3070 fout=pG$Cpg)/cp $dl)/resultp_C$Cpg)_Ptest.dat ${fout};.output; #output file to be classified as C
${Cpg} for Cpg in p,t,o
3071 export ntest="wc ${fout}";.output |awk '{print $1}';
3072 export fgt=C$Ctgt;
3073 awk 'BEGIN{Ctgt=ENVIRON["Ctgt"];ntest=ENVIRON["ntest"];for(i=0;i<ntest;i++) print Ctgt;}' > ${ftgt}
.;
```

```
target #mktarget $Ctgt $ntest > ${ftgt};.target
3074 #
3075 cmd=evalloss4pg p:$fpdg.dat t:$ftgt};.target o:$ftgt};.output vth:0.5:0"echo "#${cmd}##";
3076 $cmd | awk '{print $2,$6;}' >> cfm.dat
3077 #
3078 cat ${fout};.output >> ${ftgtall};.output;
3079 cat ${ftgt};.target >> ${ftgtall};.target; ##all
3080 done #for Cpg in "p" "tp" "to" "o"; do #CLASS of pG: p(prompted), tp(transient of prompted), o(othe
r), to(transient of other) #Looplevel1: for Cpg
3081 done #for Ctgt
3082
3082 #
3083 echo "#${gibbs};|DTCT=$DTCT;SiCs=$SiCs";
3084 cat cfm.dat | awk 'BEGIN{I=0;wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["w
p3"];}
3085 gibbs=ENVIRON["gibbs"];|DTCT=ENVIRON["DTCT"];SiCs=ENVIRON["SiCs"];|tDR=ENVIRON["tDR"];}
3086 {p1I=$1;n1I=$2;I++;}END{
3087 printf("\n# C0 C1 C2 C3 n wpi #Confusion Matrix for $s|DTCT=$s;SiCs=$s;tDR=$s\n",gibb
s,|DTCT,|SiCs,tDR);
3088 printf("%3f %3f %3f %3f %3f %6d %g #p00 p01 p02 p03 n0 wp0 for target C0=Cp\n", I-p[0],I-p[8]
,I-p[12],n[0],wp0);
3089 printf("%3f %3f %3f %3f %3f %6d %g #p10 p11 p12 p13 n1 wp1 for target C1=Ctp\n", I-p[1],I-p[9]
,I-p[13],n[1],wp1);
3090 printf("%3f %3f %3f %3f %3f %6d %g #p20 p21 p22 p23 n2 wp2 for target C2=Cto\n", I-p[2],I-p[6],I-p[10]
,I-p[14],n[2],wp2);
3091 printf("%3f %3f %3f %3f %3f %6d %g #p30 p31 p32 p33 n3 wp2 for target C3=Co\n", I-p[3],I-p[7],I-p[11]
,I-p[15],n[3],wp3);
3092 nsum=n[0]+n[1]+n[2]+n[3];
3093 p00=(1-p[0])*n[0]+(1-p[1])*n[1];
3094 p03=(1-p[12])*n[0]+(1-p[13])*n[1];
3095 p0T=1-p00-p03;
3096 N0=p00+p03;p00/=N0;p03/=N0;
3097 p30=(1-p[2])*n[2]+(1-p[3])*n[3];
3098 p33=(1-p[14])*n[2]+(1-p[15])*n[3];
3099 N3=p30+p33;p30/=N3;p33/=N3;
3100 p3T=1-p30-p33;
3101 NT=nsum-N0-N3;
3102 printf("# C0 C3 N #Modified Confusion Matrix\n");
3103 printf("%3f %3f %3f %g #p00 p03 N0 for target C0=Cp\n",p00,p03,N0);
3104 printf("%3f %3f %3f %g #p30 p33 N3 for target C3=Co\n",p30,p33,N3);
3105 printf("%3f %3f %3f %6.0f #PNT 1-PNT num-of-all-data\n',NT/nsum,I-NT/nsum,nsum);
3106 }',
3107 #####
3108 ##### copy and paste to here for (1)
3109 #####
3110 export DTCoCp=30,20:30,15:30,10:30,5:20,30:30,15:30,10:30,5:20 #DTCoCp=30,20:30,15:20,10:20,5:20#DT
CoCp=TCol,TCp2,TCp2,TCp3:...;TCO #usethis
3111 #with if(fabs(test->logit[t])<=test->lmax){
3112 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3:100;DTCT=2;SiCs=2;tDR=4
3113 0.764 0.159 0.073 0.003 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3114 0.260 0.509 0.225 0.006 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3115 0.006 0.202 0.170 0.9500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3116 0.002 0.010 0.140 0.848 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3117 # C0 C3 N #Modified Confusion Matrix
3118 0.995 0.005 240394 #p00 p03 N0 for target C0=Cp
3119 0.003 0.997 721497 #p30 p33 N3 for target C3=Co
3120 0.228 0.772 1246000 #PNT 1-PNT num-of-all-data
3121 #saved in ../result-speakerdetect/icompl6figa/
3122
3123 # with if(fabs(test->logit[t])=test->lmax){
3124 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3:100;DTCT=2;SiCs=2;tDR=4
3125 0.763 0.162 0.070 0.005 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3126 0.642 0.299 0.055 0.004 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3127 0.036 0.012 0.588 0.365 59500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3128 0.023 0.015 0.076 0.885 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3129 # C0 C3 N #Modified Confusion Matrix
3130 0.994 0.006 261968 #p00 p03 N0 for target C0=Cp
3131 0.027 0.973 783402 #p30 p33 N3 for target C3=Co
3132 0.161 0.839 1246000 #PNT 1-PNT num-of-all-data
3133
3134
3135
3136
3137 export DTCoCp=30,20:30,15:30,10:30,5:30,20:30,15:30,10:30,5:20 #DTCoCp=30,20:30,15:20,10:20,5:20#DT
CoCp=TCol,TCp2,TCp2,TCp3:...;TCO
3138 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=2;SiCs=2;tDR=4
3139 0.764 0.159 0.073 0.003 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3140 0.260 0.509 0.225 0.006 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3141 0.006 0.202 0.623 0.170 59500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3142 0.002 0.010 0.140 0.848 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3143 # C0 C3 N #Modified Confusion Matrix
3144 0.995 0.005 240394 #p00 p03 N0 for target C0=Cp
```

```
3145 0.003 0.997 721497 #p30 p33 N3 for target C3=Co
3146 0.228 0.772 1246000 #PNT 1-PNT num-of-all-data
3147 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.25;DTCT=2;SiCs=2;tDR=4
3148 0.735 0.193 0.069 0.003 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3149 0.493 0.425 0.077 0.005 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3150 0.034 0.022 0.676 0.267 59500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3151 0.015 0.013 0.093 0.880 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3152 # C0 C3 N #Modified Confusion Matrix
3153 0.995 0.005 244860 #p00 p03 N0 for target C0=Cp
3154 0.019 0.981 766577 #p30 p33 N3 for target C3=Co
3155 0.188 0.812 1246000 #PNT 1-PNT num-of-all-data
3156
3157 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.25:0;DTCT=2;SiCs=2;tDR=4
3158 0.729 0.219 0.049 0.003 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3159 0.311 0.589 0.094 0.005 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3160 0.031 0.042 0.778 0.150 59500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3161 0.002 0.020 0.108 0.871 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3162 # C0 C3 N #Modified Confusion Matrix
3163 0.995 0.005 232904 #p00 p03 N0 for target C0=Cp
3164 0.016 0.984 741034 #p30 p33 N3 for target C3=Co
3165 0.005 0.995 1246000 #PNT 1-PNT num-of-all-data
3166 0.218 0.782 1246000 #PNT 1-PNT num-of-all-data
3167 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:0.2:0;DTCT=2;SiCs=2;tDR=4
3168 0.779 0.148 0.064 0.009 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3169 0.024 0.714 0.240 0.021 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3170 0.011 0.207 0.580 0.202 59500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3171 0.000 0.002 0.088 0.910 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3172 # C0 C3 N #Modified Confusion Matrix
3173 0.984 0.016 234192 #p00 p03 N0 for target C0=Cp
3174 0.001 0.999 773888 #p30 p33 N3 for target C3=Co
3175 0.191 0.809 1246000 #PNT 1-PNT num-of-all-data
3176 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:0.3:0;DTCT=2;SiCs=2;tDR=4
3177 0.813 0.141 0.033 0.013 294000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3178 0.687 0.270 0.028 0.015 56000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3179 0.050 0.011 0.647 0.292 59500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3180 0.021 0.011 0.061 0.906 836500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3181 # C0 C3 N #Modified Confusion Matrix
3182 0.993 0.017 282156 #p00 p03 N0 for target C0=Cp
3183 0.026 0.974 795784 #p30 p33 N3 for target C3=Co
3184 0.135 0.865 1246000 #PNT 1-PNT num-of-all-data
3185
3186
3187
3188 export DTCTCoP=30,20:20,15:20,10:20 ##DTCTCoP=30,20:20,15:20,10:20,5:20#DTCTCoP=TCol,TCp1:TC02,TCp2:TC0
3,TCp3:....:TC0
3189 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.2:0;DTCT=2;SiCs=2;tDR=4 ***best B
I
3190 0.848 0.126 0.023 0.004 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3191 0.077 0.637 0.241 0.045 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3192 0.014 0.208 0.583 0.195 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3193 0.000 0.002 0.068 0.930 276500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3194 # C0 C3 N #Modified Confusion Matrix
3195 0.987 0.013 118860 #p00 p03 N0 for target C0=Cp
3196 0.001 0.999 262266 #p30 p33 N3 for target C3=Co
3197 0.169 0.831 458500 #PNT 1-PNT num-of-all-data
3198 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.2:0;DTCT=2;SiCs=3;tDR=4
3199 0.915 0.021 0.058 0.006 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3200 0.568 0.422 0.103 0.087 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3201 0.503 0.132 0.219 0.146 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3202 0.239 0.149 0.124 0.488 276500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3203 # C0 C3 N #Modified Confusion Matrix
3204 0.981 0.019 139472 #p00 p03 N0 for target C0=Cp
3205 0.361 0.639 216916 #p30 p33 N3 for target C3=Co
3206 0.223 0.777 458500 #PNT 1-PNT num-of-all-data
3207
3208
3209 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=2;SiCs=2;tDR=4 ##best u
sing DTCT
3210 0.761 0.195 0.043 0.000 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3211 0.491 0.427 0.077 0.005 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3212 0.018 0.038 0.719 0.225 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3213 0.008 0.025 0.112 0.855 276500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3214 # C0 C3 N #Modified Confusion Matrix
3215 0.999 0.001 114292 #p00 p03 N0 for target C0=Cp
3216 0.011 0.989 244573 #p30 p33 N3 for target C3=Co
3217 0.217 0.783 458500 #PNT 1-PNT num-of-all-data
3218 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=2;SiCs=3;tDR=4
3219 0.888 0.000 0.105 0.007 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3220 0.771 0.000 0.196 0.033 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3221 0.388 0.000 0.401 0.211 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3222 0.225 0.000 0.229 0.546 276500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3223 # C0 C3 N #Modified Confusion Matrix
```

```
3224 0.988 0.012 139052 #p00 p03 N0 for target C0=Cp
3225 0.315 0.685 227857 #p30 p33 N3 for target C3=Co
3226 0.200 0.800 458500 #PNT 1-PNT num-of-all-data
3227
3228
3229
3230 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=0;SiCs=2;tDR=4 ##best w
ithout DTCT
3231 0.973 0.000 0.000 0.027 157500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3232 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3233 nan nan nan nan 0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3234 0.050 0.000 0.000 0.950 301000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3235 # C0 C3 N #Modified Confusion Matrix
3236 nan nan nan #p00 p03 N0 for target C0=Cp
3237 nan nan nan #p30 p33 N3 for target C3=Co
3238 nan nan 458500 #PNT 1-PNT num-of-all-data
3239
3240 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=3;SiCs=2;tDR=4
3241 0.778 0.179 0.043 0.000 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3242 0.639 0.299 0.059 0.004 31500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3243 0.027 0.014 0.589 0.370 38500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3244 0.018 0.016 0.098 0.867 262500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3245 # C0 C3 N #Modified Confusion Matrix
3246 0.999 0.001 118282 #p00 p03 N0 for target C0=Cp
3247 0.023 0.977 247597 #p30 p33 N3 for target C3=Co
3248 0.202 0.798 458500 #PNT 1-PNT num-of-all-data
3249
3250 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=1;SiCs=2;tDR=4
3251 0.747 0.207 0.045 0.001 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3252 0.274 0.608 0.106 0.012 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3253 0.021 0.074 0.836 0.070 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3254 0.005 0.025 0.100 0.869 290500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3255 # C0 C3 N #Modified Confusion Matrix
3256 0.998 0.002 112959 #p00 p03 N0 for target C0=Cp
3257 0.007 0.993 254852 #p30 p33 N3 for target C3=Co
3258 0.198 0.802 458500 #PNT 1-PNT num-of-all-data
3259
3260 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=4;SiCs=2;tDR=4
3261 0.785 0.170 0.039 0.006 115500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3262 0.725 0.223 0.044 0.007 42000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3263 0.029 0.006 0.467 0.498 52500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3264 0.023 0.011 0.092 0.874 248500 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3265 # C0 C3 N #Modified Confusion Matrix
3266 0.992 0.008 122104 #p00 p03 N0 for target C0=Cp
3267 0.029 0.971 250572 #p30 p33 N3 for target C3=Co
3268 0.187 0.813 458500 #PNT 1-PNT num-of-all-data
3269
3270 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=3;SiCs=2;tDR=3
3271 0.797 0.191 0.011 0.000 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3272 0.311 0.514 0.169 0.007 31500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3273 0.004 0.146 0.616 0.233 38500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3274 0.000 0.004 0.108 0.888 266000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3275 # C0 C3 N #Modified Confusion Matrix
3276 0.998 0.002 110439 #p00 p03 N0 for target C0=Cp
3277 0.001 0.999 245332 #p30 p33 N3 for target C3=Co
3278 0.230 0.770 462000 #PNT 1-PNT num-of-all-data
3279
3280 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=1;SiCs=2;tDR=3
3281 0.891 0.077 0.027 0.005 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3282 0.122 0.433 0.353 0.092 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3283 0.061 0.240 0.666 0.034 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3284 0.001 0.013 0.049 0.937 294000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3285 # C0 C3 N #Modified Confusion Matrix
3286 0.987 0.013 133959 #p00 p03 N0 for target C0=Cp
3287 0.003 0.997 276770 #p30 p33 N3 for target C3=Co
3288 0.111 0.889 462000 #PNT 1-PNT num-of-all-data
3289
3290 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=3;SiCs=2;tDR=5
3291 0.195 0.742 0.055 0.007 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3292 0.093 0.888 0.015 0.004 31500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3293 0.037 0.001 0.379 0.582 38500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3294 0.055 0.027 0.078 0.839 259000 100 #p30 p31 p32 p33 n3 wp2 for target C3=Co
3295 # C0 C3 N #Modified Confusion Matrix
3296 0.965 0.035 28507.5 #p00 p03 N0 for target C0=Cp
3297 0.061 0.939 255378 #p30 p33 N3 for target C3=Co
3298 0.376 0.624 455000 #PNT 1-PNT num-of-all-data
3299
3300 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs=1:1:0.3;DTCT=0;SiCs=2;tDR=3
3301 0.960 0.000 0.000 0.040 157500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3302 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3303
3304
```



```
3305 nan nan nan nan      0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3306 # .0025 0.000 0.000 0.975 304500 100 #p30 p01 p02 p03 n0 wp0 for target C3=Cco
3307 # C0 C3 N #Modified Confusion Matrix
3308 nan nan nan #p00 p03 N0 for target C0=Cp
3309 nan nan #p30 p33 N3 for target C3=Cco
3310 nan nan 462000 #PNT 1-PNT num-of-all-data
3311
3312 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:DTCT=0;SiCs=2;tQR=5
3313 0.950 0.000 0.000 0.050 157500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3314 nan nan nan nan      0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Cto
3315 nan nan nan nan      0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3316 0.080 0.000 0.000 0.920 297500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3317 # C0 C3 N #Modified Confusion Matrix
3318 nan nan nan #p00 p03 N0 for target C0=Cp
3319 nan nan nan #p30 p33 N3 for target C3=Cco
3320 nan nan 455000 #PNT 1-PNT num-of-all-data
3321
3322
3323
3324
3325 20160225
3326 #####
3327 ##### copy and paste from here for (1)
3328 #####
3329 #####
3330 # [1]
3331 prog=spkerdigit_v6
3332 make ; make data-clean
3333 dl=../Result-speaker_search; if [ ! -e $dl ]; then mkdir $dl;fi
3334 ##d2=/media/sf_D_DRIVE/cdata/15iconip/20150917akeguchi/12voicedata_sakashita/12voicedata/allpole:1d
2sep=-"
3335 _##d2=/media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/id2sep=-"
3336 ##d2=-/sotu/2015iconip/iconip_saijen/2012/12voicedata/allpole:d2sep=":"
3337 ##d2=-./../2012/12voicedata/iconip14data:d2sep=":"
3338 ##d2=-./../2012/12voicedata/allpole:d2sep=":"
3339 d2=/sotu/2012/12voicedata/allpole:d2sep=":"
3340 tmp=/tmp; if [ ! -e $tmp ]; then mkdir $tmp;fi
3341 ##### Main variables for tuning from here #####
3342 export gibbs=gibbs:1:1:0.3 ##### use only gibb:1:1:1(GEB1) gibbs:1:1:0(BI), see 20160125 [a]-[e]
]
3343 #beta=beta:0.5:0.3 ##### tune this,
3344 export DTC=3:#DTCto=0;DTCt=4;
3345 export SiCs="2"; #####for 3:Unregistered, 2:Incorrect SiCs#0 3 2"; #d2pnds on spkerdigit_v6.c test
7:1:..$iCs:....
3346 export wp0=100 wpl=100 wp2=100 wp3=100; #weight of posterior distribution of probabilistic prediction
n
3346 export DTCocp=30,20:20,15:20,10:20 ##DTCocp=30,20:20,15:20,10:20,5:20
3347 ##### Main variables for Tuning to here #####
3348 cat /dev/null > resultsum.dat
3349 cat /dev/null > psdsum.dat
3350 cat /dev/null > testdsdum.dat
3351 fbg-$tmp/histSpeaker:cat /dev/null > $fhg.dat #Initialize
3352 for iCs in $iCs: do
f test:7:.....
3353 for sX in 0 1 2 3 4 5 6; do sP=-1;
3354 if [ "$d2sep" = "-" ]; then ytm:1:0.9:1000 or ytm:1:0.9:2000
3355 cmd="$prog fs:{$d2}/oob4s:-lM40mbas2:300:1.6:1xs{$sX}.y nSDL:7:10:1:0 pmin:0.01 ytm:1:0.9:1000 $gibbs
var:-2 pApad:{$pAs}:{$pAd} LAR:0:0:-1 test:8:1000:$iCs:{$DTCocp} sX:$sX sP:$sP void:0";
3356 #cmd="$prog fs:{$d2}/oob4s:-lM40mbas2:300:1.6:1xs{$sX}.y nSDL:7:10:1:0 pmin:0.01 ytm:1:0.9:1000 $gibb
s ver:-2 pApad:{$pAs}:{$pAd} LAR:0:0:-1 test:8:2000:$iCs:{$sX}:3:30,20:20,15:20,10:20,5:20 sX:$sX sP:$sP void:0";
3357 #cmd="$prog fs:{$d2}/oob4s:-lM40mbas2:300:1.6:1xs{$sX}.y nSDL:7:10:1:0 pmin:0.01 ytm:1:0.9:1000 $gibb
s ver:-2 pApad:{$pAs}:{$pAd} LAR:0:0:-1 test:8:2000:$iCs:{$sX}:20:20,20:20,20 sX:$sX sP:$sP void:0";
3358 #cmd="$prog fs:{$d2}/oob4s:-lM40mbas2:300:1.6:1xs{$sX}.y nSDL:7:10:1:0 pmin:0.01 ytm:1:0.9:1000 $gibb
s beta ver:-2 pApad:{$pAs}:{$pAd} LAR:0:0:-1 test:7:2000:$iCs:{$sX}:0:20:100:20:2 sX:$sX sP:$sP void:0";
3359 #beta ver:-2 pApad:{$pAs}:{$pAd} LAR:0:0:-1 test:7:2000:$iCs:{$sX}:0:20:100:20:2 sX:$sX sP:$sP void:0";
3360 #beta ver:-2 pApad:{$pAs}:{$pAd} LAR:0:0:-1 test:7:2000:$iCs:{$sX}:0:20:100:20:2 sX:$sX sP:$sP void:0";
3361 fi
3362 echo "Exec $cmd";$cmd > /dev/null
3363 cat tmp/tested_stat.dat >> resultsum.dat
3364 echo -e "\n" >> resultsum.dat #####
3365 cat tmp/psd.dat >> psdsum.dat #####
3366 cat tmp/tested.dat |awk 'BEGIN{d=0};if(d==0){if(substr($1,1,3)=="###") d=1;}else print $0;}'> tmp/t
estdsdum.dat
3367 #echo "##wc psdsum.dat tmp/psd.dat"
3368 #wc psdsum.dat tmp/psd.dat
3369 done #for sX excluded speaker
6;
3370 done # for iCs
3371
3372
```

```
3373 #####
3374 ## obtained psdsum.dat consists of lines involving (1)t(step),(2)n(number of data),(3)test->pgC[n]t
] (pgs),(4)test->pgC[n]t] (pgd),(5)sX
3375 #####
3376 ##show t vs. pg of resultsum.dat
3377 fbgG="tmp/t-pGmean"
3378 gnuplot <<EOF
3379 set term postscript;set output "$fntpg.eps";
3380 plot "resultsum.dat" using 1:2:(($2-\\$4):(\\$2+\\$5) w errorbars,"" using 1:2 w l lc rgb "blue"
3381 quit
3382 EOF
3383 ## the following takes a lot of time to display via gnuplot
3384 cmd="gv fntpg.eps"; echo "Exec $cmd."; $cmd&
3385 ##(1) 各ノットにおけるt-pG曲線の表示(2つの角度からの表示);10テスト毎に間引き
cat tmp/testdsdum.dat | awk 'BEGIN{l=0;t=0;n=1;}{if(substr($1,1,1)!=tn){[n++;printf("\\n");} else {1
++};match($2,"t.*");t=substr($2,RSTART+1,RSTART+3); if(n%10==0) print n,t,$3;}}' > tmp/tpG.dat
3387 gnuplot <<EOF
3388 set xlabel "test"; set ylabel "t"; set zlabel "pg";
3389 set view 21,73
3390 set term postscript;set output "tmp/tpG1.eps";
3391 plot "tmp/tpG.dat" using 1:2:3 w l
3392 set view 16,108
3393 set term postscript;set output "tmp/tpG2.eps";
3394 plot "tmp/tpG.dat" using 1:2:3 w l
3395 quit
3396 EOF
3397 ## the following takes a lot of time to display via gnuplot
3398 cmd="gv tmp/tpG1.eps"; echo "Exec $cmd."; $cmd&
3399 cmd="gv tmp/tpG2.eps"; echo "Exec $cmd."; $cmd&
3400 #####
3401 export Ctotp='cat tmp/Ctotp.dat'
3402 # [2]
3403 #####
3404 ## making training histogram for probabilistic prediction
3405 ## class Cp: prompted speaker's d1gits, Co:other speaker's, Ct:transient
3406 ## Generate (0)$dl/resultup.Ctto.dat,
3407 ## (1)$dl/resultup.Co.dat,
3408 ## (2)$dl/resultup.Cp.dat,
3409 ## (3)$dl/resultup.Cp.dat,
3410 #####
3411 #####
3412 for CpG in "p" "tp" "to" "o"; do #CLASS of pG:p(prompted), tp(transient of prompted), o(other), to
(transient of other) #LoopLevel1: for CpG
3413 export CpG
3414 fb0=CpG
3415 fbr=$[dl]/resultup_{$fb0}
3416 cat /dev/null > {$fb0}.dat
3417 cat psdsum.dat|
3418 awk 'BEGIN{CpG=ENVIRON["CpG"];Ctotp=ENVIRON["Ctotp"];imax=split(Ctotp,C);}
if ($1==0){
for(n=1;n<=nmax;n++){
3421 if ($1<C[n]){
n4=(n-1)%4;
3422 if((CpG=="to" && n4==0)||
(CpG=="o" && n4==1)||
(CpG=="tp" && n4==2)||
3425 (CpG=="p" && n4==3)) {print $3,$0;}
break;
3426 }
}
3427 }
3428 for sX_in 0 1 2 3 4 5 6; do
3429
3430 }
3431 } >> {$fb0}.dat ;
3432 cmd1="cp {$fb0}.dat {$fbr}.dat"
3433 echo $cmd1;$cmd1
3434 #nd0="wc {$fb0}.dat|awk '{print $1}';' #nd="wc psdsum.dat|awk '{print $1}';'
3435 #echo "nd=$nd,nd0=$nd0"
3436 cat /dev/null > {$fbr}_pPtrain.dat #pp:Probabilistic Prediction
3437 cat /dev/null > {$fbr}_pPtest.dat
3438 cat {$fbr}.dat|awk 'BEGIN{l=0;}{if(l++%2==0) print $0;}' >> {$fbr}_pPtrain.dat
3439 cat {$fbr}.dat|awk 'BEGIN{l=0;}{if(l++%2==1) print $0;}' >> {$fbr}_pPtest.dat
3440 #for sX_in 0 1 2 3 4 5 6; do
3441 #LoopLeve2:for sX_in 0 1 2 3 4
3442 #export sX0="expr $sX_ \\* $nd0 \\* 2";
3443 #sed -n -e "expr ${sX_0} + 1",expr ${sX_0} + $nd0"p" $fbr).dat >> {$fbr}_pPtest.dat
3444 #sed -n -e "expr ${sX_0} + $nd0 + 1",expr ${sX_0} + $nd0 \ * 2"p" $fbr).dat >> {$fbr}_pPtest.dat
3445 #done #for sX_
2 3 4 5 6;
3446 # [2-2]
3447 #####
3448 ## Likelihood P(c_1|p_G) for Probabilistic Prediction
3449 ## Histogram by moving average of each class;
```

```
3450 #####
3451 #export wp0=100 wp1=100 wp2=100 wp3=100; #weight of posterior distribution of probabilistic predicti
on
3452 export x0=0 ndiv=100 mvav=3
3453 cmd="histmavl-onsei $x0 $ndiv $mvav ${fbr}_pPrtrain.dat"
3454 echo $cmd; $cmd
3455 fhe=${d1}/hist-C${CpG}.eps
3456 cp $tmp/hist.eps $fhe
3457 #gv $fhe& #disp result
3458 cp $fheg.dat $tmp/histtmp.dat
3459 cat tmp/hist.dat |awk '{print $3}'> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fheg.dat #
##
```

```
3460 sleep 2;
3461 done #for Cpg in "p" "tp" "to" "o" ; do #CLASS of pG: p(prompted), tp(transient of prompted), o(oth
e
z) to(transient of other) #LoopLevel1: for Cpg
3462 #####
3463 #####
3464 #####
3465 ## insert first column to be the value of pG, while 2,3,4 columns P(c_i|p_g) for c_i=Cp, Ct, Co, ze
spectively
3466 fpgd=$d1/ProbbistSpeaker
3467 cp $fheg.dat $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.d
a
t tmp/hist1.dat > $fheg.dat ##
3468 cat /dev/null > $fpgd.dat
3469 #cat $fheg.dat |awk 'BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["wp3"]
;}{p0=$1*wp0;p1=$2*wp1;p2=$3*wp2;p3=$4*wp3;psum=p0+p1+p2+p3;
3470 #if(psum>0) printf("%e %e %e\n",$5, p0/psum,p1/psum,p2/psum,p3/psum);}' >> $fpgd.dat
3471 cat $fheg.dat |awk 'BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["wp3"]
;}{p0=$1*wp0;p1=$2*wp1;p2=$3*wp2;p3=$4*wp3;psum=p0+p1+p2+p3;
3472 if(psum=0){p0=p1=p2=p3=1;psum=4;}'
3473 printf("%e %e %e\n",$5, p0/psum,p1/psum,p2/psum,p3/psum);}' >> $fpgd.dat
3474
```

```
3475 #cat $fheg.dat |awk '{p0sum=$1;p1sum=$2;p2sum=$3;psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$4, p0
sum/psum,p1sum/psum,p2sum/psum);}' >> $fpgdg.dat
3476
```

```
3477 #[3]
3478 #####
3479 ## Show Likelihood P(c_i|p_g), and p(p_g)
3480 #####
3481 gnuplot <<60F
3482 set xrange [0:1.3]; set style data boxes; #set style data histograms
3483 set term fill solid border lc rgb "black"
3484 set term tgif;set output "$fpgd.obj";
3485 plot "$fpgd.dat" using 1:($2+($3+$4+$5) lc rgb "blue" t "Prompted Speaker", "" using 1:($3+$4+$
5) lc rgb "green" t "TransientPrompted", "" using 1:($4+$5) lc rgb "yellow" t "Other Prompted", "" using
1:($5) lc rgb "red" t "Other Speaker"
3486 set term postscript;set output "$fpgd.eps";replot
3487 set term postscript;set output "$fpgd-pgdlist.eps";plot "$fheg.dat" using 5:($1+$2+$3+$4) lc rgb "
green" t "p(p_g)"
3488 quit
3489 EOF
3490 ##show
3491 cmd="gv $fpgd.eps"; echo "Exec $cmd."; $cmd&
3492 cmd="gv $fpgd-pgdlist.eps"; echo "Exec $cmd."; $cmd& #show p(p_g)
3493
```

```
3494 #[4]
3495 #####
3496 # evalloss
3497 d0~/sotu/2015/can2b
3498 fpgd=$d1/ProbbistSpeaker #defined above
3499 fgtall=pGall;cat /dev/null > ${fgtall}.output ##all
3500 fgtall=CtGtall;cat /dev/null > ${ftgtall}.target
3501 fgtall=CtGtall;cat /dev/null > ${ftgtall}.target ##all
(transient of other) #LoopLevel1: for Cpg
3502 if [ $CpG = "p" ] ; then export CtGt=0; fi #prompted speaker
3503 if [ $CpG = "tp" ] ; then export CtGt=1; fi #transient of prompted speaker
3504 if [ $CpG = "to" ] ; then export CtGt=2; fi #transient of other speaker
3505 if [ $CpG = "o" ] ; then export CtGt=3; fi #other speaker
3506 fout=pG${CpG};cp $d1/resultp_C${CpG}_pPtest.dat ${fout}.output;#
3507 export ntest=wc ${fout}.output |awk '{print $1}';
3508 export fgt=C${CtGt};
3509 export fgt=C${CtGt};
3510 awk 'BEGIN{CtGt=ENVIRON["CtGt"];ntest=ENVIRON["ntest"];for(i=0;i<ntest;i++) print CtGt;}' > ${ftgt}.
target
3511 cmd="evalloss4pg p:${fpgd}.dat t:${ftgt}.target o:${fout}.output vth:0.5:0;echo -n "${cmd}##";$cmd
3512 cat ${fout}.output >> ${foutall}.output; ##all
3513 cat ${ftgt}.target >> ${ftgtall}.target; ##all
3514 done #for Cpg in "p" "tp" "to" "o" ; do #CLASS of pG: p(prompted), tp(transient of prompted), o(oth
e
z) to(transient of other) #LoopLevel1: for Cpg
3515 cmd="evalloss4pg p:${fpgd}.dat t:${ftgtall}.target o:${ftgtall}.output vth:0.5:0;echo -n "${cmd}##
";$cmd
3516
```

```
3517 #[5]
3518 #####
3519 # evalloss for confusion matrix
3520 #####
3521 d0~/sotu/2015/can2b
3522 fpgd=$d1/ProbbistSpeaker #defined above
3523 fgtall=pGall;cat /dev/null > ${fgtall}.output ##all
3524 fgtall=CtGtall;cat /dev/null > ${ftgtall}.target
3525 #
3526 cat /dev/null > cfm.dat
3527 for CtGt in 0 1 2 3; do #target class
evel 0
3528 echo "#For Target Class $CtGt, evall loss of p(prompted), t(transient), o(ther) data. "
3529 export CtGt;
3530 for Cpg in "p" "tp" "to" "o" ; do #CLASS of pG: p(prompted), tp(transient of prompted), o(other), to
(transient of other) #LoopLevel1: for Cpg
3531 fout=pG${Cpg};cp $d1/resultp_C${Cpg}_pPtest.dat ${fout}.output; #output file to be classified as C
${Cpg} for Cpg in p,t or o
3532 export ntest=wc ${fout}.output |awk '{print $1}';
3533 export fgt=C${CtGt};
3534 awk 'BEGIN{CtGt=ENVIRON["CtGt"];ntest=ENVIRON["ntest"];for(i=0;i<ntest;i++) print CtGt;}' > ${ftgt}.
target
3535 #
3536 cmd="evalloss4pg p:${fpgd}.dat t:${ftgt}.target o:${fout}.output vth:0.5:0;echo "${cmd}##";
3537 $cmd | awk '{print $2,$6};' >> cfm.dat
3538 #
3539 cat ${fout}.output >> ${ftgtall}.output;
3540 cat ${ftgt}.target >> ${ftgtall}.target; ##all
3541 done #for Cpg in "p" "tp" "to" "o" ; do #CLASS of pG: p(prompted), tp(transient of prompted), o(oth
e
z) to(transient of other) #LoopLevel1: for Cpg
3542 done #for CtGt
el 0
3543 #
3544 echo "#${gibbs};DTCT=$DTCT;SiCs=$SiCs";
3545 cat cfm.dat | awk 'BEGIN{I=0;wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"];wp3=ENVIRON["w
p3"];
3546 gibbs=ENVIRON["gibbs"];DTCT=ENVIRON["DTCT"];SiCs=ENVIRON["SiCs"]};
3547 {I1}=$I;I1=I+$2;I=I1;}'END{
3548 printf("\n# C0 C1 C2 C3 n wpi #Confusion Matrix for %s:DTCT=%s;SiCs=%s\n",gibbs,DTCT,
SiCs);
3549 printf("%3f %3f %3f %3f %6d %g #p0 p01 p02 p03 n0 wp0 for target C0=Cp\n", I-p[12],n[0],wp0);
3550 printf("%3f %3f %3f %3f %6d %g #p1 p11 p12 p13 n1 wp1 for target C1=Ctp\n", I-p[1],I-p[8]
3551 printf("%3f %3f %3f %3f %6d %g #p2 p21 p22 p23 n2 wp2 for target C2=Cto\n", I-p[2],I-p[16],I-p[10]
3552 printf("%3f %3f %3f %3f %6d %g #p3 p31 p32 p33 n3 wp2 for target C3=Co\n", I-p[3],I-p[7],I-p[11]
3553 nsum=n[0]+n[1]+n[2]+n[3]);
3554 p0=(1-p[0])*n[0]+(1-p[1])*n[1];
3555 p03=(1-p[12])*n[0]+(1-p[13])*n[1];
3556 p0T=1-p00-p03;
3557 N0=p00+p03;p00/=N0;p03/=N0;
3558 p30=(1-p[2])*n[2]+(1-p[3])*n[3];
3559 p33=(1-p[14])*n[2]+(1-p[15])*n[3];
3560 N3=p30+p33;p30/=N3;p33/=N3;
3561 p3T=1-p30-p33;
3562 NT=nsum-N0-N3;
3563 printf("# C0 C3 N #Modified Confusion Matrix\n");
3564 printf("%3f %3f %g #p00 p03 N0 for target C0=Cp\n",p00,p03,N0);
3565 printf("%3f %3f %g #p30 p33 N3 for target C3=Co\n",p30,p33,N3);
3566 printf("%3f %3f %6.0f #PNT 1-PNT num-of-all-data\n",NT/nsum,1-NT/nsum,nsum);
3567 },
3568 #####
3569 ##### copy and paste to here for (1)
3570 #####
3571 #####
3572 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:4:0:3:DTCT=4;SiCs=2
3573 # 0.962 0.003 0.029 0.006 115500 100 #p0 p01 p02 p03 n0 wp0 for target C0=Cp
3574 # 0.547 0.162 0.024 0.267 42000 100 #p1 p11 p12 p13 n1 wp1 for target C1=Ctp
3575 # 0.205 0.003 0.208 0.583 52500 100 #p2 p21 p22 p23 n2 wp2 for target C2=Cto
3576 # 0.003 0.003 0.013 0.982 259000 100 #p3 p31 p32 p33 n3 wp2 for target C3=Co
3577 # C0 C3 N #Modified Confusion Matrix
3578 # 0.918 0.082 145992 #p00 p03 N0 for target C0=Cp
3579 # 0.039 0.961 296485 #p30 p33 N3 for target C3=Co
3580 # 0.057 0.943 469000 #PNT 1-PNT num-of-all-data
3581
3582 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:3:0:3:DTCT=3;SiCs=2
3583 # 0.957 0.016 0.023 0.003 126000 100 #p0 p01 p02 p03 n0 wp0 for target C0=Cp
3584 # 0.289 0.266 0.090 0.356 31500 100 #p1 p11 p12 p13 n1 wp1 for target C1=Ctp
3585 # 0.279 0.103 0.281 0.337 38500 100 #p2 p21 p22 p23 n2 wp2 for target C2=Cto
3586 # 0.002 0.003 0.015 0.981 273000 100 #p3 p31 p32 p33 n3 wp2 for target C3=Co
```

```
# C0 C3 N #Modified Confusion Matrix
3587 0.961 0.082 141278 #p00 p03 N0 for target C0=Cp
3588 0.039 0.961 292075 #p30 p33 N3 for target C3=Co
3589 0.076 0.924 469000 #PNT 1-PNT num-of-all-data
3590
3591 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:3.0:0.3:DTct=7:SiCs=2
3592 0.961 0.014 0.021 0.004 84000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3593 0.452 0.133 0.046 0.155 73500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3594 0.666 0.175 0.046 0.155 73500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3595 0.115 0.048 0.124 0.713 94500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3596 0.002 0.003 0.012 0.983 217000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3597 # C0 C3 N #Modified Confusion Matrix
3598 0.917 0.083 141404 #p00 p03 N0 for target C0=Cp
3599 0.039 0.961 291991 #p30 p33 N3 for target C3=Co
3600 0.076 0.924 469000 #PNT 1-PNT num-of-all-data
3601
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:4.0:0.3:DTct=5:SiCs=2
3602 0.962 0.003 0.029 0.006 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3603 0.462 0.130 0.025 0.215 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3604 0.666 0.175 0.046 0.155 73500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3605 0.162 0.003 0.168 0.667 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3606 0.003 0.003 0.012 0.982 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3607 # C0 C3 N #Modified Confusion Matrix
3608 0.917 0.082 145950 #p00 p03 N0 for target C0=Cp
3609 0.039 0.961 296454 #p30 p33 N3 for target C3=Co
3610 0.057 0.943 469000 #PNT 1-PNT num-of-all-data
3611
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:3.0:0.3:DTct=5:SiCs=2
3612 0.961 0.014 0.022 0.003 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3613 0.459 0.175 0.061 0.221 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3614 0.666 0.175 0.046 0.155 73500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3615 0.162 0.065 0.173 0.600 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3616 0.002 0.002 0.013 0.983 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3617 # C0 C3 N #Modified Confusion Matrix
3618 0.918 0.082 141330 #p00 p03 N0 for target C0=Cp
3619 0.039 0.961 291998 #p30 p33 N3 for target C3=Co
3620 0.076 0.924 469000 #PNT 1-PNT num-of-all-data
3621
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:5.0:0.3:DTct=5:SiCs=2
3622 0.964 0.002 0.022 0.013 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3623 0.466 0.130 0.025 0.215 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3624 0.738 0.022 0.022 0.218 52500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3625 0.164 0.001 0.136 0.699 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3626 0.005 0.001 0.014 0.989 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3627 # C0 C3 N #Modified Confusion Matrix
3628 0.916 0.084 152775 #p00 p03 N0 for target C0=Cp
3629 0.041 0.959 298714 #p30 p33 N3 for target C3=Co
3630 0.037 0.963 469000 #PNT 1-PNT num-of-all-data
3631
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:6.0:0.3:DTct=5:SiCs=2
3632 0.965 0.000 0.012 0.024 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3633 0.465 0.130 0.025 0.215 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3634 0.760 0.002 0.016 0.223 52500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3635 0.165 0.000 0.072 0.762 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3636 0.006 0.001 0.012 0.981 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3637 # C0 C3 N #Modified Confusion Matrix
3638 0.908 0.092 155452 #p00 p03 N0 for target C0=Cp
3639 0.041 0.959 303460 #p30 p33 N3 for target C3=Co
3640 0.022 0.978 469000 #PNT 1-PNT num-of-all-data
3641
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:2.8:0.3:DTct=5:SiCs=2
3642 0.961 0.020 0.016 0.003 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3643 0.466 0.130 0.025 0.215 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3644 0.738 0.022 0.022 0.218 52500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3645 0.164 0.089 0.180 0.576 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3646 0.001 0.003 0.011 0.984 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3647 # C0 C3 N #Modified Confusion Matrix
3648 0.917 0.083 141225 #p00 p03 N0 for target C0=Cp
3649 0.038 0.962 290535 #p30 p33 N3 for target C3=Co
3650 0.079 0.921 469000 #PNT 1-PNT num-of-all-data
3651
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:2.6:0.3:DTct=5:SiCs=2
3652 0.961 0.016 0.021 0.002 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3653 0.466 0.130 0.025 0.215 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3654 0.738 0.022 0.022 0.218 52500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3655 0.162 0.078 0.158 0.544 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3656 0.001 0.004 0.009 0.986 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3657 # C0 C3 N #Modified Confusion Matrix
3658 0.917 0.083 140700 #p00 p03 N0 for target C0=Cp
3659 0.038 0.962 288764 #p30 p33 N3 for target C3=Co
3660 0.084 0.916 469000 #PNT 1-PNT num-of-all-data
3661
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:2.4:0.3:DTct=5:SiCs=2
3662 0.960 0.013 0.025 0.003 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3663 0.466 0.130 0.025 0.215 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3664 0.738 0.022 0.022 0.218 52500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3665 0.162 0.062 0.173 0.600 66500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3666 0.001 0.004 0.009 0.986 245000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3667 # C0 C3 N #Modified Confusion Matrix
3668 0.917 0.083 140700 #p00 p03 N0 for target C0=Cp
```

```
3669 0.916 0.084 139282 #p00 p03 N0 for target C0=Cp
3670 0.038 0.962 287102 #p30 p33 N3 for target C3=Co
3671 0.091 0.909 469000 #PNT 1-PNT num-of-all-data
3672
3673 # C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:2.0:0.3:DTct=5:SiCs=2
3674 0.960 0.015 0.024 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3675 0.452 0.290 0.037 0.220 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3676 0.162 0.105 0.251 0.481 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3677 0.001 0.004 0.008 0.987 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3678 # C0 C3 N #Modified Confusion Matrix
3679 0.914 0.086 136185 #p00 p03 N0 for target C0=Cp
3680 0.039 0.961 284820 #p30 p33 N3 for target C3=Co
3681 0.102 0.898 469000 #PNT 1-PNT num-of-all-data
3682
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:2.0:0.3:DTct=5:SiCs=2
3683 0.959 0.012 0.028 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3684 0.411 0.294 0.074 0.221 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3685 0.162 0.120 0.276 0.442 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3686 0.000 0.004 0.008 0.988 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3687 # C0 C3 N #Modified Confusion Matrix
3688 0.913 0.087 133980 #p00 p03 N0 for target C0=Cp
3689 0.038 0.962 282226 #p30 p33 N3 for target C3=Co
3690 0.113 0.887 469000 #PNT 1-PNT num-of-all-data
3691
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.8:0.3:DTct=5:SiCs=2
3692 0.958 0.017 0.024 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3693 0.394 0.277 0.104 0.224 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3694 0.162 0.139 0.303 0.396 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3695 0.000 0.005 0.008 0.987 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3696 # C0 C3 N #Modified Confusion Matrix
3697 0.911 0.089 133140 #p00 p03 N0 for target C0=Cp
3698 0.039 0.961 278922 #p30 p33 N3 for target C3=Co
3699 0.121 0.879 469000 #PNT 1-PNT num-of-all-data
3700
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.6:0.3:DTct=5:SiCs=2
3701 0.956 0.015 0.029 0.000 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3702 0.320 0.366 0.089 0.225 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3703 0.162 0.173 0.335 0.330 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3704 0.000 0.005 0.009 0.986 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3705 # C0 C3 N #Modified Confusion Matrix
3706 0.908 0.092 128992 #p00 p03 N0 for target C0=Cp
3707 0.039 0.961 274288 #p30 p33 N3 for target C3=Co
3708 0.140 0.860 469000 #PNT 1-PNT num-of-all-data
3709
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.4:0.3:DTct=5:SiCs=2
3710 0.951 0.022 0.027 0.000 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3711 0.230 0.382 0.162 0.226 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3712 0.162 0.218 0.339 0.280 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3713 0.000 0.008 0.012 0.979 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3714 # C0 C3 N #Modified Confusion Matrix
3715 0.904 0.096 123795 #p00 p03 N0 for target C0=Cp
3716 0.040 0.960 269248 #p30 p33 N3 for target C3=Co
3717 0.162 0.838 469000 #PNT 1-PNT num-of-all-data
3718
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.2:0.3:DTct=5:SiCs=2
3719 0.941 0.022 0.036 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3720 0.176 0.447 0.149 0.230 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3721 0.162 0.264 0.335 0.239 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3722 0.000 0.022 0.009 0.968 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3723 # C0 C3 N #Modified Confusion Matrix
3724 0.899 0.101 120120 #p00 p03 N0 for target C0=Cp
3725 0.041 0.959 263826 #p30 p33 N3 for target C3=Co
3726 0.181 0.819 469000 #PNT 1-PNT num-of-all-data
3727
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.0:0.3:DTct=5:SiCs=2
3728 0.911 0.019 0.070 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3729 0.050 0.498 0.222 0.230 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3730 0.170 0.207 0.411 0.213 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3731 0.000 0.065 0.009 0.926 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3732 # C0 C3 N #Modified Confusion Matrix
3733 0.890 0.110 110460 #p00 p03 N0 for target C0=Cp
3734 0.045 0.955 252340 #p30 p33 N3 for target C3=Co
3735 0.226 0.774 469000 #PNT 1-PNT num-of-all-data
3736
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.0:0.3:DTct=5:SiCs=2
3737 0.854 0.019 0.125 0.002 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3738 0.023 0.548 0.191 0.237 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3739 0.298 0.090 0.397 0.215 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3740 0.000 0.115 0.012 0.872 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3741 # C0 C3 N #Modified Confusion Matrix
3742 0.890 0.110 110460 #p00 p03 N0 for target C0=Cp
3743 0.045 0.955 252340 #p30 p33 N3 for target C3=Co
3744 0.226 0.774 469000 #PNT 1-PNT num-of-all-data
3745
```

```
# C0 C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1.0:0.3:DTct=5:SiCs=2
3746 0.854 0.019 0.125 0.002 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3747 0.023 0.548 0.191 0.237 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3748 0.298 0.090 0.397 0.215 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=cto
3749 0.000 0.115 0.012 0.872 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3750 # C0 C3 N #Modified Confusion Matrix
```

3751 0.878 0.122 103530 #p00 p03 N0 for target C0=Cp
3752 -0.080 0.920 247754 #p30 p33 N3 for target C3=Co
3753 0.251 0.749 469000 #PNT 1-PNT num-of-all-data
3754
3755 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:DTCT=2;SiCs=2
3756 0.896 0.015 0.063 0.027 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3757 0.003 0.453 0.000 0.544 21000 50 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3758 0.476 0.001 0.376 0.147 24500 50 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3759 0.089 0.049 0.003 0.859 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3760 # CO C3 N #Modified Confusion Matrix
3761 0.890 0.110 137476 #p00 p03 N0 for target C0=Cp
3762 0.129 0.871 287340 #p30 p33 N3 for target C3=Co
3763 0.094 0.906 469000 #PNT 1-PNT num-of-all-data
3764
3765 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:DTCT=2;SiCs=2
3766 0.899 0.015 0.070 0.027 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3767 0.003 0.453 0.000 0.544 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3768 0.472 0.001 0.361 0.147 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3769 0.089 0.049 0.004 0.859 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3770 # CO C3 N #Modified Confusion Matrix
3771 0.889 0.111 136521 #p00 p03 N0 for target C0=Cp
3772 0.129 0.871 287242 #p30 p33 N3 for target C3=Co
3773 0.096 0.904 469000 #PNT 1-PNT num-of-all-data
3774
3775
3776
3777 # CO C1 C2 C3 n wpi #Confusion Matrix; gibbs:1:1:2:0:DTCT=2;SiCs=2 best??
3778 0.960 0.005 0.029 0.006 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3779 0.256 0.202 0.017 0.524 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3780 0.433 0.004 0.394 0.170 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3781 0.003 0.003 0.014 0.980 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3782 # CO C3 N #Modified Confusion Matrix
3783 0.920 0.080 148239 #p00 p03 N0 for target C0=Cp
3784 0.039 0.961 296894 #p30 p33 N3 for target C3=Co
3785 0.051 0.949 469000 #PNT 1-PNT nsum
3786
3787 # CO C1 C2 C3 n wpi #Confusion Matrix; gibbs:1:1:4:0:DTCT=2;SiCs=2
3788 0.964 0.002 0.026 0.010 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3789 0.458 0.000 0.022 0.520 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3790 0.433 0.000 0.295 0.171 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3791 0.006 0.000 0.016 0.978 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3792 # CO C3 N #Modified Confusion Matrix
3793 0.920 0.080 153489 #p00 p03 N0 for target C0=Cp
3794 0.041 0.959 299656 #p30 p33 N3 for target C3=Co
3795 0.034 0.966 469000 #PNT 1-PNT nsum
3796
3797 # CO C1 C2 C3 n wpi #Confusion Matrix; gibbs:1:1:6:0:DTCT=2;SiCs=2
3798 0.964 0.002 0.018 0.016 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3799 0.458 0.012 0.020 0.520 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3800 0.434 0.010 0.198 0.158 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3801 0.006 0.006 0.009 0.979 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3802 # CO C3 N #Modified Confusion Matrix
3803 0.915 0.085 154308 #p00 p03 N0 for target C0=Cp
3804 0.041 0.959 302099 #p30 p33 N3 for target C3=Co
3805 0.027 0.973 469000 #PNT 1-PNT nsum
3806
3807 # CO C1 C2 C3 n wpi #Confusion Matrix for #gibbs:1:1:0:DTCT=2;SiCs=2
3808 0.956 0.011 0.028 0.005 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3809 0.010 0.461 0.002 0.526 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3810 0.434 0.014 0.396 0.157 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3811 0.001 0.013 0.005 0.981 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3812 # CO C3 N #Modified Confusion Matrix
3813 0.918 0.082 142432 #p00 p03 N0 for target C0=Cp
3814 0.037 0.963 296314 #p30 p33 N3 for target C3=Co
3815 0.065 0.935 469000 #PNT 1-PNT nsum
3816
3817 # CO C1 C2 C3 n wpi #Confusion Matrix; gibbs:1:0.8:0:DTCT=2;SiCs=2
3818 0.956 0.020 0.017 0.008 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3819 0.009 0.385 0.065 0.542 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3820 0.436 0.143 0.263 0.159 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3821 0.001 0.005 0.003 0.990 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3822 # CO C3 N #Modified Confusion Matrix
3823 0.913 0.087 143157 #p00 p03 N0 for target C0=Cp
3824 0.037 0.963 298994 #p30 p33 N3 for target C3=Co
3825 0.057 0.943 469000 #PNT 1-PNT nsum
3826
3827 # CO C1 C2 C3 n wpi #Confusion Matrix; gibbs:1:1:2:0:DTCT=2;SiCs=2
3828 0.963 0.001 0.001 0.034 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3829 0.458 0.023 0.000 0.519 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3830 0.434 0.001 0.003 0.563 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3831 0.006 0.013 0.000 0.981 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3832 # CO C3 N #Modified Confusion Matrix

3833 0.901 0.099 156608 #p00 p03 N0 for target C0=Cp
3834 0.040 0.960 307696 #p30 p33 N3 for target C3=Co
3835 0.010 0.990 469000 #PNT 1-PNT nsum
3836
3837 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:DTCT=5;SiCs=2
3838 0.911 0.019 0.070 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3839 0.050 0.498 0.222 0.230 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3840 0.170 0.207 0.411 0.213 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3841 0.000 0.065 0.009 0.926 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3842 # CO C3 N #Modified Confusion Matrix
3843 0.890 0.110 110460 #p00 p03 N0 for target C0=Cp
3844 0.045 0.955 252340 #p30 p33 N3 for target C3=Co
3845 0.226 0.774 469000 #PNT 1-PNT nsum
3846
3847 # CO C1 C2 C3 n wpi #Confusion Matrix for gibbs:1:1:0.3:DTCT=5;SiCs=2
3848 0.911 0.019 0.070 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3849 0.050 0.498 0.222 0.230 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3850 0.170 0.207 0.411 0.213 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3851 0.000 0.065 0.009 0.926 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3852 # CO C3 N #Modified Confusion Matrix
3853 0.890 0.110 110460 #p00 p03 N0 for target C0=Cp
3854 0.045 0.955 252340 #p30 p33 N3 for target C3=Co
3855 0.226 0.774 469000 #PNT 1-PNT nsum
3856
3857 # gibbs:1:1:0.05:DTCT=10;SiCs=2
3858 # CO C1 C2 C3 n wpi #Confusion Matrix
3859 0.962 0.025 0.010 0.003 52500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3860 0.752 0.125 0.014 0.109 105000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3861 0.079 0.054 0.075 0.793 136500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3862 0.000 0.006 0.010 0.984 175000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3863 # CO C3 N #Modified Confusion Matrix
3864 0.918 0.082 141068 #p00 p03 N0 for target C0=Cp
3865 0.037 0.963 291228 #p30 p33 N3 for target C3=Co
3866 0.078 0.922 469000 #PNT 1-PNT nsum
3867
3868 # gibbs:1:1:0.05:DTCT=2;SiCs=2
3869 # CO C1 C2 C3 n wpi #Confusion Matrix
3870 0.956 0.023 0.013 0.008 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3871 0.009 0.419 0.031 0.541 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3872 0.436 0.195 0.210 0.159 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3873 0.001 0.006 0.003 0.990 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3874 # CO C3 N #Modified Confusion Matrix
3875 0.913 0.087 143136 #p00 p03 N0 for target C0=Cp
3876 0.037 0.963 298994 #p30 p33 N3 for target C3=Co
3877 0.057 0.943 469000 #PNT 1-PNT nsum
3878
3879 # gibbs:1:1:1:0:DTCT=2;SiCs=2
3880 # CO C1 C2 C3 n wpi #Confusion Matrix
3881 0.949 0.011 0.031 0.009 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3882 0.002 0.439 0.017 0.542 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3883 0.436 0.040 0.366 0.158 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3884 0.001 0.005 0.004 0.990 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3885 # CO C3 N #Modified Confusion Matrix
3886 0.911 0.089 142191 #p00 p03 N0 for target C0=Cp
3887 0.037 0.963 298970 #p30 p33 N3 for target C3=Co
3888 0.059 0.941 469000 #PNT 1-PNT nsum
3889
3890 # gibbs:1:1:0.2:DTCT=2;SiCs=2
3891 # CO C1 C2 C3 n wpi #Confusion Matrix
3892 0.910 0.013 0.060 0.016 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3893 0.001 0.452 0.001 0.546 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3894 0.454 0.002 0.395 0.149 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3895 0.018 0.032 0.003 0.947 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3896 # CO C3 N #Modified Confusion Matrix
3897 0.901 0.099 137886 #p00 p03 N0 for target C0=Cp
3898 0.056 0.944 291728 #p30 p33 N3 for target C3=Co
3899 0.084 0.916 469000 #PNT 1-PNT nsum
3900
3901 # gibbs:1:1:0:DTCT=3;SiCs=2
3902 # CO C1 C2 C3 n wpi #Confusion Matrix
3903 0.959 0.007 0.030 0.005 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3904 0.293 0.344 0.007 0.356 31500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3905 0.277 0.013 0.272 0.438 38500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3906 0.000 0.013 0.003 0.983 273000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Co
3907 # CO C3 N #Modified Confusion Matrix
3908 0.917 0.083 141908 #p00 p03 N0 for target C0=Cp
3909 0.036 0.964 295886 #p30 p33 N3 for target C3=Co
3910 0.067 0.953 469000 #PNT 1-PNT nsum
3911
3912 # gibbs:1:1:0:DTCT=1;SiCs=2 #NG
3913 # CO C1 C2 C3 n wpi #Confusion Matrix
3914

3915 0.078 0.013 0.894 0.015 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3916 0.004 0.992 0.001 0.003 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3917 0.008 0.005 0.971 0.017 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3918 0.006 0.956 0.011 0.027 301000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3919 # CO C3 N #Modified Confusion Matrix
3920 0.837 0.163 13744.5 #p00 p03 N0 for target C0=Cp
3921 0.185 0.815 10195.5 #p30 p33 N3 for target C3=Cco
3922 0.949 0.051 469000 #PNT 1-PNT nsum
3923
3924
3925 #gibbs=1:1:0:DTCT=0:SiCs=2
3926 # CO C1 C2 C3 n wpi #Confusion Matrix
3927 0.899 0.000 0.000 0.001 157500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3928 nan nan nan nan 0 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3929 nan nan nan nan 0 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3930 0.041 0.000 0.000 0.959 311500 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3931 # CO C3 N #Modified Confusion Matrix
3932 nan nan nan #p00 p03 N0 for target C0=Cp
3933 nan nan nan #p30 p33 N3 for target C3=Cco
3934 nan nan 469000 #PNT 1-PNT nsum
3935
3936 #gibbs=1:1:0:1:DTCT=1:SiCs=2 #NG
3937 # CO C1 C2 C3 n wpi #Confusion Matrix
3938 0.090 0.009 0.882 0.020 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3939 0.004 0.989 0.000 0.006 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3940 0.011 0.001 0.975 0.013 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3941 0.017 0.920 0.012 0.051 301000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3942 # CO C3 N #Modified Confusion Matrix
3943 0.815 0.185 16275 #p00 p03 N0 for target C0=Cp
3944 0.253 0.747 20720 #p30 p33 N3 for target C3=Cco
3945 0.921 0.079 469000 #PNT 1-PNT nsum
3946
3947 #gibbs=1:1:0:DTCT=3:SiCs=2
3948 # CO C1 C2 C3 n wpi #Confusion Matrix
3949 0.959 0.007 0.030 0.005 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3950 0.293 0.344 0.007 0.356 31500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3951 0.277 0.013 0.272 0.438 38500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3952 0.000 0.013 0.003 0.983 273000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3953 # CO C3 N #Modified Confusion Matrix
3954 0.917 0.083 141908 #p00 p03 N0 for target C0=Cp
3955 0.036 0.964 295886 #p30 p33 N3 for target C3=Cco
3956
3957 #gibbs=1:1:0:2:DTCT=2:SiCs=2
3958 # CO C1 C2 C3 n wpi #Confusion Matrix
3959 0.910 0.013 0.060 0.016 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3960 0.001 0.452 0.001 0.546 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3961 0.454 0.002 0.395 0.149 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3962 0.018 0.032 0.003 0.947 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3963 # CO C3 N #Modified Confusion Matrix
3964 0.901 0.099 137886 #p00 p03 N0 for target C0=Cp
3965 0.056 0.944 291728 #p30 p33 N3 for target C3=Cco
3966 0.084 0.916 469000 #PNT 1-PNT nsum
3967
3968 #DTCT=2:gibbs=1:1:0:1
3969 # CO C1 C2 C3 n wpi #Confusion Matrix
3970 0.949 0.011 0.031 0.009 136500 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3971 0.002 0.439 0.017 0.542 21000 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3972 0.436 0.040 0.366 0.158 24500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3973 0.001 0.005 0.004 0.990 287000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3974 # CO C3 N #Modified Confusion Matrix
3975 0.911 0.089 142191 #p00 p03 N0 for target C0=Cp
3976 0.037 0.963 298970 #p30 p33 N3 for target C3=Cco
3977 0.059 0.941 469000 #PNT 1-PNT nsum
3978
3979 #DTCT=5:gibbs=1:1:0
3980 # CO C1 C2 C3 n wpi #Confusion Matrix
3981 0.961 0.005 0.029 0.005 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3982 0.555 0.204 0.017 0.224 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3983 0.161 0.004 0.160 0.675 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3984 0.000 0.005 0.003 0.992 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3985 # CO C3 N #Modified Confusion Matrix
3986 0.914 0.086 142328 #p00 p03 N0 for target C0=Cp
3987 0.036 0.964 298634 #p30 p33 N3 for target C3=Cco
3988 0.060 0.940 469000 #PNT 1-PNT nsum
3989
3990 #DTCT=1:gibbs=1:1:0:0 ??bad?DTCT=1 is very bad but DTCT=2 is pretty good why?
3991 # CO C1 C2 C3 n wpi #Confusion Matrix
3992 0.078 0.013 0.894 0.015 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
3993 0.004 0.992 0.001 0.003 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
3994 0.008 0.005 0.971 0.017 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
3995 0.006 0.956 0.011 0.027 301000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
3996 # CO C3 N #Modified Confusion Matrix

3997 0.837 0.163 13744.5 #p00 p03 N0 for target C0=Cp
3998 0.185 0.815 10195.5 #p30 p33 N3 for target C3=Cco
3999 0.949 0.051 469000 #PNT 1-PNT nsum
4000
4001 #gibbs=1:1:0:3:DTCT=1:SiCs=2
4002 # CO C1 C2 C3 n wpi #Confusion Matrix
4003 0.295 0.011 0.668 0.026 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
4004 0.005 0.995 0.000 0.000 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
4005 0.036 0.000 0.960 0.003 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
4006 0.152 0.798 0.004 0.046 301000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
4007 # CO C3 N #Modified Confusion Matrix
4008 0.919 0.081 47239.5 #p00 p03 N0 for target C0=Cp
4009 0.769 0.231 60007.5 #p30 p33 N3 for target C3=Cco
4010 0.771 0.229 469000 #PNT 1-PNT nsum
4011 #DTCT=1:gibbs=1:1:0:3
4012 # CO C1 C2 C3 n wpi #Confusion Matrix
4013 0.295 0.011 0.668 0.026 147000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
4014 0.005 0.995 0.000 0.000 10500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
4015 0.036 0.000 0.960 0.003 10500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
4016 0.152 0.798 0.004 0.046 301000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
4017 # CO C3 N #Modified Confusion Matrix
4018 0.919 0.081 47239.5 #p00 p03 N0 for target C0=Cp
4019 0.769 0.231 60007.5 #p30 p33 N3 for target C3=Cco
4020 0.771 0.229 469000 #PNT 1-PNT nsum
4021
4022
4023
4024 #DTCT=5:gibbs=1:1:0:3
4025 # CO C1 C2 C3 n wpi #Confusion Matrix
4026 0.911 0.019 0.070 0.001 105000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
4027 0.050 0.498 0.222 0.230 52500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
4028 0.170 0.207 0.411 0.213 66500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
4029 0.000 0.065 0.009 0.926 245000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
4030 # CO C3 N #Modified Confusion Matrix
4031 0.890 0.110 110460 #p00 p03 N0 for target C0=Cp
4032 0.045 0.955 252340 #p30 p33 N3 for target C3=Cco
4033 0.226 0.774 469000 #PNT 1-PNT nsum
4034
4035 #DTCT=3:
4036 # CO C1 C2 C3 n wpi #Confusion Matrix
4037 0.800 0.046 0.147 0.007 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
4038 0.012 0.604 0.002 0.382 31500 100 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
4039 0.312 0.014 0.494 0.180 38500 100 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
4040 0.008 0.108 0.014 0.870 273000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
4041 # CO C3 N #Modified Confusion Matrix
4042 0.887 0.113 114093 #p00 p03 N0 for target C0=Cp
4043 0.055 0.945 258636 #p30 p33 N3 for target C3=Cco
4044 0.205 0.795 469000 #PNT 1-PNT nsum
4045
4046
4047 # CO C1 C2 C3 n wpi #Confusion Matrix
4048 0.784 0.052 0.158 0.006 126000 100 #p00 p01 p02 p03 n0 wp0 for target C0=Cp
4049 0.000 0.617 0.004 0.378 31500 150 #p10 p11 p12 p13 n1 wp1 for target C1=Ctp
4050 0.295 0.015 0.510 0.180 38500 150 #p20 p21 p22 p23 n2 wp2 for target C2=Cto
4051 0.003 0.112 0.018 0.867 273000 100 #p30 p31 p32 p33 n3 wp3 for target C3=Cco
4052 # CO C3 N #Modified Confusion Matrix
4053 0.886 0.114 111447 #p00 p03 N0 for target C0=Cp
4054 0.048 0.952 255798 #p30 p33 N3 for target C3=Cco
4055 0.217 101756 #PNT Nt nsum
4056 469000 #nsum
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```
4079 #####
4080 #####
4081 #####
4082 #####
4083 # (1) まず、pi_jについて20160220を参照。
4084  過渡期間DTctを増やして (=3や5など)、判定不能 (undesidable)とする割合
4085  (p01*n0+p11*n1+p21*n2)/(n0+n1+n2))を増やし、
4086  判定不能時刻を除いた時刻の話者検査成功率p00/(p00+p02)を上げることができるか？
4087  gibbs:1:1:0.3は良い結果を与えるが、p10とp12の何かが指定話者であるか
4088  を調べない。正確な検査正解率が得られない
4089  # (2) 201602020の[1]～[5]の実行結果。
4090  wp0,wp1,wp2は[2-2]で指定
4091
4092 gibbs:1:1:0.3 DTct=5 SiCs="3": Seems very good
4093 # CO C1 C2 n wpi #Confusion Matrix
4094 # CO C1 C2 n wpi #Confusion Matrix
4095 0.947 0.049 0.004 105000 100 #p00 p01 p02 n0 wp0 for target C0
4096 0.471 0.336 0.194 119000 150 #p10 p11 p12 n1 wp1 for target C1
4097 0.197 0.355 0.448 245000 100 #p20 p21 p22 n2 wp2 for target C2
4098
4099 gibbs:1:1:0.3 DTct=5 SiCs="2": Seems very good
4100 # CO C1 C2 n wpi #Confusion Matrix
4101 0.911 0.089 0.000 105000 100 #p00 p01 p02 n0 wp0 for target C0
4102 0.117 0.665 0.218 119000 150 #p10 p11 p12 n1 wp1 for target C1
4103 0.000 0.076 0.924 245000 100 #p20 p21 p22 n2 wp2 for target C2
4104
4105 gibbs:1:1:0.3 DTct=3 SiCs="2": Seems good
4106 # CO C1 C2 n wpi #Confusion Matrix
4107 # CO C1 C2 n wpi #Confusion Matrix
4108 0.809 0.183 0.008 126000 100 #p00 p01 p02 n0 wp0 for target C0
4109 0.181 0.548 0.271 70000 150 #p10 p11 p12 n1 wp1 for target C1
4110 0.012 0.115 0.872 273000 100 #p20 p21 p22 n2 wp2 for target C2
4111 7300) are recognized undecidable. Should check how much data in C0 and C2 for 0.181 and 0.271
4112
4113 gibbs:1:1:0 DTct=3 SiCs="2": wp0:wp1:wp2=100:150:100; Seems good ?p11が小さいが良いか？
4114 # CO C1 C2 n wpi #Confusion Matrix
4115 0.901 0.035 0.005 105000 100 #p00 p01 p02 n0 wp0 for target C0
4116 0.335 0.198 0.468 119000 150 #p10 p11 p12 n1 wp1 for target C1
4117 0.000 0.016 0.983 245000 100 #p20 p21 p22 n2 wp2 for target C2
4118
4119 gibbs:1:1:0 DTct=3 SiCs="2": wp0:wp1:wp2=100:100:100; Seems good ?p11が小さいが良いか？
4120 # CO C1 C2 n wpi #Confusion Matrix
4121 0.961 0.034 0.005 105000 100 #p00 p01 p02 n0 wp0 for target C0
4122 0.335 0.189 0.476 119000 100 #p10 p11 p12 n1 wp1 for target C1
4123 0.000 0.008 0.992 245000 100 #p20 p21 p22 n2 wp2 for target C2
4124
4125 ##gibbs:1:1:0.3 DTct=1 SiCs="2": Seems NG.
4126 ## CO C1 C2 n wpi #Confusion Matrix
4127 #0.295 0.026 0.026 147000 100 #p00 p01 p02 n0 wp0 for target C0
4128 #0.021 0.978 0.002 21000 150 #p10 p11 p12 n1 wp1 for target C1
4129 #0.152 0.802 0.046 301000 100 #p20 p21 p22 n2 wp2 for target C2
4130
4131 ##gibbs:1:1:0.3
4132 ## CO C1 C2 n wpi #Confusion Matrix
4133 #0.963 0.000 0.037 147000 1 #p00 p01 p02 n0 wp0 for target C0
4134 #0.501 0.000 0.499 21000 1 #p10 p11 p12 n1 wp1 for target C1
4135 #0.156 0.000 0.844 301000 1 #p20 p21 p22 n2 wp2 for target C2
4136 ##gibbs:1:1:0.4
4137 ## CO C1 C2 n wpi #Confusion Matrix
4138 #0.410 0.514 0.076 147000 1 #p00 p01 p02 n0 wp0 for target C0
4139 #0.041 0.459 0.500 21000 1 #p10 p11 p12 n1 wp1 for target C1
4140 #0.240 0.028 0.732 301000 1 #p20 p21 p22 n2 wp2 for target C2
4141 ##gibbs:1:1:0.5 NG time-constant
4142 ## CO C1 C2 n wpi #Confusion Matrix
4143 #0.466 0.414 0.120 147000 1 #p00 p01 p02 n0 wp0 for target C0
4144 #0.082 0.417 0.500 21000 1 #p10 p11 p12 n1 wp1 for target C1
4145 #0.299 0.071 0.630 301000 1 #p20 p21 p22 n2 wp2 for target C2
4146
4147 ##
4148 ## CO C1 C2 n wpi #Confusion Matrix
4149 #0.963 0.006 0.031 147000 10 #p00 p01 p02 n0 wp0 for target C0
4150 #0.487 0.003 0.510 21000 17 #p10 p11 p12 n1 wp1 for target C1
4151 #0.009 0.006 0.985 301000 10 #p20 p21 p22 n2 wp2 for target C2
4152
4153 ## CO C1 C2 n wpi #Confusion Matrix
4154 #0.079 0.693 0.028 147000 100 #p00 p01 p02 n0 wp0 for target C0
4155 #0.006 0.487 0.507 21000 175 #p10 p11 p12 n1 wp1 for target C1
4156 #0.007 0.014 0.979 301000 100 #p20 p21 p22 n2 wp2 for target C2
4157 #
```

```
4158 ## CO C1 C2 n wpi #Confusion Matrix
4159 #0.079 0.895 0.026 147000 10 #p00 p01 p02 n0 wp0 for target C0
4160 #0.006 0.505 21000 18 #p10 p11 p12 n1 wp1 for target C1
4161 #0.007 0.018 0.975 301000 10 #p20 p21 p22 n2 wp2 for target C2
4162
4163 ## CO C1 C2 n wpi #Confusion Matrix
4164 #0.964 0.000 0.036 147000 10 #p00 p01 p02 n0 wp0 for target C0
4165 #0.487 0.000 0.513 21000 15 #p10 p11 p12 n1 wp1 for target C1
4166 #0.009 0.001 0.990 301000 10 #p20 p21 p22 n2 wp2 for target C2
4167
4168 ## CO C1 C2 n #Confusion Matrix
4169 #0.078 0.912 0.010 147000 1 #p00 p01 p02 n0 wp0 for target C0
4170 #0.006 0.988 0.006 21000 2 #p10 p11 p12 n1 wp1 for target C1
4171 #0.006 0.976 0.018 301000 1 #p20 p21 p22 n2 wp2 for target C2
4172
4173 ## CO C1 C2 n wpi #Confusion Matrix
4174 #0.074 0.922 0.004 147000 1 #p00 p01 p02 n0 wp0 for target C0
4175 #0.005 0.992 0.002 21000 3 #p10 p11 p12 n1 wp1 for target C1
4176 #0.005 0.987 0.008 301000 1 #p20 p21 p22 n2 wp2 for target C2
4177
4178
20160220
(1) 過渡期間 (判定 不能) の効果を調べるために、DTct=0 ができるようにし、さらに
  Confusion matrix (詳細はwiki参照)で、性能評価できるようにした。
#Confusion matrix(混同行列) と Contingency table(分割表)
#target ↓ output判定 → C0 C1 C2
#C0 p00 p01 p02 n0 (p00+p01+p02=1)
#C1 p10 p11 p12 n1
#C2 p20 p21 p22 n2
# pi_jは入力データの話者ラズ (target)がCiに対し、検査結果がCjとなる確率
#####
##### output検査結果 (判定) がC0となる場合の確率
#p0=(p01+n02)/n0 --> n0*p00=n01+n02 --> n00+n01+n02=n0 --> n00=n0*(1-p00) <--[4]で求まる値(1-p00)
#p1=(p11+n12)/n1 --> n1*p01=n11+n12 --> n10=n1*(1-p10)
#p2=(p21+n22)/n2 --> n2*p02=n21+n22 --> n20=n2*(1-p20)
#####
##### output検査結果 (判定) がC1となる場合の確率
#p01=(n00+n02)/n0 -->
#p11=(n10+n12)/n1 --> n11=n1*(1-p11) --> n1=n1*(1-p11) <--[4]で求まる値(1-p11)
#p21=(n20+n22)/n2 -->
#p02=(n00+n01)/n0 --> output検査結果 (判定) がC1となる場合の確率
#p12=(n10+n11)/n1 -->
#p22=(n20+n21)/n2 -->
#####
(2) 201602020の[1]～[4]の後に、[5]を挿入し、これを実行すれば表示される。例えば
次の結果が得られる。
# [5] の結果
# (a) DTct=0:SiCs="2"
4207 # CO C1 C2 n #Confusion Matrix
4208 0.899 0.000 0.101 157500 #p00 p01 p02 n0 for target C0
4210 nan nan nan 0 #p10 p11 p12 n1 for target C1
4211 0.041 0.000 0.959 311500 #p20 p21 p22 n2 for target C2
4212 # (b) DTct=1:SiCs="2"
4213 # CO C1 C2 n #Confusion Matrix
4214 0.964 0.000 0.036 147000 #p00 p01 p02 n0 for target C0
4215 0.487 0.000 0.513 21000 #p10 p11 p12 n1 for target C1
4216 0.009 0.000 0.991 301000 #p20 p21 p22 n2 for target C2
4217 #####
4218 # (c) DTct=0:SiCs="3"
4219 # CO C1 C2 n #Confusion Matrix
4220 0.895 0.000 0.105 157500 #p00 p01 p02 n0 for target C0
4221 nan nan nan 0 #p10 p11 p12 n1 for target C1
4222 0.267 0.000 0.733 311500 #p20 p21 p22 n2 for target C2
4223
4224 # (d) DTct=1:SiCs="3"
4225 # CO C1 C2 n #Confusion Matrix
4226 0.936 0.002 0.062 147000 #p00 p01 p02 n0 for target C0
4227 0.586 0.008 0.406 21000 #p10 p11 p12 n1 for target C1
4228 0.234 0.005 0.761 301000 #p20 p21 p22 n2 for target C2
4229
4230 #DTct=3:SiCs="3"
4231 # CO C1 C2 n #Confusion Matrix
4232 0.960 0.018 0.021 126000 #p00 p01 p02 n0 for target C0
4233 0.531 0.189 0.280 70000 #p10 p11 p12 n1 for target C1
4234 0.186 0.107 0.707 273000 #p20 p21 p22 n2 for target C2
4235
4236 ##result
4237 対応する[4]の結果
4238 # (a) DTct=0:SiCs="2"
```

```
4239 # (b) DTCT=1;SiCs="2"
4240 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c0.target o:pgp.output vth:0.5:0## 0.0
35 0.036 0.449 0.499 3 147000 #LAVE,LACE,INLP,INLPD,nc ndata <- LAVE=1-p00= 0.036=1-0.964
4241 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c1.target o:pgt.output vth:0.5:0## 0.4
88 1.000 1.019 1.049 3 21000 #LAVE,LACE,INLP,INLPD,nc ndata <- LAVE=1-p11= 1.000=1-0.000
4242 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c2.target o:pgp.output vth:0.5:0## 0.0
11 0.009 0.455 0.468 3 301000 #LAVE,LACE,INLP,INLPD,nc ndata <- LAVE=1-p22= 0.009=1-0.991
4243 # (c) DTCT=0;SiCs="3"
4244 # (d) DTCT=1;SiCs="3"
4245 #DTCT=3;SiCs="3"
4246 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c0.target o:pgp.output vth:0.5:0## 0.0
29 0.040 0.476 0.540 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4247 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c1.target o:pgt.output vth:0.5:0## 0.6
99 0.811 0.961 1.144 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4248 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c2.target o:pgp.output vth:0.5:0## 0.3
15 0.293 0.530 0.789 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4249 #evalloss4pg p:.../result-speaker_search/ProbDistSpeaker.dat t:c3tall.target o:pgall.output vth:0.5:
0## 0.296 0.302 0.360 0.781 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4250
4251
4252
4253
4254
20160214
4255 (1) 各テストにおけるt-pg曲線の表示を2016002020の(1)の後ろ(2)の前)に入れた。
4256 #####
4257
201600202
4258 #####
4259 #####
4260 ##### copy and paste from here for (1)
4261 #####
4262 #####
4263 prog=spkerdigit.v6
4264 make ; make data-clean
4265 d1=.../result-speaker_search; if [ ! -e $d1 ]; then mkdir $d1;fi
4266 ##d2=/media/$f_D_DRIVE/cdata/$ficonip/20150917kateguchi/12voicedata_sakashita/12voicedata/allpole/d
2899_
4267 ##d2=/media/$f_D_DRIVE/cdata/$ficonip/20151005sakashita/d2sep="_
4268 ##d2=~/sotu/2015iconip/iconip-saigen/2012/12voicedata/allpole/d2sep=":
4269 ##d2=~/.../2012/12voicedata/iconip1d4data/d2sep=":
4270 d2=~/sotu/2012/12voicedata/allpole/d2sep=":
4271 tmp=/tmp; if [ ! -e $tmp ]; then mkdir $tmp;fi
4272 ##hobrain psdsum.dat
4273 gibbs=gibbs:1:0.5:0.2 ##### use only gibb:1:1:1(GEBI) gibbs:1:1:0(BI), see 20160125 [a]-[e] ##b
eta=beta:0.5:0.3 ##### tune this,
4274 gibbs=gibbs:1:1:0 ##### use only gibb:1:1:1(GEBI) gibbs:1:1:0(BI), see 20160125 [a]-[e] ##beta=
beta:0.5:0.3 ##### tune this,
4275 gibbs=gibbs:1:1:0 #####
4276 DTCT=3;DTCT=0;DTCT=4;
4277 SiCs="2"; ##for 3:Unregistered, 2:Incorrect SiCs="0 2"; #Depnds on speakerdigit_v6.c test:7:..:$.
iCs:...
4278 DTCT=30,20:20,15:20,10:20 #HDTCT=30,20:20,15:20,10:20,5:20
4279 cat /dev/null > resultsum.dat
4280 cat /dev/null > psdsum.dat
4281 cat /dev/null > testsdsum.dat
4282 fig=$tmp/histSpeaker:cat /dev/null > $fhg.dat #Initialize
4283 for iCs in $SiCs; do
f test:7:.....
4284 for sX in 0 1 2 3 4 5 6; do sP=-1;
4285 if [ "$d2sep" = " " ] ; then ytm:1:0.9:1000 or ytm:1:0.9:2000
4286 cmd=$prog fs:$(d2)/oob4s-$IN4ombas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibbs
veri-2 pApAd:$[pAs] :$[pAd] LAR:0:0:-1 test:8:1000:$[sX]:$[DTCT] ex:$sX sp:$sP void:0";
4287 #cmd=$prog fs:$(d2)/oob4s-$IN4ombas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibb
s veri-2 pApAd:$[pAs] :$[pAd] LAR:0:0:-1 test:8:2000:$[iCs]:$[3:30,20:20,15:20,10:20,5:20 sX:$sX sP:$sP void:0"
;
4288 #cmd=$prog fs:$(d2)/oob4s-$IN4ombas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibb
s veri-2 pApAd:$[pAs] :$[pAd] LAR:0:0:-1 test:8:2000:$[iCs]:$[3:30,20:20,15:20,10:20,5:20 sX:$sX sP:$sP void:0";
4289 #cmd=$prog fs:$(d2)/oob4s-$IN4ombas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibb
s $beta veri-2 pApAd:$[pAs] :$[pAd] LAR:0:0:-1 test:7:2000:$[iCs]:$[3:30,20:20,15:20,10:20,5:20 sX:$sX sP:$sP void:0";
4290 else
4291 cmd=$prog fs:$(d2)/oob4s-$IN4ombas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gibbs
$beta veri-2 pApAd:$[pAs] :$[pAd] LAR:0:0:-1 test:7:2000:$[iCs]:$[3:30,20:20,15:20,10:20,5:20 sX:$sX sP:$sP void:0";
4292 fi
4293 echo "Exec $cmd";$cmd > /dev/null
4294 cat $tmp/testsd.stat.dat >> resultsum.dat
4295 echo -e '\n' >> resultsum.dat #####
4296 cat $tmp/psd.dat >> psdsum.dat #####
4297 cat tmp/testsd.dat |awk 'BEGIN{d=0}{if(d=0){if(substr($1,1,3)=="##") g1;}else print $0;} '> tmp/t
esdsum.dat
4298 #echo "##wc psdsum.dat tmp/psd.dat"
4299 #wc psdsum.dat tmp/psd.dat
4300 done #for sX excluded speaker
#done #LoopLevel2:for sX in 0 1 2 3 4 5
```

```
6;
4301 done # for iCs
4302 #####
4303 # obtained psdsum.dat consists of lines involving (1)t(step), (2)n(number of data), (3)test->pgC[n][t
](pOs), (4)test->pgC[n][t](pGd), (5)sX
4304 #####
4305 ##show t vs. pg of resultsum.dat
4306 fntpg="tmp/t-pGmean"
4307 gnuplot <<EOF
4308 set term postscript;set output "$fntpg.eps";
4309 plot "resultsum.dat" using 1:2:($2-$4):($2+$5) w errorbars, "" using 1:2 w l lc rgb "blue"
4310 quit
4311 EOF
4312 ## the following takes a lot of time to display via gnuplot
4313 cmd="gv $fntpg.eps"; echo "Exec $cmd."; $cmd&
4314 ##fntpg="tmp/tpGall"
4315 ##gnuplot <<EOF
4316 ##set term postscript;set output "$fntpg.eps";
4317 ##plot "psdsum.dat" using 1:3 w d
4318 ##quit
4319 #####
4320 #####
4321 ##cmd="gv $fntpg.eps"; echo "Exec $cmd."; $cmd&
4322 ##cmd="cat tmp/Ctotp.ab";echo "Manually Exec $cmd";$cmd
4323 #export Ctotp="3 30 33 50 53 70 73 85 105 108 115 118 135 138 140 143 160 "; #Sequence of time po
ints changing the class Ct,Co,Ct,Cp ...
4324 ##(1) 各テストにおけるt-pg曲線の表示(2つの角度からの表示:10テスト毎に間引き
4325 cat tmp/testsdsum.dat | awk 'BEGIN{1=0;t0=0;n=1;}{if(substr($1,1,1)=="n"){n++;printf("\n");} else {1
++;match($2,"t.*");t=substr($2,RSTART+1,RSTART+3); if(n%10==0) print n,t,$3;}}' > tmp/tpg.dat
4326 gnuplot <<EOF
4327 set xlabel "test"; set ylabel "t"; set zlabel "pg";
4328 set view 21,73
4329 set term postscript;set output "tmp/tpG1.eps";
4330 plot "tmp/tpg.dat" using 1:2:3 w l
4331 set view 16,108
4332 set term postscript;set output "tmp/tpG2.eps";
4333 plot "tpg.dat" using 1:2:3 w l
4334 quit
4335 EOF
4336 ## the following takes a lot of time to display via gnuplot
4337 cmd="gv tmp/tpG1.eps"; echo "Exec $cmd."; $cmd&
4338 cmd="gv tmp/tpG2.eps"; echo "Exec $cmd."; $cmd&
4339 #####
4340 export Ctotp='cat tmp/Ctotp.dat'
4341 # [2]
4342 #####
4343 ## making training histogram for probabilistic prediction
4344 ## class Cp: prompted speaker's digits, Co:other speaker's, Ct:transient
4345 #####
4346 for CpG in "p" "t" "o" ; do # CLASS of pg
#LoopLevel1: for CpG
export CpG
4347 fbo=cS(CpG)
4348 export CpG
4349 fbr=$[d1]/resultp.$[fbo]
4350 cat /dev/null > ${fbo}.dat
4351 cat psdsum.dat
4352 awk 'BEGIN{CpG=ENVIRON["CpG"];Ctotp=ENVIRON["Ctotp"];nmax=split(Ctotp,C);}{
if($1!=0){
for(n=1;n<=nmax;n++){
4353 if($1<C[n]){
4354 n4=(n-1)%4;
4355 if(((CpG=="p" && n4==3)||
(CpG=="o" && n4==1)||
(CpG=="t" && n4==0) || n4==2))){print $3,$0;}
break;
4356 }
4357 }
4358 }' >> ${fbo}.dat ;
4359 # (CpG=="t" && n4==0 || n4==2))){print $3,$0,"n",n,n4,"C=",C[n],C[[1],nmax;]}
cmd1="cp ${fbo}.dat ${fbr}.dat"
4360 echo $cmd1;$cmd1
4361 #nd0="wc ${fbo}.dat|awk '{print $1}';' ; #nd="wc psdsum.dat|awk '{print $1}';'
4362 #echo "#nd=$nd,nd0=$nd0"
4363 cat /dev/null > ${fbr}_pPrain.dat #PP:Probabilistic Prediction
4364 cat /dev/null > ${fbr}_pPrest.dat
4365 cat ${fbr}.dat|awk 'BEGIN{1=0;}{if(1++%2==0) print $0;}' >> ${fbr}_pPrain.dat
4366 cat ${fbr}.dat|awk 'BEGIN{1=0;}{if(1++%2==1) print $0;}' >> ${fbr}_pPrest.dat
4367 #for sX_ in 0 1 2 3 4 5 6; do
#LoopLevel2:for sX_ in 0 1 2 3 4
5 6;
4377 #export sX_0='expr $sX_ \* $nd0 \* 2'
```

```
4378 #sed -n -e "expr ${sX_0} + 1", 'expr ${sX_0} + $nd0*p" ${fbr}.dat >> ${fbr}_PPrain.dat
4379 #sed -n -e "expr ${sX_0} + $nd0 + 1", 'expr ${sX_0} + $nd0 * 2*p" ${fbr}.dat >> ${fbr}_PPrtest.dat
4380 #done #for sX_
2 3 4 5 6;
4381 ## [2-2]
4382 #####
4383 ## Likelihood P(c_i|p_G) for Probabilistic Prediction
4384 ## Histogram by moving average of each class?
4385 #####
4386 export wp0=100 wp1=150 wp2=100; #weight of posterior distribution of probabilistic prediction
4387 export x0=0 ndiv=100 mmav=3
4388 cmd="histmavl-onsei $x0 $ndiv $mmav ${fbr}_PPrain.dat"
4389 echo $cmd; $cmd
4390 fies=$(dl)/hist-Cs(Cpg).eps
4391 cp $tmp/hist.eps $fies
4392 $gv $fiesk #disp result
4393 cp $fgh.dat $tmp/histtmp.dat
4394 cat tmp/hist.dat |awk '{print $3}'> tmp/hist3.dat; paste $tmp/histtmp.dat tmp/hist3.dat > $fgh.dat #
##
4395 sleep 2;
4396 done #for Cpg in "p" "t" "o" ; #Done:LoopLevel1: for Cpg
4397 #####
4398 ## insert first column to be the value of pG, while 2,3,4 columns P(c_i|p_G), Ct, Co, re
spectively
4399 fpgs=$dl/ProbDistSpeaker
4400 cp $fgh.dat $tmp/histtmp.dat; cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat; paste $tmp/histtmp.da
t tmp/hist1.dat > $fgh.dat ##
4401 cat /dev/null > $fpgd.dat
4402 cat $fgh.dat |awk 'BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"]} {p0=$1*wp0;p1=$2*w
p1;p2=$3*wp2;psum=p0+p1+p2;printf("%e %e %e\n",$4, p0/psum,p1/psum,p2/psum)}' >> $fpgd.dat
4403 #cat $fgh.dat |awk 'BEGIN{wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"]} {p0sum=$1*wp0;p1s
um=$2*wp1;p2sum=$3*wp2;psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$4, p0sum/psum,p1sum/psum,p2sum/psum)}'
>> $fpgd.dat
4404 #cat $fgh.dat |awk '{p0sum=$1;p1sum=$2;p2sum=$3;psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$4, p0
sum/psum,p1sum/psum,p2sum/psum)}' >> $fpgd.dat
4405 #[3]
4406 ##
4407 #####
4408 ## Show Likelihood P(c_i|p_G), and p(p_G)
4409 #####
4410 gnuplot <<EOF
4411 set xrange [0:1.3]; set style data boxes; #set style data histograms
4412 set style fill solid border lc rgb "black"
4413 set term tgif;set output "$fpgd.obj";
4414 plot "$fpgd.dat" using 1:($2*\\$3+\\$4) lc rgb "blue" t "Prompted Speaker", "" using 1:($3+\\$4) lc r
gb "yellow" t "Transient", "" using 1:($4) lc rgb "red" t "Other Speaker"
4415 set term postscript;set output "$fpgd.eps";replot
4416 set term postscript;set output "$fpgd-pGdist.eps";plot "$fgh.dat" using 4:($1+\\$2+\\$3) lc rgb "gree
n" t "p(p_G)"
4417 quit
4418 EOF
4419 ##show
4420 cmd="gv $fpgd.eps"; echo "Exec $cmd."; $cmd& #show p(c_i|p_G)
4421 cmd="gv $fpgd-pGdist.eps"; echo "Exec $cmd."; $cmd& #show p(p_G)
4422 ##[4]
4423 #####
4424 #####
4425 # evalloss
4426 #####
4427 d0=~/$otu/2015/can2b
4428 fpgs=$dl/ProbDistSpeaker #defined above
4429 f0tall=pGall;cat /dev/null > ${f0tall}.output ##all
4430 f0tall=CtGtall;cat /dev/null > ${f0tall}.target
4431 for Cpg in "p" "t" "o" ; do # Cpg(phase) for w:prompted-word o:other-word, t:transient #LoopLev
el 1:for Cpg in "p" "o" "t" ; do
4432 if [ $Cpg = "p" ] ; then export CtGt=0; fi #prompted
4433 if [ $Cpg = "t" ] ; then export CtGt=1; fi #transient
4434 if [ $Cpg = "o" ] ; then export CtGt=2; fi #other
4435 f0ut=pG$(Cpg);cp $$(dl)/resultp-Cs(Cpg)_PPrtest.dat ${f0ut}.output;#
4436 export ntest="wc ${f0ut}.output |awk '{print $1}',"
4437 export f0gt=C$(CtGt);
4438 awk 'BEGIN{CtGt=ENVIRON["CtGt"];ntest=ENVIRON["ntest"];for(i=0;i<ntest;i++) print CtGt;}' > ${f0gt}.
target #mktarget $CtGt $ntest > ${f0gt}.target
4439 cmd="evalloss4pg p:$fpgd; dat t:$f0gt; target o:$f0ut; output vth:0.5:0';echo -n "#${cmd}##";$cmd
4440 cat ${f0ut}.output >> ${f0tall}.output;
4441 cat ${f0gt}.target >> ${f0tall}.target; ##all
4442 done #for Cpg
4443 #LoopLev
el 1:for Cpg in "p" "o" "t" ; do
4443 cmd="evalloss4pg p:$fpgd; dat t:$f0gtall; target o:$f0tall; output vth:0.5:0';echo -n "#${cmd}##
";$cmd
4444
4445 #[5]
```

```
4446 #####
4447 # evalloss for confusion matrix
4448 #####
4449 d0=~/$otu/2015/can2b
4450 fpgs=$dl/ProbDistSpeaker #defined above
4451 f0tall=pGall;cat /dev/null > ${f0tall}.output ##all
4452 f0tall=CtGtall;cat /dev/null > ${f0tall}.target
4453 #
4454 cat /dev/null > cfm.dat
4455 for CtGt in 0 1 2 ; do #target class
4456 echo "#for Target Class $CtGt, evall loss of p(rompted), t(ransient), o(ther) data. "
4457 export CtGt;
4458 for Cpg in "p" "t" "o" ; do # Cpg(phase) for w:prompted-word o:other-word, t:transient #LoopLev
el 1:for Cpg in "p" "o" "t" ; do
4459 f0ut=pG$(Cpg);cp $$(dl)/resultp-Cs(Cpg)_PPrtest.dat ${f0ut}.output; #output file to be classified as C
$(Cpg) for Cpg in p,t or o
4460 export ntest="wc ${f0ut}.output |awk '{print $1}',"
4461 export f0gt=C$(CtGt);
4462 awk 'BEGIN{CtGt=ENVIRON["CtGt"];ntest=ENVIRON["ntest"];for(i=0;i<ntest;i++) print CtGt;}' > ${f0gt}.
target #mktarget $CtGt $ntest > ${f0gt}.target
4463 #
4464 cmd="evalloss4pg p:$fpgd; dat t:$f0gt; target o:$f0ut; output vth:0.5:0';echo "#${cmd}##";
4465 $cmd | awk '{print $2,$6;}' >> cfm.dat
4466 #
4467 cat ${f0ut}.output >> ${f0tall}.output;
4468 cat ${f0gt}.target >> ${f0tall}.target; ##all
4469 done #for Cpg
4470 el 1:for Cpg in "p" "o" "t" ; do
4471 done #for CtGt
el o
4471 echo " C0 C1 C2 n #Confusion Matrix"
4472 cat cfm.dat | awk 'BEGIN{f1=0;wp0=ENVIRON["wp0"];wp1=ENVIRON["wp1"];wp2=ENVIRON["wp2"]} {
4473 {p11=$1;n111=$2;11++}}END{
4474 printf("%3f %3f %3f %3f %d %g #p00 p01 p02 n0 wp0 #Confusion Matrix\n\n");
4475 printf("%3f %3f %3f %3f %d %g #p10 p11 p12 n1 wp1 for target C0\n",1-p11,1-p14,1-p17,n11,wp1);
4476 printf("%3f %3f %3f %3f %d %g #p20 p21 p22 n2 wp2 for target C1\n",1-p11,1-p14,1-p17,n11,wp1);
4477 printf("%3f %3f %3f %3f %d %g #p20 p21 p22 n2 wp2 for target C2\n",1-p12,1-p15,1-p18,n12,wp2);}',
4478 ##### copy and paste to here for (1)
4479 #####
4480 #####
4481 #####
4482 #####
4483 #####
4484 # ewault of [5]
4485 #DTCT=3;SiCs="2"
4486 # C0 C1 C2 n #Confusion Matrix
4487 0.960 0.035 0.005 126000 #p00 p01 p02 n0 for target C0
4488 0.287 0.311 0.402 70000 #p10 p11 p12 n1 for target C1
4489 0.000 0.016 0.984 273000 #p20 p21 p22 n2 for target C2
4490 #DTCT=1;SiCs="2"
4491 # C0 C1 C2 n #Confusion Matrix
4492 0.964 0.000 0.036 147000 #p00 p01 p02 n0 for target C0
4493 0.487 0.000 0.513 21000 #p10 p11 p12 n1 for target C1
4494 0.009 0.000 0.991 301000 #p20 p21 p22 n2 for target C2
4495 #DTCT=0;SiCs="2"
4496 # C0 C1 C2 n #Confusion Matrix
4497 0.899 0.000 0.101 157500 #p00 p01 p02 n0 for target C0
4498 nan nan nan 0 #p10 p11 p12 n1 for target C1
4499 0.041 0.000 0.959 311500 #p20 p21 p22 n2 for target C2
4500 #####
4501 #DTCT=3;SiCs="3"
4502 # C0 C1 C2 n #Confusion Matrix
4503 0.960 0.018 0.021 126000 #p00 p01 p02 n0 for target C0
4504 0.531 0.189 0.280 70000 #p10 p11 p12 n1 for target C1
4505 0.186 0.107 0.707 273000 #p20 p21 p22 n2 for target C2
4506 #DTCT=i;SiCs="3"
4507 # C0 C1 C2 n #Confusion Matrix
4508 0.936 0.002 0.062 147000 #p00 p01 p02 n0 for target C0
4509 0.586 0.008 0.406 21000 #p10 p11 p12 n1 for target C1
4510 0.234 0.005 0.761 301000 #p20 p21 p22 n2 for target C2
4511 #DTCT=0;SiCs="3"
4512 # C0 C1 C2 n #Confusion Matrix
4513 0.895 0.000 0.105 157500 #p00 p01 p02 n0 for target C0
4514 nan nan nan 0 #p10 p11 p12 n1 for target C1
4515 0.267 0.000 0.733 311500 #p20 p21 p22 n2 for target C2
4516 #DTCT=3;SiCs="3"
4517 #####result
4518
4519 #####
4520 #####
4521 ##### SiCs="2" registered spekers
```


4522 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.02
9 0.039 0.306 0.326 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4523 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.43
5 0.811 1.118 1.125 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4524 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
6 0.008 0.357 0.364 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4525 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.121 0.219 0.539 0.549 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4526
4527 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" modified Bayes
4528 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
4529 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
6 0.037 0.282 0.290 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4530 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.46
2 0.713 1.121 1.123 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4531 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
3 0.012 0.288 0.296 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4532 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.120 0.196 0.498 0.504 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4533
4534 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" Bayes Good?
4535 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.02
9 0.039 0.306 0.326 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4536 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.43
5 0.811 1.118 1.125 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4537 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
6 0.008 0.357 0.364 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4538 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.121 0.219 0.539 0.549 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4539
4540 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" modified Bayes better?
4541 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.03
4 0.034 0.380 0.433 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4542 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.42
8 0.932 1.095 1.115 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4543 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
6 0.020 0.423 0.454 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4544 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.119 0.255 0.584 0.617 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4545
4546 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" modified Bayes better?
4547 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
7 0.037 0.296 0.308 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4548 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.49
7 0.736 1.116 1.118 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4549 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
5 0.014 0.305 0.318 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4550 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.130 0.202 0.509 0.519 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4551
4552 #gibbs:1:1:0.05 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" modified Bayes Not so good
4553 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.01
6 0.039 0.302 0.321 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4554 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.48
1 0.791 1.119 1.124 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4555 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
6 0.016 0.351 0.359 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4556 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.129 0.218 0.535 0.545 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4557
4558 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" modified Bayes
4559 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
6 0.040 0.252 0.259 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4560 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.43
6 0.652 1.102 1.104 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4561 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
2 0.011 0.266 0.272 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4562 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.113 0.180 0.475 0.480 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4563
4564 #gibbs:1:1:0.2 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="2" modified Bayes
4565 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
5 0.045 0.212 0.219 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4566 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.48
5 0.498 1.018 1.019 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4567 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
1 0.013 0.205 0.210 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4568 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.125 0.143 0.413 0.417 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4569
4570 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="2" Conventional Bayes better?
4571 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.01

3 0.067 0.205 0.229 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4572 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.52
4 0.427 0.979 0.982 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4573 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
5 0.038 0.228 0.245 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4574 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.085 0.104 0.334 0.351 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4575
4576 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="2" modified Bayes
4577 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
8 0.043 0.243 0.256 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4578 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.48
6 0.556 1.063 1.067 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4579 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
3 0.017 0.217 0.229 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4580 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.077 0.104 0.350 0.361 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4581 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="2" Conventional Bayes best?
4582 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.02
9 0.040 0.266 0.287 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4583 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.45
3 0.689 1.101 1.107 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4584 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
6 0.016 0.296 0.306 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4585 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.079 0.123 0.408 0.420 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4586 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="2" modified Bayes Not so much?
4587 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.03
5 0.035 0.382 0.434 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4588 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.43
7 0.898 1.101 1.123 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4589 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.00
6 0.021 0.392 0.423 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4590 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.078 0.155 0.495 0.530 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4591
4592 ##### SiCs="3" unregistered speakers
4593 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="3" modified Bayes better? not so much
4594 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.03
4 0.036 0.564 0.634 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4595 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.67
8 0.946 0.900 1.117 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4596 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.28
3 0.256 0.530 0.833 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4597 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.275 0.300 0.595 0.822 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4598
4599 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="3" Bayes Good?
4600 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.02
9 0.040 0.476 0.540 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4601 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.69
9 0.811 0.961 1.144 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4602 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.31
5 0.293 0.530 0.799 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4603 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.296 0.302 0.580 0.791 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4604
4605 #gibbs:1:1:0.1 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="3" modified Bayes NG?
4606 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
5 0.038 0.463 0.523 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4607 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.72
4 0.834 0.994 1.161 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4608 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.33
7 0.308 0.523 0.800 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4609 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.361 0.381 0.629 0.830 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4610
4611 #gibbs:1:1:0.5 DTCCp=30,20:20,15:20,10:20; DTCT=3; SiCs="3" modified Bayes wore
4612 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.00
8 0.051 0.421 0.495 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata
4613 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C1.target o:pGt.output vth:0.5:0#0.68
1 0.723 0.976 1.153 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4614 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C2.target o:pGo.output vth:0.5:0#0.38
6 0.347 0.569 0.834 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4615 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0.329 0.324 0.590 0.790 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4616
4617
4618
4619 #gibbs:1:0.5:0.2 DTCCp=30,20:20,15:20,10:20; DTCT=5; SiCs="3" NG?
4620 #evalloss4p6 p:.../result-speaker_search/ProbbDistSpeaker.dat t:C0.target o:pGp.output vth:0.5:0#0.02
5 0.147 0.547 0.673 3 126000 #LAVE,LACE,INLP,INLPD,nc ndata

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4621 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.68
2 0.764 0.814 1.111 3 70000 #LAVE,LACE,INLP,INLPD,nc ndata
4622 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.56
6 0.426 0.686 1.000 3 273000 #LAVE,LACE,INLP,INLPD,nc ndata
4623 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.438 0.396 0.668 0.929 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4624
4625 #gibbs1:0.5:0.2 DTCCp=20,20:20,15:10:20 DTCT=5; SiCs="2"; NG?
4626 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C0.target o:pDgo.output vth:0.5:0#0.02
1 0.017 0.248 0.297 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4627 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.50
0 0.448 1.031 1.034 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4628 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.01
2 0.120 0.276 0.309 3 245000 #LAVE,LACE,INLP,INLPD,nc ndata
4629 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.138 0.201 0.462 0.490 3 469000 #LAVE,LACE,INLP,INLPD,nc ndata
4630
4631
4632 #gibbs1:1:0.2 DTCCp=20,20:20, DTCT=3; SiCs="2";
4633 #gibbs1:1:0.2 DTCCp=20,20:20, DTCT=5; SiCs="2"; good?
4634 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C0.target o:pDgo.output vth:0.5:0#0.03
0 0.039 0.265 0.248 3 52500 #LAVE,LACE,INLP,INLPD,nc ndata
4635 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.35
4 0.847 1.096 1.101 3 49000 #LAVE,LACE,INLP,INLPD,nc ndata
4636 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.00
4637 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.094 0.215 0.542 0.551 3 206500 #LAVE,LACE,INLP,INLPD,nc ndata
4638
4639 #gibbs1:1:1:0 DTCCp=20,20:20, DTCT=3; SiCs="2";
4640 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C0.target o:pDgo.output vth:0.5:0#0.03
0 0.041 0.241 0.264 3 59500 #LAVE,LACE,INLP,INLPD,nc ndata
4641 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.37
4 0.739 1.092 1.097 3 28000 #LAVE,LACE,INLP,INLPD,nc ndata
4642 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.00
5 0.016 0.358 0.365 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4643 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.063 0.121 0.444 0.435 3 206500 #LAVE,LACE,INLP,INLPD,nc ndata
4644
4645 #gibbs1:0.5:0.2 DTCCp=20,20:20, DTCT=5; SiCs="2";
4646 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C0.target o:pDgo.output vth:0.5:0#0.00
9 0.053 0.149 0.170 3 52500 #LAVE,LACE,INLP,INLPD,nc ndata
4647 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.42
3 0.517 0.964 0.967 3 49000 #LAVE,LACE,INLP,INLPD,nc ndata
4648 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.00
4 0.043 0.296 0.304 3 105000 #LAVE,LACE,INLP,INLPD,nc ndata
4649 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.104 0.158 0.417 0.427 3 206500 #LAVE,LACE,INLP,INLPD,nc ndata
4650
4651 #gibbs1:0.5:0.2 DTCCp=20,20:20 DTCT=4; SiCs="2";
4652 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C0.target o:pDgo.output vth:0.5:0#0.01
6 0.094 0.195 0.232 3 56000 #LAVE,LACE,INLP,INLPD,nc ndata
4653 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.42
6 0.574 1.018 1.028 3 38500 #LAVE,LACE,INLP,INLPD,nc ndata
4654 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.01
5 0.050 0.326 0.341 3 112000 #LAVE,LACE,INLP,INLPD,nc ndata
4655 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.092 0.160 0.420 0.439 3 206500 #LAVE,LACE,INLP,INLPD,nc ndata
4656
4657 #gibbs1:0.5:0.2 DTCCp=20,20:20 DTCT=3; SiCs="2";
4658 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C0.target o:pDgo.output vth:0.5:0#0.03
1 0.109 0.259 0.297 3 59500 #LAVE,LACE,INLP,INLPD,nc ndata
4659 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C1.target o:pDct.output vth:0.5:0#0.37
6 0.556 1.010 1.032 3 28000 #LAVE,LACE,INLP,INLPD,nc ndata
4660 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:C2.target o:pDgo.output vth:0.5:0#0.04
2 0.078 0.363 0.389 3 119000 #LAVE,LACE,INLP,INLPD,nc ndata
4661 #evallos4d6g p:.../result-speaker_search/ProbDistSpeaker.dat t:CtGtall.target o:pGall.output vth:0.5:
0#0+0.084 0.151 0.421 0.450 3 206500 #LAVE,LACE,INLP,INLPD,nc ndata
4662
4663
4664
4665
4666 #####201600201
4667 ########## copy and paste from here for (1)
4668 #####(1)
4669 #####pros=spkerdigit_v6
4670 #####make , make data-clean
4671 #####
4672 #####d2s=~/media/sf_D_DRIVE/cdata/15iconip/20150917akeguchi/12voicedata_sakashita/12voicedata/allpol
e/d2sep=_"
4673 #####d2s=~/sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole/d2sep=_"
4674 #####d2s=~/sotu/2015iconip/iconip14data/d2sep=_"
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```
4675 #####d2s=~/sotu/2012/12voicedata/iconip14data/d2sep=_"
4676 #####d2s=~/sotu/2012/12voicedata/allpole/d2sep=_"
4677 #d2s=~/sotu/2012/12voicedata/allpole/d2sep=_"
4678 #tmp=~/tmp; if [ ! -e $tmp ]; then mkdir $tmp; fi
4679 #####obtain psum.dat
4680 #####cat /dev/null > resultsum.dat
4681 #####cat /dev/null > psum.dat
4682 #gibbsgibbs:1:0.5:0.2 ##### use only gibb:1:1:(GEBI) gibbs:1:1:0:(BI), see 20160125 [a]-[e]
4683 #DTCt=3;
4684 #DTCcP=30,20:20,15:10:20,10:20,5:10
4685 #beta=0.5:0.3 ##### tune this,
4686 #hist=$tmp;cat /dev/null > $fhg.dat #Initialize
4687 #SiCs="2"; #####for 3:Unregistered, 2:Incorrect SiCs="0 3 2"; #depends on spkerdigit_v6.c test:7;.
:SiCs=...
4688 #for iCs in $SiCs; do #LoopLevel:for iCs for set 2nd optio
n of test:7;.....
4689 #for sX in 0 1 2 3 4 5 6; do sP=-1; #LoopLevel:for sX in 0 1 2 3 4 5 6;
4690 #if [ "$d2sep" = "v" ] ; then #ym:1:0.9:1000 or ytm:1:0.9:2000
4691 #cmd=$prog fs:${d2}/oob4s-IN40mbas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gi
bbs ver:-2 pAdAd:$pAs}:${pAd} LAR:0:0:-1 test:8:2000:$iCs${pDct}:${DTCcP} sX:$sX sP:$sP void:0";
4692 #cmd=$prog fs:${d2}/oob4s-IN40mbas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $g
ibbs ver:-2 pAdAd:$pAs}:${pAd} LAR:0:0:-1 test:8:2000:$iCs${pDct}:${DTCcP} sX:$sX sP:$sP void:0";
4693 #cmd=$prog fs:${d2}/oob4s-IN40mbas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $g
ibbs ver:-2 pAdAd:$pAs}:${pAd} LAR:0:0:-1 test:8:2000:$iCs${pDct}:${DTCcP} sX:$sX sP:$sP void:0";
4694 #cmd=$prog fs:${d2}/oob4s-IN40mbas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $g
ibbs $beta ver:-2 pAdAd:$pAs}:${pAd} LAR:0:0:-1 test:7:2000:$iCs${pDct}:${DTCcP} sX:$sX sP:$sP void:0";
4695 #else
4696 #cmd=$prog fs:${d2}/oob4s-IN40mbas2_300_1_6_1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 $gi
bbs $beta ver:-2 pAdAd:$pAs}:${pAd} LAR:0:0:-1 test:7:2000:$iCs${pDct}:${DTCcP} sX:$sX sP:$sP void:0";$cmd
> /dev/null
4697 #fi
4698 #echo "Exec $cmd";$cmd > /dev/null
4699 #cat $tmp/tested.stat.dat >> resultsum.dat
4700 #echo -e "\n" >> resultsum.dat #####<= mean UC of pg
4701 #cat $tmp/pad.dat >> psum.dat #####<= pg for all tests for speaker
4702 #done #for sX excluded speaker
5 6;
4703 #done # for iCs
4704 #####
4705 ##### obtained psum.dat consists of lines involving (1)t(step),(2)n(number of data),(3)test->pgC[n]
t(i)pgs),(4)test->pgCdn[i]t(i)pgd,(5)sX
4706 #####
4707 #####show t vs. pg of resultsum.dat
4708 #fntpg="tmp/t-pgMean"
4709 #gnuplot <<EOF
4710 #set term postscript;set output "$fntpg.eps";
4711 #plot "resultsum.dat" using 1:2:($2-$4):($2-$5) w errorbars, "" using 1:2 w l lc rgb "blue"
4712 #quit
4713 #EOF
4714 ##### the following takes a lot of time to display via gnuplot
4715 #cmd="gv $fntpg.eps"; echo "Exec $cmd."; $cmd&
4716 #####fntpgs="tmp/tpGall"
4717 #gnuplot <<EOF
4718 #set term postscript;set output "$fntpg.eps";
4719 #plot "psum.dat" using 1:3 w d
4720 #quit
4721 #EOF
4722 #####
4723 #cmd="gv $fntpg.eps"; echo "Exec $cmd."; $cmd&
4724 #cmd="cat tmp/CtOp.sh" echo "Manually Exec $cmd";$cmd
4725 #export CIO12="30 33 50 73 75 88 105 108 115 118 135 138 140 143 160 "; #Sequence of time
points changing the class Ct,Ct,Ct,Cp ...
4726 #####
4727 #####(2)
4728 ##### making training histogram for probabilistic prediction
4729 ##### class Cp: prompted speaker's digits, Co:other speaker's, Ct:transient
4730 #####
4731 #####
4732 #t=0
4733 #for CpG in "p" "t" "o" ; do # CLASS of pg
4734 #export CpG
4735 #fb0=C${CpG}
4736 #fbr=${d1}/resultp_${fb0}
4737 #cat /dev/null > $fb0.dat
4738 #cat psum.dat |awk 'BEGIN{CpG=ENVIRON["CpG"]};{
4739 #areal3
4740 # if(((CpG=="p")&&($1>=33)&&($1<43)) ||
4741 # ((CpG=="t")&&($1>=30)&&($1<33)) ||
4742 # ((CpG=="o")&&($1>=20)&&($1<30)))
4743 #areal
4744 # if(((CpG=="p")&&($1>=23)&&($1<33)) ||
```



```
4868 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C1.targe
t o:pGt.output vth:0.5:0#H0.763 0.019 0.056 0.057 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4869 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C2.targe
t o:pGt.output vth:0.5:0#H0.000 0.014 0.364 0.380 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4870 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.
target o:pGall.output vth:0.5:0#H0.584 0.151 0.567 0.573 3 210000 #LAVE, LACE, INLP, INLPPD, nc ndata
4871 #####beta:0.5:0.3 for areal
4872 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C0.targe
t o:pGp.output vth:0.5:0#H0.008 0.941 1.098 1.099 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4873 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C1.targe
t o:pGt.output vth:0.5:0#H0.782 0.885 3.732 3.748 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4874 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C2.targe
t o:pGp.output vth:0.5:0#H0.000 0.005 0.195 0.200 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4875 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.
target o:pGall.output vth:0.5:0#H0.263 0.610 1.675 1.683 3 210000 #LAVE, LACE, INLP, INLPPD, nc ndata
4876 #####beta:0.5:0.3 with 25 for areal
4877 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C0.targe
t o:pGp.output vth:0.5:0#H0.003 0.006 0.020 0.021 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4878 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C1.targe
t o:pGt.output vth:0.5:0#H0.994 0.910 3.994 3.994 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4879 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:C2.targe
t o:pGp.output vth:0.5:0#H0.000 0.005 0.180 0.182 3 70000 #LAVE, LACE, INLP, INLPPD, nc ndata
4880 #####/home/kuro/sotu/2015/can2b/evalloss4p6 p:../result-speaker_search/ProbbDistSpeaker.dat t:CtGtall.
target o:pGall.output vth:0.5:0#H0.332 0.307 1.398 1.399 3 210000 #LAVE, LACE, INLP, INLPPD, nc ndata
4881 #####
4882 #####
4883 #####
4884 #####201600131
4885 ########## copy and paste from here for (1)
4886 #####prog=spakerdigit_v6
4887 #####make
4888 #####dl=../result-speaker_search; if [ -e $dl ]; then mkdir $dl;fi
4889 #####d2=/media/sf_D_DRIVE/cdata/15iconip/20150917takeguchi/12voicedata_sakashita/12voicedata/allpole1d
2sep=""
4890 #####d2=/media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/d2sep=""
4891 #####d2=-/sotu/2015/iconip/saigen/2012/12voicedata/allpole/d2sep=""
4892 #####d2=-../2012/12voicedata/iconip1d4data/d2sep=""
4893 #####d2=-../2012/12voicedata/allpole/d2sep=""
4894 #####d2=-/sotu/2012/12voicedata/allpole/d2sep=""
4895 #####SiCs4b=0;"#SiCs4b=0 3 2";
4896 #####cat /dev/null > resultsum.dat
4897 #####for SD in "S"; do # SD="S"; SD="D";
oopleve11:for SD
4898 #####tmp=/tmp; if [ -e $tmp ]; then mkdir $tmp; fi
4899 #####for gibbs in 1; do #for gibbs in 1 0; do
oopleve12:for gibbs
4900 #####if [ $gibbs -eq 1 ]; then
4901 #####pas=0.80;pAd=0.96;T=5;TT=15;gibbs=1; #for GEBI pAdAd:pAd
4902 #####else
4903 #####pas=0.99;pAd=0.80;T=5;TT=15;gibbs=0; #for BI pAdAd:pAd
4904 #####fi
4905 #####fhg=$tmp/histSpeaker/cat /dev/null > $fhg.dat #initialize
4906 #####if [ "$SD" = "D" ]; then
4907 #####SiCs=$SiCs4b; #for only Correct speakers # SiCs="0"; #for only Correct speakers
4908 #####else
4909 #####SiCs="2"; #for 3:unregistered, 2:Incorrect SiCs="0 3 2"; #for Correct, Unregistered, Incorrect
4910 #####fi
4911 #####for iCd in 0; do #for iCd in 0 1 2 3 4 5; do #
oopleve13:for iCd in 0;
4912 #####for iCs in $SiCs; do
oopleve14:for iCs $SiCs;
4913 #####cat /dev/null > resultsum.dat
4914 #####cat /dev/null > pdsdum.dat
4915 #####for sX in 0 1 2 3 4 5 6; do sP=-1;
oopleve15:for sX in 0 1 2 3 4 5 6;
4916 #####test=test:5:2000:#{iCs};{iCd};5:15; #test:test->id:test->n:test->riCs:test->t_iCd:th->T
4917 #####
4918 #####if [ "$d2sep" = "." ] ; then ytm:1:0.9:1000 or ytm:1:0.9:2000
4919 #####cmd=$prog fs:#{d2}/oob4s:-lN40mbas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gib
bs:$gibbs beta:0.5:0.3 ver:-2 pAdAd:#{pas}:#{iCs} LAR:0:0:-1 test:7:2000:2:2 ex:$sX sp:$sP
vold:0";
4920 #####cmd=$prog fs:#{d2}/oob4s:-lN40mbas2:300:1.6:1sX${sX}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gi
bbs:$gibbs beta:0.5:0.3 ver:-2 pAdAd:#{pas}:#{iCs} LAR:0:0:-1 test:7:2000:2:0:20:60:20:2 sX:$sX sp:$sP voi
d:0";
4921 #####
4922 #####for d2 for file names with under-bar ", not colon ""
4923 #####$prog fs:#{d2}/oob4s:-lN40mbas2_300_1_6_1sX${sX}.y fd:#{d2}/oob4d_-lN100mbas2_300_1_6_1sX${s
X}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$gibbs beta:1 ver:-2 pAdAd:#{pas}:#{iCs} LAR:0:0:-1 test:5:
2000:#{iCs};{iCd};T:$T sX:$sX sp:$sP vold:0";&md > /dev/null
4924 #####
4925 #####echo "Exec $cmd" &cmd > /dev/null
4926 #####cat $tmp/testsd_stat.dat >> resultsum.dat
```

```
4927 #####echo -e "\n" >> resultsum.dat
4928 #####cat $tmp/pAd.dat >> pdsdum.dat #####
um.dat
4929 #####done #for sX excluded speaker
one #LoopLevels:for sX in 0 1 2 3 4 5 6;
4930 #####done #for iCs
LoopLevel4:for iCs $SiCs;
4931 #####done #for iCd
LoopLevel3:for iCd in 0;
4932 #####
4933 #####done #for gibbs in 1; do #for gibbs in 1 0; do
#LoopLevel2:for gibbs
4934 #####done #for SD in "S"; do # SD="S"; SD="D";
#LoopLevel1:for SD
4935 #####show the t-pG
4936 #####fhg=$tmp/t-pGmean"
4937 #####
4938 #####set term postscript;set output "$fntpg.eps";
4939 #####plot "resultsum.dat" using 1:2:($2-$4):($2-$4) w errorbars, "" using 1:2 w l c rgb "blue"
4940 #####quit
4941 #####EOF
4942 #####
4943 #####cmd="gv $fntpg.eps"; echo "Exec $cmd."; &cmd&
4944 #####fntpg=$tmp/tpGall"
4945 #####gnuplot <<EOF
4946 #####set term postscript;set output "$fntpg.eps";
4947 #####plot "pdsdum.dat" using 1:3 w d
4948 #####quit
4949 #####EOF
4950 #####
4951 #####cmd="gv $fntpg.eps"; echo "Exec $cmd."; &cmd&
4952 #####plot "pdsdum.dat" using 1:3
4953 #####
4954 ##########c
4955 #####obtained pdsdum.dat consists of lines involving (1)t(step),(2)n(number of data),(3)test->pGc[n
]t(i)pgs) (4)test->pGcdIn[t](pgd)/(5)sX
4956 ##########
4957 #####making training and test data for S
4958 ##########
4959 #####class histogram
4960 #####for PH in "p" "t" "o"; do # PH(phase) for w:prompted-word o:other-word, t:transient #LoopLe
vel 3:for PH in "p" "o" "t"; do
4961 #####C=${PH}
4962 #####fbr=${dl}/resultp_${fbo}
4963 #####cat /dev/null > ${fbo}.dat
4964 #####export PH
4965 #####cat pdsdum.dat awk 'BEGIN{PH=ENVIRON["PH"]};{
4966 ##### if(((PH=="p")&&($1>=23)&&($1<33)) ||
4967 ##### ((PH=="t")&&($1>=20)&&($1<23)) ||
4968 ##### ((PH=="o")&&($1>=10)&&($1<20))) {print $3,$0;}' >> ${fbo}.dat ;
4969 #####wc ${fbo}.dat
4970 #####cmdl="cp ${fbo}.dat ${fbr}.dat"
4971 #####echo $cmdl;$cmdl
4972 #####mp=10 #33-23
4973 #####nt=10 #(23-20)+(47-40)
4974 #####no=10 #20-10
4975 ##########
4976 #####cat /dev/null > ${fbr}_PPrtrain.dat ##PP:Probabilistic Prediction
4977 #####cat /dev/null > ${fbr}_PPrtest.dat
4978 #####for sX_ in 0 1 2 3 4 5 6; do
evet:for sX_ in 0 1 2 3 4 5 6;
4979 ##### divide 20000=2000*10 data into 1000=1000*10 each for train and test
4980 #####if [ "$sPH" = "p" ] ; then nd=$np; fi
4981 #####if [ "$sPH" = "t" ] ; then nd=$nt; fi
4982 #####if [ "$sPH" = "o" ] ; then nd=$no; fi
4983 #####export sX_0="expr $sX_ \* 2000 \* $nd"
4984 #####echo "sed -n -e \"expr ${sX_0} + 1\",'expr ${sX_0} + 1000 \* $nd\"p\" ${fbr}.dat >> ${fbr}_PPrtra
in.dat"
4985 #####sed -n -e \"expr ${sX_0} + 1\",'expr ${sX_0} + 1000 \* $nd\"p\" ${fbr}.dat >> ${fbr}_PPrtrain.dat
4986 #####echo "sed -n -e \"expr ${sX_0} + 1000 \* $nd + 1\",'expr ${sX_0} + 20000\"p\" ${fbr}.dat >> ${fbr}
_PPrtest.dat"
4987 #####sed -n -e \"expr ${sX_0} + 1000 \* $nd + 1\",'expr ${sX_0} + 2000 \* $nd\"p\" ${fbr}.dat >> ${fbr}_P
Prtest.dat
4988 #####PPrfiles="$PPrfiles ${fbr}"
4989 #####done #for sX_
oopleve1:for sX_ in 0 1 2 3 4 5 6;
4990 ##### Histogram by moving average of each class?
4991 ##########
4992 #####x0=0;ndiv=100;nmav=3
4993 #####cmd="histnavi-onsei $x0 $ndiv $nmav ${fbr}_PPrtrain.dat"
4994 #####echo $cmd; &cmd
4995 #####fne=${dl}/hist-C${PH}.eps
```



```
5126 cat /dev/null > resultsum.dat
5127 cat /dev/null > pdsdsum.dat
5128 for sx in 0 1 2 3 4 5 6 ; do sp=-1;
5129 test=test:$s:2000:$(ics):$(icd):$15; #test:test=id:test->n:test->riCs:test->t_icd:th->T
5130 ###
5131 if [ "$d2sep" = "" ] ; then ytmci=1:0.9:1000 or ytm=1:0.9:2000
5132 cmd=$prog fs:${d2}/oob4s:-lN40mbas2:300:1.6:1xs${sx}.y fd:${d2}/oob4d:-lN100mbas2:300:1.6:1xs${sx}.
y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$gibbs beta:1:0.95 ver:-2 pAdAd:$(pAs):$(pAd) LAR:0:0:-1 test:
5:2000:$(ics):$(icd):$T:$T sx:$sx sp:$sp void:0;
5133 #cmd=$prog fs:${d2}/oob4s:-lN40mbas2:300:1.6:1xs${sx}.y fd:${d2}/oob4d:-lN100mbas2:300:1.6:1xs${sx}
y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$gibbs beta:1 ver:-2 pAdAd:$(pAs):$(pAd) LAR:0:0:-1 test:$s:20
00:$(ics):$(icd):$T:$T sx:$sx sp:$sp void:0;
5134 else
5135 #for d2 for file names with under-bar " " not colon ":"
5136 cmd=$prog fs:${d2}/oob4s:-lN40mbas2:300:1.6:1xs${sx}.y fd:${d2}/oob4d:-lN100mbas2:300:1.6:1xs${sx}.
y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$gibbs beta:1 ver:-2 pAdAd:$(pAs):$(pAd) LAR:0:0:-1 test:5:200
0:$(ics):$(icd):$T:$T sx:$sx sp:$sp void:0;$cmd > /dev/null
5137 fi
5138 echo "Exec $cmd;$cmd > /dev/null"
5139 cat $tmp/tested.stat.dat >> resultsum.dat
5140 echo "e \"n\" >> resultsum.dat
5141 cat $tmp/pdat >> pdsdsum.dat #####<= $prog.c p0 for speaker and digits #pdsd.dat->pdsdsum.
dat
5142 done #for sx excluded speaker
5143 #####
5144 # obtained pdsdsum.dat consists of lines involving (1)t(step),(2)n(number of data),(3)test->pdc[n][t
](pCs),(4)test->pgcd[n][t](pG),(5)sx
5145 #####
5146 ### making training and test data for S and D
5147 #####
5148 export t=15;
5149 fb0=t-pG${t}(SD)
5150 fbr=${dl}/resultp_ics${ics}icd${icd}qS${gibbs}$_${fb0}
5151 cat /dev/null > ${fb0}.dat
5152 #echo "#pGC, t n pGC pgcd" >> ${fb0}.dat #???
5153 if [ "$SD" = "D" ]; then cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]};{if ($1==t){print $4,$0;}}' >> ${f
b0}.dat ; fi #pdsdsum.dat ->fb0 for digits
5154 if [ "$SD" = "S" ]; then cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]};{if ($1==t){print $3,$0;}}' >> ${f
b0}.dat ; fi #pdsdsum.dat ->fb0 for speakers
5155 #cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]};{if ($1==t){print $3,$0;}}' >> ${fb0}.dat #pdsdsum.dat -
>fb0 for speakers
5156 cmd1="cp ${fb0}.dat ${fbr}.dat"
5157 echo $cmd1;$cmd1
5158 #####
5159 #check$export t=15;fb0=t-pG${t}
5160 #check$fbr=${dlc}/resultp_ics${ics}icd${icd}qS${gibbs}$_${fb0}
5161 cat /dev/null > ${fbr}_pPrtrain.dat #pp:Probabilistic Prediction
5162 cat /dev/null > ${fbr}_pPtest.dat
5163 for sx_ in 0 1 2 3 4 5 6 ; do
5164 export sx_1000="expr $sx_ % 2000"
5165 echo "sed -n -e \"expr ${sx_1000} + 1`,`expr ${sx_1000} + 1000`p\" ${fbr}.dat >> ${fbr}_pPrtrain.d
at"
5166 sed -n -e ``expr ${sx_1000} + 1`,`expr ${sx_1000} + 1000`p" ${fbr}.dat >> ${fbr}_pPrtrain.dat
5167 echo "sed -n -e \"expr ${sx_1000} + 1001`,`expr ${sx_1000} + 2000`p\" ${fbr}.dat >> ${fbr}_pPtest.d
at"
5168 sed -n -e ``expr ${sx_1000} + 1001`,`expr ${sx_1000} + 2000`p" ${fbr}.dat >> ${fbr}_pPtest.dat
5169 pPfiles=$(pPfiles) ${fbr}"
5170 #####
5171 ### Histogram by moving average
5172 #####
5173 #####
5174 x0=0;ndiv=100;nmav=3
5175 cmd="histmavl-onsei $x0 $ndiv $nmav ${fbr}_pPrtrain.dat"
5176 echo $cmd;$cmd
5177 fhe=${dl}/hist-ics${ics}icd${icd}qS${gibbs}.eps
5178 cp $tmp/hist.eps $fhe
5179 #gv $fhe& #disp result
5180 cp $fhe.dat $tmp/histmp.dat
5181 cat tmp/hist.dat |awk '{print $3}'> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fheg.dat #
#
5182 #paste $tmp/histtmp.dat tmp/hist.dat > $fheg.dat
5183 sleep 2;
5184 #####
5185 done # for ics
5186 done # for icd
5187 #####
5188 # Probability P(c_i|p_c) for Probabilistic Prediction (fpdg=$dl/ProbDistG${gibbs}${SD})
5189 #####
5190 fpdg=$dl/ProbDistG${gibbs}${SD}
5191 cp $fheg.dat $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.da
t tmp/hist1.dat > $fheg.dat ##
5192 cat /dev/null > $fpdg.dat
```

```
5193 ###
5194 if [ "$SD" = "D" ]; then #for 3=number of iCs candidates
5195 if [ "$SiCs4p" = "0" ]; then
5196 cat $fheg.dat |awk '{p0sum=$1;p1sum=$2;p2sum=$3;p3sum=$4;p4sum=$5;p5sum=$6;psum=p0sum+p1sum+p2sum+p3su
mp4sum+p5sum;printf("%e %e %e %e\n",$7, p0sum/psum,p1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5
um/psum);}' >> $fpdg.dat
5197 else
5198 cat $fheg.dat |awk '{p0sum=$1+$2+$3;p1sum=$4+$5+$6;p2sum=$7+$8+$9;p3sum=$10+$11+$12;p4sum=$13+$14+$15;
p5sum=$16+$17+$18;psum=p0sum+p1sum+p2sum+p3sum+p4sum+p5sum;printf("%e %e %e %e\n",$19, p0sum/psum,p
1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5sum/psum);}' >> $fpdg.dat
5199 fi
5200 else #####if [ "$SD" = "S" ]; then
5201 cat $fheg.dat |awk '{p0sum=$1+$4+$7+$10+$13+$16;p1sum=$2+$5+$8+$11+$14+$17;p2sum=$3+$6+$9+$12+$15+$18;
psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$19, p0sum/psum,p1sum/psum,p2sum/psum);}' >> $fpdg.dat
5202 fi
5203 #####
5204 if [ "$SD" = "D" ]; then
5205 gnuplot <<EOF
5206 set yrange [0:1.3]; set style data boxes; #set style data histeps
5207 set style fill solid border lc rgb "black"
5208 set term tgif;set output "$fpdg.obj";
5209 plot "$fpdg.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+$5+$
6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$6+$7
) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "0/5"
5210 set term postscript;set output "$fpdg.eps";replot
5211 quit
5212 EOF
5213 else
5214 gnuplot <<EOF
5215 set yrange [0:1.3]; set style data boxes; #set style data histeps
5216 set style fill solid border lc rgb "black"
5217 set term tgif;set output "$fpdg.obj";
5218 plot "$fpdg.dat" using 1:($2+$3+$4) lc rgb "blue" t "Correct Speaker", "" using 1:($3+$4) lc rg
b "yellow" t "Unregistered Speaker", "" using 1:($4) lc rgb "red" t "Incorrect Speaker"
5219 set term postscript;set output "$fpdg.eps";replot
5220 quit
5221 EOF
5222 fi
5223 cmd="gv $fpdg.eps"; echo "Exec $cmd."; $cmd&
5224 #####
5225 done #for gibbs
5226 done #for SD
5227 ##### copy and paste to here for (1)
5228 #####
5229 #(2)evalloss
5230 #####
5231 #(2-1) eval loss for S
5232 d2=-/sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole;d2sep=":
5233 d2=-././2012/12voicedata/iconip14data;d2sep=":
5234 d2=-././2012/12voicedata/allpole;d2sep=":
5235 d0=-/sotu/2015/can2b
5236 d0=-./can2b
5237 cd $dl;
5238 dl=-./result-onsei_icsiCd_saka: if [ ! -e $dl ]; then mkdir $dl;fi
5239 cd $dl;
5240 SD="S";#
5241 export Cth=0; # threshold for LAVE in verification using threshold
5242 for gibbs in 1 0; do
5243 if [ $gibbs = "1" ]; then pGth=0.80; else pGth=0.99; fi; # threshold for LAVE in verification using
threshold
5244 foutall-pG${gibbs}Call${SD};cat /dev/null >${foutall}.output #####
5245 ftgtall-Call${SD};cat /dev/null > ${ftgtall}.target #####
5246 for ics in 0 3 2; do
5247 if [ $iCs = "0" ]; then Ctgt=0; fi
5248 if [ $iCs = "3" ]; then Ctgt=1; fi #unregistered
5249 if [ $iCs = "2" ]; then Ctgt=2; fi #incorrect
5250 fout=pG${gibbs}${Ctgt}${SD}
5251 ftgt=C${Ctgt}${SD}
5252 cat /dev/null > ${fout}.output
5253 cat /dev/null > ${ftgt}.target
5254 for icd in 0 1 2 3 4 5; do #####
5255 t=15
5256 fb0=t-pG${t}(SD)
5257 fbr=resultp_ics${ics}icd${icd}qS${gibbs}$_${fb0}
5258 #cat ${fbr}_pPrtrain.dat >> ${fout}.output
5259 cat ${fbr}_pPtest.dat >> ${fout}.output
5260 #i-while [ $i-le 7000 ] ;do echo "${Ctgt}" >> ${ftgt}.target; if [ `expr $i % 500` = "0" ] ; then
echo "n .: "; fi; i=`expr $i + 1`; done
5261 mktarget ${Ctgt} $7000 > ${ftgt}.target;
5262 done #for icd
5263 cat ${fout}.output >> ${foutall}.output; cat ${ftgt}.target >> ${ftgtall}.target; #####
5264 fpdg=ProbDistG${gibbs}${SD}
```



```
5393 for SD in "S"; do # SD="S"; SD="D";
5394 tmp="/tmp;if [ ! -e $tmp ]; then mkdir $tmp;fi
5395 for gibbs in 1 0; do
5396 if [ $gibbs -eq 1 ]; then
5397 pAs=0.80;pAd=0.96;T=5;TT=15;gibbs=1;    #for GEBI pAdAd:pA:pAd
5398 else
5399 pAs=0.99;pAd=0.80;T=5;TT=15;gibbs=0;    #for BI  pAdAd:pA:pAd
5400 fi
5401 fbg=$tmp/histG${gibbs}${SD};cat /dev/null > $fhg.dat #Initialize
5402 if [ "$SD" = "D" ]; then
5403 SiCs=$SiCs4D;    #for only Correct speakers # SiCs="0";    #for only Correct speakers
5404 else
5405 SiCs="0 3 2";    #for Correct, Unregistered, Incorrect
5406 fi
5407 for iCd in 0 1 2 3 4 5; do    #####
5408 for iCs in $SiCs; do    ## for iCs in 0 0 0; do for iconip2015 with SD=D and <<<<#####
!!!
5409 cat /dev/null > resultsum.dat
5410 cat /dev/null > pdsdsum.dat
5411 for sX in 0 1 2 3 4 5 6; do sP=-1;
5412 test -t=${sD:5:2000}:${iCs}:${iCd}];&15;    #test:test->id:test->n:test->riCs:test->t_id:th->T
5413 ##
5414 if [ "$d2sep" = "." ]; then #ytm:1:0.9:1000 or ytm:1:0.9:2000
5415 cmd="speakerdigit_v5 fs:${d2}/oobAs:-lN40mbas2:300:1.6:1x${sX}.y fd:${d2}/oob4d:-lN100mbas2:300:1.6
:lX${sX}.y NSDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$gibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0
:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd:${pAs}:${pAd} LAR:0:0:-1 test:5:2000:${iCs}:${iCd}]:$T:$TT sX:$sX sP:$sP void
:0;$cmd > /dev/null
5416 else
5417 #for d2 for file names with under-bar "-", not colon ":"
5418 cmd="speakerdigit_v5 fs:${d2}/oobAs:-lN40mbas2:300:1.6:1x${sX}.y fd:${d2}/oob4d:-lN100mbas2:300:1.6
:lX${sX}.y NSDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$gibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0
:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd:${pAs}:${pAd} LAR:0:0:-1 test:5:2000:${iCs}:${iCd}]:$T:$TT sX:$sX sP:$sP void
:0;$cmd > /dev/null
5419 fi
5420 cat $tmp/tested_stat.dat >> resultsum.dat
5421 echo -e "\n" >> resultsum.dat
5422 cat $tmp/pdsd.dat >> pdsdsum.dat #####<== speakerdigit_v5.c _pG for speaker and digits #pdsd.da
t->pdsdsum.dat
5423 done #for sX excluded speaker
5424 #####
5425 ## obtained pdsdsum.dat consists of lines involving (1)t(step),(2)n(number of data),(3)test->pgC[n]t
)pgC,(4)test->pgC[n]t(pGd),(5)sX
5426 #####
5427 ## making training and test data for S and D
5428 #####
5429 export t=15;
5430 fb0=t-pG${t}${SD}
5431 fbr=${d1}/resultp_iCs${iCs}iCd${iCd}${gibbs}}_${fbo}
5432 cat /dev/null > ${fbo}.dat
5433 #echo "#pGc,"$D"; then cat pdsdsum.dat #??
5434 if [ "$SD" = "D" ]; then cat pdsdsum.dat [awk 'BEGIN{t=ENVIRON["t"]} {if ($1==t){print $4,$0;}}' >> ${f
b0}.dat ; fi ##pdsdsum.dat ->fb0 for digits
5435 if [ "$SD" = "S" ]; then cat pdsdsum.dat [awk 'BEGIN{t=ENVIRON["t"]} {if ($1==t){print $3,$0;}}' >> ${f
b0}.dat ; fi ##pdsdsum.dat ->fb0 for speakers
5436 #cat pdsdsum.dat [awk 'BEGIN{t=ENVIRON["t"]} {if ($1==t){print $3,$0;}}' >> ${fbo}.dat    ##pdsdsum.dat -
>fb0 for speakers
5437 cmd1="cp ${fbo}.dat ${fbr}.dat"
5438 echo $cmd1;$cmd1
5439 #####
5440 #check#export t=15;fb0=t-pG${t}
5441 #check#fbr=${d1c}/resultp_iCs${iCs}iCd${iCd}${gibbs}}_${fbo}
5442 cat /dev/null > ${fbr}_.pPrtrain.dat #PP:Probabilistic Prediction
5443 cat /dev/null > ${fbr}_.pPtest.dat
5444 for sX_ in 0 1 2 3 4 5 6; do
5445 export sX_1000="expr $sX_ \^ 2000"
5446 echo "sed -n -e \"expr ${sX_1000} + 1\",'expr ${sX_1000} + 1000'p\"    ${fbr}.dat >> ${fbr}_.pPrtrain.d
at"
5447 sed -n -e \"expr ${sX_1000} + 1\",'expr ${sX_1000} + 1000'p\"    ${fbr}.dat >> ${fbr}_.pPrtrain.dat
5448 echo "sed -n -e \"expr ${sX_1000} + 1001\",'expr ${sX_1000} + 2000'p\"    ${fbr}.dat >> ${fbr}_.pPtest.d
at"
5449 sed -n -e \"expr ${sX_1000} + 1001\",'expr ${sX_1000} + 2000'p\"    ${fbr}.dat >> ${fbr}_.pPtest.dat
5450 pPfiles=$(pPfiles) ${fbr}"
5451 done #for sX
5452 #####
5453 ## Histogram by moving average
5454 #####
5455 xD=0;ndiv=100;nmav=3
5456 cmd=histmavi-onsei $x0 $ndiv $mav ${fbr}_.pPrtrain.dat"
5457 echo $cmd;$cmd
5458 fne=${d1}/hist-icS${iCs}iCd${iCd}${gibbs}.eps
5459 cp $tmp/hist_eps $fne
5460 #gv $fne& #disp result
```

```
5461 cp $fhg.dat $tmp/histtmp.dat
5462 cat tmp/hist.dat [awk '{print $3}']> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fhg.dat #
##
5463 #paste $tmp/histtmp.dat tmp/hist.dat > $fhg.dat
5464 sleep 2;
5465 #####
5466 done # for iCs
5467 done # for iCd
5468 #####
5469 # Probability P(c_i|p_G) for Probabilistic Prediction (fpdg=$d1/ProbbDistG${gibbs}${SD})
5470 #####
5471 fpdg=$d1/ProbbistG${gibbs}${SD}
5472 cp $fhg.dat $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.da
t tmp/hist1.dat > $fhg.dat ##
5473 cat /dev/null > $fpdg.dat
5474 #####
5475 if [ "$SD" = "D" ]; then #for 3=number of iCs candidates
5476 if [ "$SiCs4D" = "0" ]; then
5477 cat $fhg.dat [awk '{p0sum=$1;p1sum=$2;p2sum=$3;p3sum=$4;p4sum=$5;p5sum=$6;psum=0sum=p1sum+p2sum+p3su
m+p4sum+p5sum;printf("%e %e %e %e\n",$7, p0sum/psum,p1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5
um/psum)}' >> $fpdg.dat
5478 else
5479 if [ "$SD" = "S" ]; then
5480 fi
5481 else #####if [ "$SD" = "S" ]; then
5482 cat $fhg.dat [awk '{p0sum=$1;$4=$7+$10+$13+$16;p1sum=$2+$5+$8+$11+$14+$17;p2sum=$3+$6+$9+$12+$15+$18;
psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$19, p0sum/psum,p1sum/psum,p2sum/psum)}' >> $fpdg.dat
5483 fi
5484 #####
5485 if [ "$SD" = "D" ]; then
5486 gnuplot <<EOF
5487 set xrange [0:1.3]; set style data boxes; #set style data histograms
5488 set style fill solid border lc rgb "black"
5489 set term tgif;set output "$fpdg.obj";
5490 plot "$fpdg.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+$5+$
6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$6+$7
) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "0/5"
5491 set term postscript;set output "$fpdg.eps";replot
5492 quit
5493 EOF
5494 else
5495 gnuplot <<EOF
5496 set xrange [0:1.3]; set style data boxes; #set style data histograms
5497 set style fill solid border lc rgb "black"
5498 set term tgif;set output "$fpdg.obj";
5499 plot "$fpdg.dat" using 1:($2+$3+$4) lc rgb "blue" t "Correct Speaker", "" using 1:($3+$4) lc rg
b "yellow" t "Unregistered Speaker", "" using 1:($4) lc rgb "red" t "Incorrect Speaker"
5500 set term postscript;set output "$fpdg.eps";replot
5501 quit
5502 EOF
5503 fi
5504 cmd="gv $fpdg.eps"; echo "Exec $cmd."; $cmd&
5505 #####
5506 done #for gibbs
5507 done #for SD
5508 ##### copy and paste to here for (1)
5509
5510 #####
5511 # (2)evalloss
5512 #####
5513 # (2-OS) eval L_AVE for S
5514 #####
5515 # (2-1) eval loss for S
5516 #####
5517 d2=-./sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole/d2sep=":
5518 d2=-./sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole/d2sep=":
5519 d2=-./sotu/2012/12voicedata/iconip14data/d2sep=":
5520 d2=-./sotu/2012/12voicedata/allpole/d2sep=":
5521 d0=-./sotu/2015/can2b
5522 d1=-./result-onsei_iCsIcd_saka: if [ ! -e $d1 ]; then mkdir $d1;fi
5523 cd $d1;#
5524 SD="S";#
5525 export Cth=0; # threshold for LAVE in verification using threshold
5526 for gibbs in 1 0; do
5527 if [ $gibbs = "1" ]; then pGth=0.80; else pGth=0.99; fi; # threshold for LAVE in verification using
threshold
5528 foutall=pG${gibbs}Call${SD}.cat /dev/null >${foutall}.output ##all
5529 cp $tmp/hist_eps $fne
5530 ftgtall=Call${SD}.cat /dev/null > ${ftgtall}.target
```



```
5532 for iCs in 0 3 2; do
5533 if [ $iCs = "0" ] ; then Ctgt=0; fi
5534 if [ $iCs = "3" ] ; then Ctgt=1; fi
5535 if [ $iCs = "2" ] ; then Ctgt=2; fi
5536 f0ut=pg${gibbs}C${Ctgt}$(SD)
5537 f0ut=cs${Ctgt}$(SD)
5538 cat /dev/null > ${f0ut}.output
5539 cat /dev/null > ${ftgt}.target
5540 for iCd in 0 1 2 3 4 5; do #####
5541 t=15
5542 f0t=pg${t}$(SD)
5543 fbr=resultp.iCs${iCs}iCd${iCd}G${gibbs}.$(f0)
5544 #cat ${fbr}.ptrain.dat >> ${f0ut}.output
5545 #cat ${fbr}.ptest.dat >> ${f0ut}.output
5546 #i=1;while [ $i -le 7000 ] ;do echo "${Ctgt}" >> ${ftgt}.target; if [ `expr $i $i 500` = "0" ] ; then
5547 mktarget ${Ctgt} $7000 > ${ftgt}.target;
5548 done #for iCd
5549 cat ${f0ut}.output >> ${foutall}.output; cat ${ftgt}.target >> ${ftgtall}.target; ##all
5550 fpg=probiStG${gibbs}$(SD)
5551 cmd=$f0/evalloss4pg p:${fpg}.dat t:${ftgt}.target o:${f0ut}.output vth:$pGth:$cth"
5552 echo -n "#$cmd ##";$cmd
5553 done #for iCs
5554 cmd=$f0/evalloss4pg p:${fpg}.dat t:${ftgtall}.target o:${foutall}.output vth:$pGth:$cth"; echo -n
5555 "#$cmd ##";$cmd; ##all
5556 cd -
5557 #####copy and paste to here for (2-1)
5558 ##(2-1)=result for d2=-/sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole:d2sep=" by the execut
utables compiled on sakashita's PC
5559 #../can2b/evalloss4pg p:ProbiDistG1S.dat t:C0S.target o:PGIC0S.output vth:0.80:0 ##0.001 0.003 0
.015 0.015 3 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5560 #../can2b/evalloss4pg p:ProbiDistG1S.dat t:C1S.target o:PGIC1S.output vth:0.80:0 ##0.011 0.073 0
.221 0.221 3 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5561 #../can2b/evalloss4pg p:ProbiDistG1S.dat t:C2S.target o:PGIC2S.output vth:0.80:0 ##0.000 0.025 0
.093 0.093 3 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5562 #../can2b/evalloss4pg p:ProbiDistG1S.dat t:C1S.target o:PGIC1S.output vth:0.80:0 ##0.004 0.033 0
.110 0.110 3 126000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5563 #../can2b/evalloss4pg p:ProbiDistG0S.dat t:C0S.target o:PG0C0S.output vth:0.99:0 ##0.049 0.029 0
.132 0.156 3 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5564 #../can2b/evalloss4pg p:ProbiDistG0S.dat t:C1S.target o:PG0C1S.output vth:0.99:0 ##0.051 0.761 1
.006 1.012 3 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5565 #../can2b/evalloss4pg p:ProbiDistG0S.dat t:C2S.target o:PG0C2S.output vth:0.99:0 ##0.001 0.018 0
.447 0.459 3 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5566 #../can2b/evalloss4pg p:ProbiDistG0S.dat t:C1S.target o:PG0Calls.output vth:0.99:0 ##0.033 0.269 0
.528 0.542 3 126000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5567 #####
5568 ##(2-1)結果 sakashita's 20151016
5569 ##result for gibbs=1, d2=-./././2012/12voicedata/allpole:d2sep=" by the executables compiled on Ku
roi's PC(yuka and messaho gave same result)=same as 20151016sakashita's
5570 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C0S.target o:PGIC0S.output #LACE=0.00311
905 LNLPD=0.00820782 LNLPD=0.0110817 nc=3 ndata=42000
5571 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C1S.target o:PGIC1S.output #LACE=0.07159
52 LNLPD=0.220935 LNLPD=0.220935 nc=3 ndata=42000
5572 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C2S.target o:PGIC2S.output #LACE=0.02504
76 LNLPD=inf LNLPD=0.0966982 nc=3 ndata=42000
5573 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C1S.target o:PGIC1S.output #LACE=0.0
3254 LNLPD=inf LNLPD=0.109572 nc=3 ndata=126000
5574 ##result for gibbs=0
5575 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C0S.target o:PG0C0S.output #LACE=0.02607
14 LNLPD=0.13352 LNLPD=0.165152 nc=3 ndata=42000
5576 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C1S.target o:PG0C1S.output #LACE=0.76209
5 LNLPD=1.0172 LNLPD=1.02355 nc=3 ndata=42000
5577 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C2S.target o:PG0C2S.output #LACE=0.01814
29 LNLPD=0.439341 LNLPD=0.457513 nc=3 ndata=42000
5578 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C1S.target o:PG0Calls.output #LACE=0.2
6877 LNLPD=0.530689 LNLPD=0.548739 nc=3 ndata=126000
5579 #####
5580 # (2-1)結果 sakashita's 20151016
5581 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C0S.target o:PGIC0S.output
t #LACE=0.00311905 LNLPD=0.00820782 LNLPD=0.0110817 nc=3 ndata=42000
5582 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C1S.target o:PGIC1S.output
t #LACE=0.0715952 LNLPD=0.220935 LNLPD=0.220935 nc=3 ndata=42000
5583 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C2S.target o:PGIC2S.output
t #LACE=0.0250476 LNLPD=inf LNLPD=0.0966982 nc=3 ndata=42000
5584 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG1S.dat t:C1S.target o:PGIC1S.o
utput #LACE=0.03254 LNLPD=inf LNLPD=0.109572 nc=3 ndata=126000
5585 #####
5586 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C0S.target o:PG0C0S.output
t #LACE=0.0260714 LNLPD=0.13352 LNLPD=0.165152 nc=3 ndata=42000
5587 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C1S.target o:PG0C1S.output
t #LACE=0.762095 LNLPD=1.0172 LNLPD=1.02355 nc=3 ndata=42000
```

```
5588 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C2S.target o:PG0C2S.output
t #LACE=0.0181429 LNLPD=0.439341 LNLPD=0.457513 nc=3 ndata=42000
5589 #/home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiDistG0S.dat t:C1S.target o:PG0Calls.o
utput #LACE=0.26877 LNLPD=0.530689 LNLPD=0.548739 nc=3 ndata=126000
5590 #####
5591 # (2-2) eval loss for D
5592 #####copy and paste from here for (2-2)
5593 d2=-/sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole:d2sep="
5594 d2=-././2012/12voicedata/iconip4data:d2sep="
5595 d2=-././2012/12voicedata/allpole:d2sep="
5596 d0=-./can2b/#d0=/sotu/2015/can2b/#d0='pwd'
5597 d1=-./result-onsei_iCsIcd_saka; if [ ! -e $d1 ]; then mkdir $d1;fi
5598 SD="D";
5599 export Cth=1; #Cth=0; ## threshold for LAVE in verification using threshold
5600 $iCs4d="0";##$iCs4d="0 3 2";
5601 cd $d1;
5602 for gibbs in 1 0; do
5603 if [ $gibbs = "1" ]; then pGth=0.96; else pGth=0.80; fi; ## threshold for LAVE in verification using
threshold
5604 foutall=pg${gibbs}Call$(SD);cat /dev/null >${foutall}.output ##all
5605 fgtall=Call$(SD);cat /dev/null > ${ftgtall}.target ##all
5606 for iCd in 0 1 2 3 4 5; do #####
5607 Ctgt=$iCd;
5608 f0ut=pg${gibbs}C${Ctgt}$(SD)
5609 fgt=Cs${Ctgt}$(SD)
5610 cat /dev/null > ${f0ut}.output
5611 cat /dev/null > ${ftgt}.target
5612 for iCs in $iCs4d; do ##### for iCs in 0 0; do #for iconip2015 with SD="D" #####
!!!!!!!!
5613 t=15
5614 f0t=pg${t}$(SD)
5615 fbr=resultp.iCs${iCs}iCd${iCd}G${gibbs}.$(f0)
5616 #cat ${fbr}.ptrain.dat >> ${f0ut}.output
5617 #cat ${fbr}.ptest.dat >> ${f0ut}.output
5618 #i=1;while [ $i -le 7000 ] ;do echo "${Ctgt}" >> ${ftgt}.target; if [ `expr $i $i 500` = "0" ] ; then
5619 done #for iCs
5620 cat ${f0ut}.output >> ${foutall}.output; cat ${ftgt}.target >> ${ftgtall}.target; ##all
5621 fpg=probiStG${gibbs}$(SD)
5622 cmd=$f0/evalloss4pg p:${fpg}.dat t:${ftgt}.target o:${f0ut}.output vth:$pGth:$cth"
5623 echo -n "#$cmd ##";$cmd
5624 done #for iCd
5625 cmd=$f0/evalloss4pg p:${fpg}.dat t:${ftgtall}.target o:${foutall}.output vth:$pGth:$cth"; echo -n
5626 "#$cmd ##";$cmd; ##all
5627 #####copy and paste to here for (2-2)
5628 ##(2-2)=result for d2=-/sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole:d2sep=" by the execut
ables compiled on sakashita's PC Cth=1
5629 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C0D.target o:PGIC0D.output vth:0.96:1 ##0.007 0.014 0
.392 0.397 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5630 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C1D.target o:PGIC1D.output vth:0.96:1 ##0.163 0.786 0
.988 0.999 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5631 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C2D.target o:PGIC2D.output vth:0.96:1 ##0.000 0.048 0
.164 0.180 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5632 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C3D.target o:PGIC3D.output vth:0.96:1 ##0.000 0.044 0
.131 0.142 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5633 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C4D.target o:PGIC4D.output vth:0.96:1 ##0.000 0.102 0
.224 0.228 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5634 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C5D.target o:PGIC5D.output vth:0.96:1 ##0.000 0.030 0
.136 0.140 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5635 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:CallD.target o:PGICallD.output vth:0.96:1 ##0.028 0.171 0
.339 0.348 6 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5636 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:C0D.target o:PG0C0D.output vth:0.80:1 ##0.013 0.015 0
.762 0.807 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5637 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:C1D.target o:PG0C1D.output vth:0.80:1 ##0.220 1.000 0
.595 1.230 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5638 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:C2D.target o:PG0C2D.output vth:0.80:1 ##0.597 0.773 0
.694 1.665 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5639 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:C3D.target o:PG0C3D.output vth:0.80:1 ##0.370 0.874 0
.671 1.726 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5640 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:C4D.target o:PG0C4D.output vth:0.80:1 ##0.208 0.692 0
.826 1.188 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5641 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:C5D.target o:PG0C5D.output vth:0.80:1 ##0.001 0.004 0
.569 0.583 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5642 #../can2b/evalloss4pg p:ProbiDistG0D.dat t:CallD.target o:PG0CallD.output vth:0.80:1 ##0.235 0.560 0
.686 1.200 6 42000 #LAVE,LACE,LNLP,LNLPD,nc ndata
5643 #####
5644 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C0D.target o:PGIC0D.output vth:0.96:1 ##0.007 0.014 0
.392 0.397 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata -log(PGmin=0.015)=4,200
5645 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C1D.target o:PGIC1D.output vth:0.96:1 ##0.163 0.786 0
.988 0.998 6 7000 #LAVE,LACE,LNLP,LNLPD,nc ndata -log(PGmin=0.015)=4,200
5646 #../can2b/evalloss4pg p:ProbiDistG1D.dat t:C2D.target o:PGIC2D.output vth:0.96:1 ##0.000 0.048 0
```



```
5752 i=1;while [ $i -le 7000 ] ;do echo "$(Ctgt)" >> ${ftgt}.target; if [ 'expr $i % 500' = "0" ] ; then
5753 done #for iCs
5754 cat ${fout}.output >> ${foutall}.output; cat ${ftgt}.target >> ${ftgtall}.target; ##wall
5755 if [ $iCd -ne 0 ] ; then
5756 fpdq4=ProbiatG5$(gibbs)$iSD/4
5757 cmd="&40/evalloss4pg p:${fpdq4}.dat t:${ftgt}.target o:${fout}.output vth:$pGth:$Cth"
5758 echo -n "#cmd ##";$cmd
5759 fi
5760 done #for iCd
5761 cmd="&40/evalloss4pg p:${fpdq4}.dat t:${ftgtall}.target o:${foutall}.output vth:$pGth:$Cth"; echo -n
5762 done #for gibbs
5763 cd -
5764 #####copy and paste to here for (2-3)
5765 ##(2-3)result for d2=/sotu/2015iconip/iconip_saigen/2012/12/voicedata/allpole:d2sep=" by the exec
utables compiled on sakashita's PC Ctr=0
5766 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C0D4.target o:PGIC0D4.output vth:0.96:0 #40.085 0.02
5767 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C1D4.target o:PGIC1D4.output vth:0.96:0 #40.000 0.04
5768 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C2D4.target o:PGIC2D4.output vth:0.96:0 #40.000 0.04
5769 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C3D4.target o:PGIC3D4.output vth:0.96:0 #40.000 0.10
5770 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C4D4.target o:PGIC4D4.output vth:0.96:0 #40.000 0.03
5771 ##../can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target o:PGICallD4.output vth:0.96:0 #40.025 0.03
5772 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C0D4.target o:PGOC0D4.output vth:0.80:0 #40.117 0.11
5773 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C1D4.target o:PGOC1D4.output vth:0.80:0 #40.597 0.78
5774 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C2D4.target o:PGOC2D4.output vth:0.80:0 #40.370 0.87
5775 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C3D4.target o:PGOC3D4.output vth:0.80:0 #40.208 0.69
5776 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:C4D4.target o:PGOC4D4.output vth:0.80:0 #40.001 0.00
5777 ##../can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target o:PGOCallD4.output vth:0.80:0 #40.203 0.37
5778 #../can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target o:PGOCallD4.output vth:0.80:0 #40.203 0.37
5779 #778
5780 #result for sakashita's result 20151016 = Kurogi's result
5781 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C0D4.target o:PGIC0D4.out
tput #LACE=0.021 LNLP=0.0525519 LNLPD=0.0640817 nc=5 ndata=14000
5782 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C1D4.target o:PGIC1D4.out
tput #LACE=0.0471429 LNLP=0.186058 LNLPD=0.222503 nc=5 ndata=7000
5783 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C2D4.target o:PGIC2D4.out
tput #LACE=0.0532857 LNLP=0.148935 LNLPD=0.174225 nc=5 ndata=7000
5784 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C3D4.target o:PGIC3D4.out
tput #LACE=0.114571 LNLP=0.246902 LNLPD=0.249733 nc=5 ndata=7000
5785 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C4D4.target o:PGIC4D4.out
tput #LACE=0.0251429 LNLP=0.126831 LNLPD=0.132246 nc=5 ndata=7000
5786 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target o:PGICallD
4.output #LACE=0.0405714 LNLP=0.117284 LNLPD=0.130293 nc=5 ndata=49000
5787 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C0D4.target o:PGOC0D4.out
tput #LACE=0.102286 LNLP=0.291989 LNLPD=0.403314 nc=5 ndata=14000
5788 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C1D4.target o:PGOC1D4.out
tput #LACE=0.851286 LNLP=1.08685 LNLPD=1.66881 nc=5 ndata=7000
5789 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C2D4.target o:PGOC2D4.out
tput #LACE=0.869143 LNLP=0.831476 LNLPD=1.73523 nc=5 ndata=7000
5790 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C3D4.target o:PGOC3D4.out
tput #LACE=0.685857 LNLP=0.834372 LNLPD=1.24381 nc=5 ndata=7000
5791 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C4D4.target o:PGOC4D4.out
tput #LACE=0.00314286 LNLP=0.560798 LNLPD=0.573545 nc=5 ndata=7000
5792 home/kuro/Desktop/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target o:PGOCallD
4.output #LACE=0.374837 LNLP=0.592647 LNLPD=0.899382 nc=5 ndata=49000
5793
5794 ##result for gibbs=1, d2=../../2012/12/voicedata/allpole:d2sep=" by the executables compiled on sa
kashita's PC
5795 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C0D4.target o:
PGIC0D4.output #LACE=0.0239286 LNLP=0.0594352 LNLPD=0.0809558 nc=5 ndata=14000
5796 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C1D4.target o:
PGIC1D4.output #LACE=0.0477143 LNLP=0.173193 LNLPD=0.194228 nc=5 ndata=7000
5797 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C2D4.target o:
PGIC2D4.output #LACE=0.0438571 LNLP=0.130509 LNLPD=0.143428 nc=5 ndata=7000
5798 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C3D4.target o:
PGIC3D4.output #LACE=0.102429 LNLP=0.224494 LNLPD=0.228925 nc=5 ndata=7000
5799 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C4D4.target o:
PGIC4D4.output #LACE=0.0297143 LNLP=0.135753 LNLPD=0.14749 nc=5 ndata=7000
5800 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target
```

```
o:PGICallD4.output #LACE=0.0389592 LNLP=0.112245 LNLPD=0.125585 nc=5 ndata=49000
5801 ##result for gibbs=0, d2=../../2012/12/voicedata/allpole:d2sep=" by the executables compiled on sa
kashita's PC
5802 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C0D4.target o:
PGOC0D4.output #LACE=0.118643 LNLP=0.276184 LNLPD=0.395793 nc=5 ndata=14000
5803 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C1D4.target o:
PGOC1D4.output #LACE=0.779571 LNLP=1.14565 LNLPD=1.66523 nc=5 ndata=7000
5804 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C2D4.target o:
PGOC2D4.output #LACE=0.873857 LNLP=0.816074 LNLPD=1.72637 nc=5 ndata=7000
5805 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C3D4.target o:
PGOC3D4.output #LACE=0.691714 LNLP=0.830404 LNLPD=1.20543 nc=5 ndata=7000
5806 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:C4D4.target o:
PGOC4D4.output #LACE=0.004 LNLP=0.569131 LNLPD=0.596444 nc=5 ndata=7000
5807 #/home/kuro/sotu/2015iconip/iconip_saigen/2012/can2b/evalloss4pg p:ProbiatSGD14.dat t:CallD4.target
o:PGOCallD4.output #LACE=0.37151 LNLP=0.594459 LNLPD=0.892905 nc=5 ndata=49000
5808 #####
5809 #####
5810 #####
5811 #####
5812 #####
5813 #####
5814 #####
5815 #####
5816 #####
5817 #####
5818 #####
5819 #####
5820 #####
5821 #####
5822 #####
5823 #####
5824 #####
5825 #####
5826 #####
5827 #####
5828 #####
5829 #####
5830 #####
5831 #####
5832 #####
5833 #####
5834 #####
5835 #####
5836 #####
5837 20151008若干修正 <- 20150917修正 <- 20150915
(0) LACE, LNLP, LNLPD を計算するプログラム evalloss4pg.c を作成。
(0-1) 以下の(1),(2-1),(2-2),(2-3)は実行例を示す。
(0-2) 用いたCAN20の数字、読者の学習データセットは、iconip2014で作成したもの
http://kurolab.cntl.kyutech.ac.jp/sotu/2012/12/voicedata/iconip2014data/oob4s....(下参照)
だが、坂下君の卒論や ICONIP2015の結果と違う。なぜ？
(1) 数字 and 読者 combined by kuro from the scripts by Sakashita
#####
5845 #####copy and paste from here for (1)
5846 make
5847 SD="S p:"# SD="S"; SD="D";
5848 tmp=./result-if [ ! -e $tmp ]; then mkdir $tmp;fi
5849 dir=./result-onsei_icsCd_saka; if [ ! -e $dir ]; then mkdir $dir;fi
5850 #dir=./result-onsei_icsCd_d;
5851 #dir=./result-onsei_icsCd; if [ ! -e $dir ]; then mkdir $dir;fi
5852 for gibbs in 1 0; do
5853 for Sord in $SD; do fhg=$tmp/hist$(gibbs){$Sord}.cat /dev/null > $fhg.dat;done
5854 if [ "$SD" = "D" ] ; then
5855 SiCs="0"; #for only Correct speakers # SiCs="0"; #for only Correct speakers
5856 else
5857 SiCs="0 2 3"; #for Correct, Unregistered, Incorrect
5858 fi
5859 for iCd in 0 1 2 3 4 5; do #####
5860 if [ $gibbs -eq 1 ]; then #for GEBI p&pad;pA;p&pad
5861 pAs=0.80;p&pad=0.96;T=5;TT=15;gibbs=1; #for GEBI p&pad;pA;p&pad
5862 else
5863 pAs=0.99;p&pad=0.80;T=5;TT=15;gibbs=0; #for BI p&pad;pA;p&pad
5864 fi
5865 for iCs in $SiCs; do ## for iCs in 0 0; do for iconip2015 with SD=D and <<<#####
!!!!
5866 cat /dev/null > resultsum.dat
5867 cat /dev/null > psdsum.dat
5868 for sX in 0 1 2 3 4 5 6; do sP=1;
5869 test-test:5:2000:${iCs};${iCd};5:15; #test-test-id:test-n:test->riCs:test->t_id:ch->T
5870 ##
d2=/media/sf_D_DRIVE/cdata/15iconip/20150917takeuchi/12/voicedata_sakashita/12/voicedata/allpole:d2se
p=" _"
p=" _"
```

```
5872 d2=/media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/rd2sep=""
5873 d2=../././2012/12voicedata/allpolierd2sep=""
5874 d2=.././2012/12voicedata/iconip1d2sep=""
5875 d2=~/sotu/2015iconip/iconip1d2sep=""
5876 fe=" "; then syem1:0.9:1000 or ytm:1:0.9:2000
5877 cmd="speakerdigit_v5 fe:${d2}/oob4s:-ln40mbas2:300:1.6:1xs${sx}.y fdi:${d2}/oob4d:-ln100mbas2:300:1.6:1xs${sx}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:sgibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAdp:${pAs}:${pAd} LAR:0:0:-1 test:5:2000:${iCs}">${iCd}.$Tt.$Tt sX:$sX sP:$sP void :0:;$cmd > /dev/null
5878 else
5879 #for d2 for file names with under-bar " ", not colon ":"
5880 cmd="speakerdigit_v5 fe:${d2}/oob4s:-ln40mbas2:300:1.6:1xs${sx}.y fdi:${d2}/oob4d:-ln100mbas2:300:1.6:1xs${sx}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:sgibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAdp:${pAs}:${pAd} LAR:0:0:-1 test:5:2000:${iCs}">${iCd}.$Tt.$Tt sX:$sX sP:$sP void :0:;$cmd > /dev/null
5881 fi
5882 cat $tmp/tested_stat.dat >> resultsum.dat
5883 echo -e "\n" >> resultsum.dat
5884 cat $tmp/ped.dat >> pdsdum.dat #####<= speakerdigit_v5.c pG for speaker and digits #pzd.da
t-pdsdum.dat
5885 done #for sX excluded speaker
5886 #####
5887 export t=15;
5888 for Sord in $SD; do #####
5889 fbg=$tmp/histG${gibbs}${Sord};
5890 fbo=t-pG${t}${Sord}
5891 fbr=${d1}/result-pG${iCs}${iCd}${gibbs}__${fbo}
5892 cat /dev/null > ${fbo}.dat
5893 #echo "#pGc,t.n,pGc,pGcd" >> ${fbo}.dat #???
5894 if [ "$Sord" = "D" ]; then cat pdsdum.dat|awk 'BEGIN{t=ENVIRON["t"];}{if($1==t){print $4,$0;}}' >> ${fbo}.dat ; fi ##pdsdum.dat ->fbo for digits
5895 if [ "$Sord" = "S" ]; then cat pdsdum.dat|awk 'BEGIN{t=ENVIRON["t"];}{if($1==t){print $3,$0;}}' >> ${fbo}.dat ; fi ##pdsdum.dat ->fbo for speakers
5896 #cat pdsdum.dat|awk 'BEGIN{t=ENVIRON["t"];}{if($1==t){print $3,$0;}}' >> ${fbo}.dat ##pdsdum.dat ->fbo for speakers
5897 cdi="cp ${fbo}.dat ${fbr}.dat"
5898 echo $cmd1;$cmd1
5899 #####
5900 #check$export t=15;fbo=t-pG${t}
5901 #check$fbr=${d1c}/result-pG${iCs}${iCd}${gibbs}-${fbo}
5902 cat /dev/null > ${fbr}_Pptrain.dat ##P:Probabilistic Prediction
5903 cat /dev/null > ${fbr}_Pptest.dat
5904 for sX_ in 0 1 2 3 4 5 6; do
5905 export sX_1000="expr $sX_ \^ 2000"
5906 echo "sed -n -e \"expr ${sX_1000} + 1\", 'expr ${sX_1000} + 1000'p\" ${fbr}.dat >> ${fbr}_Pptrain.d
at"
5907 sed -n -e \"expr ${sX_1000} + 1\", 'expr ${sX_1000} + 1000'p\" ${fbr}.dat >> ${fbr}_Pptrain.d
at"
5908 echo "sed -n -e \"expr ${sX_1000} + 1001\", 'expr ${sX_1000} + 2000'p\" ${fbr}.dat >> ${fbr}_Pptest.d
at"
5909 sed -n -e \"expr ${sX_1000} + 1001\", 'expr ${sX_1000} + 2000'p\" ${fbr}.dat >> ${fbr}_Pptest.dat
5910 pFiles="(pPfiles) ${fbr}"
5911 done #for sX
5912 #####
5913 x0=0;ndiv=100;nmav=3
5914 echo "histmavl-onsei $x0 $ndiv $nmav ${fbr}_Pptrain.dat"
5915
5916 fbr=${d1}/hist-icS${iCs}${iCd}${gibbs}.eps
5917 cp $tmp/hist.eps $fbr
5918 #gv $fbr& #disp result
5919 cp $fbg.dat $tmp/histtmp.dat
5920 cat tmp/hist.dat |awk '{print $3}'> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fbg.dat #
##
5921 paste $tmp/histtmp.dat tmp/hist.dat > $fbg.dat
5922 sleep 2;
5923 done # for Sord
5924 #####
5925 done # for iCs
5926 done # for iCd
5927 #####
5928 # Probability P(c_i|p_G) for Probabilistic Prediction (fpdG=$d1/probDistG${gibbs}${Sord})
5929 #####
5930 for Sord in $SD; do #####
5931 fbg=$tmp/histG${gibbs}${Sord};
5932 fpdG=$d1/ProbDistG${gibbs}${Sord}
5933 cp $fbg.dat $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.da
t tmp/hist1.dat > $fbg.dat ##
5934 cat /dev/null > $fpdg.dat
5935 ###
5936 if [ "$Sord" = "D" ]; then #for 3-number of iCs candidates
5937 if [ "$SICs" = "0" ]; then
5938 cat $fbg.dat|awk '{p0sum=$1;p1sum=$2;p2sum=$3;p3sum=$4;p4sum=$5;p5sum=$6;psum=p0sum+p1sum+p2sum+p3su
m+p4sum+p5sum;printf("%e %e %e\n",$1, $7, p0sum/psum,p1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5
```

```
um/psum);}' >> $fpdg.dat
5939 else
5940 cat $fbg.dat|awk '{p0sum=$1+$2+$3;p1sum=$4+$5+$6;p2sum=$7+$8+$9;p3sum=$10+$11+$12;p4sum=$13+$14+$15;
p5sum=$16+$17+$18;psum=p0sum+p1sum+p2sum+p3sum+p4sum+p5sum;printf("%e %e %e %e\n",$1, $7, p0sum/psum,p1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5sum/psum);}' >> $fpdg.dat
5941 fi
5942 else
5943 cat $fbg.dat|awk '{p0sum=$1+$4+$7+$10+$13+$16;p1sum=$2+$5+$8+$11+$14+$17;p2sum=$3+$6+$9+$12+$15+$18;
psum=p0sum+p1sum+p2sum;printf("%e %e %e\n",$1, $19, p0sum/psum,p1sum/psum,p2sum/psum);}' >> $fpdg.dat
5944 fi
5945 #####
5946 if [ "$Sord" = "D" ]; then
5947 gnuplot <<EOF
5948 set xrange [0:1.3]; set style data boxes; #set style data histograms
5949 set style fill solid border lc rgb "black"
5950 set term tgif;set output "$fpdg.obj";
5951 plot "$fpdg.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+$5+$
6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$6+$7
) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "0/5"
5952 set term postscript;set output "$fpdg.eps";replot
5953 quit
5954 EOF
5955 else
5956 gnuplot <<EOF
5957 set xrange [0:1.3]; set style data boxes; #set style data histograms
5958 set style fill solid border lc rgb "black"
5959 set term tgif;set output "$fpdg.obj";
5960 plot "$fpdg.dat" using 1:($2+$3+$4) lc rgb "blue" t "Correct Speaker", "" using 1:($3+$4) lc rg
b "yellow" t "Unregistered Speaker", "" using 1:($3) lc rgb "red" t "Incorrect Speaker"
5961 set term postscript;set output "$fpdg.eps";replot
5962 quit
5963 EOF
5964 fi
5965 cmd="gv $fpdg.eps"; echo "Exec $cmd."; $cmd&
5966 done # for Sord
5967 #####
5968 done #for gibbs
5969 #####
5970
5971
5972
5973
5974
5975 #####
5976 # (2)evalloss
5977 #iCs=0;iCd=0; # test correct (registered) speaker
5978 #iCs=1;iCd=0; # test incorrect registered and unregistered sX
5979 #iCs=2;iCd=0; # test incorrect registered
5980 #iCs=3;iCd=0; # test (incorrect) unregistered sX
5981 # (2-1) eval loss for S
5982 d0=~/sotu/2015/can2b
5983 dl=~/sotu/2015/result-onsei_iCeiCd_saka
5984 cd $d1;
5985 SD="S"; # SD="D";SD="S D"; #
5986 for gibbs in 1 0; do
5987 for Sord in $SD; do #for Sord in S D ; do
5988 fctall-pG${gibbs}|call${Sord}|cat /dev/null >${fctall}.output ##all
5989 fctall-call${Sord}|cat /dev/null > ${fctgall}.target ##all
5990 for iCs in 0 2 3; do
5991 if [ $iCs = "0" ]; then Ctgt=0; fi
5992 if [ $iCs = "2" ]; then Ctgt=1; fi #Ctgt=2?
5993 if [ $iCs = "3" ]; then Ctgt=2; fi #Ctgt=1?
5994 fct=pG${gibbs}|C${Ctgt}|cat /dev/null > ${fctg}.output
5995 cat /dev/null > ${fctg}.target
5996 cat /dev/null > ${fctg}.target
5997 for iCd in 0 1 2 3 4 5; do #####
5998 t=15
5999 fbo=t-pG${t}|${Sord}
6000 fbr=result-pG${iCs}|iCd${gibbs}|cat /dev/null >${fbo}
6001 #cat ${fbr}_Pptrain.dat >> ${fctg}.output
6002 cat ${fbr}_Pptest.dat >> ${fctg}.output
6003 i=1;while [ $i -le 7000 ];do echo "${Ctgt}" >> ${fctg}.target;if [ 'expr $i % 500' = "0" ] ; then
echo -n " "; fi; i=expr $i + 1; done
6005 done #for iCd
6006 cat ${fctg}.output >> ${fctgall}.output; cat ${fctg}.target >> ${fctgall}.target; ##all
6007 fpdG=fctDistG${gibbs}|${Sord}
6008 cmd=$d0/evalloss4pG p:${fpdg}.dat t:${fctg}.target o:${fctg}.output"
6009 echo -n "#$cmd ";$cmd
6010 done #for iCs
6011 cmd=$d0/evalloss4pG p:${fpdg}.dat t:${fctgall}.target o:${fctgall}.output"; echo -n "#$cmd ";$cmd;
#####
```

```
6012 done #for Sord
6013 done #for gibbs
6014 #####copy and paste to here for (2-1)
6015 ##result for gibbs=1, d2=../2012/12voicedata/iconipl4data/d2sep=""
6016 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:COS.target o:PGIC0S.output #LACE=0.00311
905 LNLDP=0.00820782 LNLDP=0.0110817 nc=3 ndata=42000
6017 .....
/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:C1S.target o:PG1C1S.output #LACE=0.0250476 LNLDP=inf LNLDP=0.0966
982 nc=3 ndata=42000
6018 .....
/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:C2S.target o:PG1C2S.output #LACE=0.0715952 LNLDP=0.220935 LNLDP=0.
.220935 nc=3 ndata=42000
6019
/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:CallS.target o:PG1CallS.output #LACE=0.033254 LNLDP=inf LNLDP=0.1
09572 nc=3 ndata=126000
6020 .....
/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:C0S.target o:PG0C0S.output #LACE=0.0260714 LNLDP=0.13552 LNLDP=0.
163152 nc=3 ndata=42000
6021 .....
/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:C1S.target o:PG0C1S.output #LACE=0.0181429 LNLDP=0.439341 LNLDP=0.
.457513 nc=3 ndata=42000
6022 .....
/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:C2S.target o:PG0C2S.output #LACE=0.762095 LNLDP=1.0172 LNLDP=1.02
355 nc=3 ndata=42000
6023 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:CallS.target o:PG0Calls.output #LACE=0.2
6877 LNLDP=0.530689 LNLDP=0.548739 nc=3 ndata=126000
6024
6025 ##result for gibbs=1, d2=../2012/12voicedata/iconipl4data/d2sep=""
6026 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:COS.target o:PGIC0S.output #LACE=0.00354
762 LNLDP=0.00904049 LNLDP=0.00919557 nc=3 ndata=42000
6027 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:C1S.target o:PGIC1S.output #LACE=0.02835
71 LNLDP=0.0830699 LNLDP=0.0831934 nc=3 ndata=42000
6028 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:C2S.target o:PGIC2S.output #LACE=0.05204
76 LNLDP=0.17383 LNLDP=0.17383 nc=3 ndata=42000
6029 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1S.dat t:CallS.target o:PG1CallS.output #LACE=0.0
279841 LNLDP=0.0886467 LNLDP=0.0887396 nc=3 ndata=126000
6030 ##result for gibbs=0, d2=../2012/12voicedata/iconipl4data/d2sep=""
6031 LNLDP=0.119712 LNLDP=0.152185 nc=3 ndata=42000
6032 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:C0S.target o:PG0C0S.output #LACE=0.01790
6033 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:C1S.target o:PG0C1S.output #LACE=0.01790
48 LNLDP=0.474746 LNLDP=0.490167 nc=3 ndata=42000
6033 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:C2S.target o:PG0C2S.output #LACE=0.75847
6 LNLDP=0.960213 LNLDP=0.968203 nc=3 ndata=42000
6034 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0S.dat t:CallS.target o:PG0Calls.output #LACE=0.2
67833 LNLDP=0.518224 LNLDP=0.536852 nc=3 ndata=126000
6035
6036 #(2-2) eval loss for D
6037 #####copy and paste from here for (2-2)
6038 d0=~/sotu/2015/can2b
6039 d1=~/sotu/2015/Result-onsei-iCsId_saka
6040 SD="D"; #SD="S D" ;# SD="S";
6041 cat $d1;
6042 for gibbs in 1 0; do
6043 for Sord in $SD; do #for Sord in S /dev; do
6044 f0tall=pgs$(gibbs){iCs}{iCd}{iCd}$(gibbs)_${f0b}
6045 f0tall=cat$(Sord);cat /dev/null > ${f0tall}.target
6046 for iCd in 0 1 2 3 4 5; do #####
6047 C0gt=$iCd;
6048 f0t=pgs$(gibbs){C0gt}{iCd}$(Sord)
6049 f0t=cat$(C0gt){Sord}
6050 cat /dev/null > ${f0t}.output
6051 cat /dev/null > ${f0t}.target
6052 for iCs in 0 2; do #####
for iCs in 0 0; do #for iconip2015 with SD="D" #####
!!!!
t=15
6053 f0b=t-pgs$(t){Sord}
6054 f0b=t-pgs$(t){Sord}
6055 f0r=resp1p_iCs$(iCs){iCd}{iCd}$(gibbs)_${f0b}
6056 #cat ${f0r}.p0train.dat >> ${f0t}.output
6057 #cat ${f0r}.p0test.dat >> ${f0t}.output
6058 i=1;while [ $i -le 7000 ];do echo "${C0gt}" >> ${f0t}.target; if [ `expr $i % 500` = "0" ] ; then
echo "n."; fi; i=`expr $i + 1`; done
6059 done #for iCs
6060 cat ${f0t}.output >> ${f0tall}.output; cat ${f0t}.target >> ${f0tall}.target; ##hall
6061 f0p=ProbbistG$(gibbs)${Sord}
6062 cmd="$d0/evalloss4pg p:${f0p}.dat t:${f0t}.target o:${f0t}.output"
6063 echo -n "$cmd" ;$cmd
6064 done #for iCd
6065 cmd="$d0/evalloss4pg p:${f0p}.dat t:${f0tall}.target o:${f0tall}.output"; echo -n "$cmd" ;$cmd;
##hall
6066 done #for Sord
6067 done #for gibbs
6068 #####copy and paste to here for (2-2)
```

```
6069 ##result for gibbs=1 d2=../2012/12voicedata/iconipl4data/d2sep=""
6070 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C0D.target o:PGIC0D.output #LACE=0.01542
86 LNLDP=0.487104 LNLDP=0.505565 nc=6 ndata=21000
6071 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C1D.target o:PGIC1D.output #LACE=0.93228
6 LNLDP=0.996135 LNLDP=1.01199 nc=6 ndata=21000
6072 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C2D.target o:PGIC2D.output #LACE=0.04709
52 LNLDP=0.187211 LNLDP=0.207524 nc=6 ndata=21000
6073 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C3D.target o:PGIC3D.output #LACE=0.02890
48 LNLDP=0.0986392 LNLDP=0.115061 nc=6 ndata=21000
6074 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C4D.target o:PGIC4D.output #LACE=0.204 L
NLDP=0.289884 LNLDP=0.296209 nc=6 ndata=21000
6075 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C5D.target o:PGIC5D.output #LACE=0.00138
095 LNLDP=0.228384 LNLDP=0.230516 nc=6 ndata=21000
6076 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:CallD.target o:PG1CallD.output #LACE=0.2
04849 LNLDP=0.381226 LNLDP=0.394478 nc=6 ndata=126000
6077 ##result for gibbs=0 d2=../2012/12voicedata/iconipl4data/d2sep=""
6078 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C0D.target o:PG0C0D.output #LACE=0.02038
1 LNLDP=0.86988 LNLDP=0.938217 nc=6 ndata=21000
6079 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C1D.target o:PG0C1D.output #LACE=0.99123
8 LNLDP=0.517706 LNLDP=1.35167 nc=6 ndata=21000
6080 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C2D.target o:PG0C2D.output #LACE=0.71142
9 LNLDP=0.724804 LNLDP=1.72339 nc=6 ndata=21000
6081 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C3D.target o:PG0C3D.output #LACE=0.98742
9 LNLDP=0.613224 LNLDP=1.87119 nc=6 ndata=21000
6082 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C4D.target o:PG0C4D.output #LACE=0.87681
INLP=0.695465 LNLDP=1.55115 nc=6 ndata=21000
6083 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C5D.target o:PG0C5D.output #LACE=0.00880
952 LNLDP=0.600125 LNLDP=0.634509 nc=6 ndata=21000
6084 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:CallD.target o:PG0CallD.output #LACE=0.5
99349 LNLDP=0.670201 LNLDP=1.34502 nc=6 ndata=126000
6085
6086 ##result for gibbs=1 d2=media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/d2sep="_" ##### result
for "for iCs in 0 0; do" <## same as result of Fig3 in iconip2015
6087 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C0D.target o:PGIC0D.output #LACE=0.015 L
NLDP=0.396237 LNLDP=0.411218 nc=6 ndata=21000
6088 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C1D.target o:PGIC1D.output #LACE=0.79957
1 LNLDP=0.995418 LNLDP=1.0096 nc=6 ndata=21000
6089 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C2D.target o:PGIC2D.output #LACE=0.05142
86 LNLDP=0.192005 LNLDP=0.219791 nc=6 ndata=21000
6090 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C3D.target o:PGIC3D.output #LACE=0.05814
29 LNLDP=0.16212 LNLDP=0.180976 nc=6 ndata=21000
6091 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C4D.target o:PGIC4D.output #LACE=0.12871
4 LNLDP=0.27072 LNLDP=0.272206 nc=6 ndata=21000
6092 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C5D.target o:PGIC5D.output #LACE=0.023 L
NLDP=0.108757 LNLDP=0.111188 nc=6 ndata=21000
6093 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:Callb.target o:PG1CallD.output #LACE=0.1
7931 LNLDP=0.354209 LNLDP=0.367496 nc=6 ndata=126000
6094 ##result for gibbs=0 d2=media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/d2sep="_" ##### result
for "for iCs in 0 0; do" <## same as result of Fig3 in iconip2015
6095 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C0D.target o:PG0C0D.output #LACE=0.01528
57 LNLDP=0.74212 LNLDP=0.792684 nc=6 ndata=21000
6096 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C1D.target o:PG0C1D.output #LACE=0.98614
3 LNLDP=0.618302 LNLDP=1.25343 nc=6 ndata=21000
6097 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C2D.target o:PG0C2D.output #LACE=0.81785
7 LNLDP=0.680088 LNLDP=1.68285 nc=6 ndata=21000
6098 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C3D.target o:PG0C3D.output #LACE=0.89142
9 LNLDP=0.676354 LNLDP=1.7526 nc=6 ndata=21000
6099 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C4D.target o:PG0C4D.output #LACE=0.67571
4 LNLDP=0.861829 LNLDP=1.19678 nc=6 ndata=21000
6100 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:C5D.target o:PG0C5D.output #LACE=0.003 L
NLDP=0.544394 LNLDP=0.558326 nc=6 ndata=21000
6101 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG0D.dat t:CallD.target o:PG0CallD.output #LACE=0.5
64905 LNLDP=0.687181 LNLDP=1.20611 nc=6 ndata=126000
6102
6103 ##result for gibbs=1 d2=../2012/12voicedata/allpole/d2sep=":" ##### result for "for iCs in 0 0
0; do" same as above
6104 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C0D.target o:PGIC0D.output #LACE=0.015
LNLDP=0.396237 LNLDP=0.411218 nc=6 ndata=21000
6105 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C1D.target o:PGIC1D.output #LACE=0.79957
1 LNLDP=0.995418 LNLDP=1.0096 nc=6 ndata=21000
6106 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C2D.target o:PGIC2D.output #LACE=0.05142
86 LNLDP=0.192005 LNLDP=0.219791 nc=6 ndata=21000
6107 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C3D.target o:PGIC3D.output #LACE=0.05814
29 LNLDP=0.16212 LNLDP=0.180976 nc=6 ndata=21000
6108 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C4D.target o:PGIC4D.output #LACE=0.12871
4 LNLDP=0.27072 LNLDP=0.272206 nc=6 ndata=21000
6109 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:C5D.target o:PGIC5D.output #LACE=0.023 L
NLDP=0.108757 LNLDP=0.111188 nc=6 ndata=21000
6110 #/home/kuro/sotu/2015/can2b/evalloss4pg p:ProbbistG1D.dat t:CallD.target o:PG1CallD.output #LACE=0.1
7931 LNLDP=0.354209 LNLDP=0.367496 nc=6 ndata=126000
6111 ##result for gibbs=0 d2=../2012/12voicedata/allpole/d2sep=":" ##### result for "for iCs in 0 0
0; do"
```

```
6112 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C0D.target o:PGOC0D.output #LACE=0.01528
57 LNP=0.74212 LNPDP=0.792684 nc=6 ndata=21000
6113 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C1D.target o:PGOC1D.output #LACE=0.98614
3 LNP=0.618302 LNPDP=1.25343 nc=6 ndata=21000
6114 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C2D.target o:PGOC2D.output #LACE=0.81785
7 LNP=0.680088 LNPDP=1.68285 nc=6 ndata=21000
6115 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C3D.target o:PGOC3D.output #LACE=0.89142
9 LNP=0.676354 LNPDP=1.7526 nc=6 ndata=21000
6116 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C4D.target o:PGOC4D.output #LACE=0.67571
4 LNP=0.861829 LNPDP=1.19678 nc=6 ndata=21000
6117 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C5D.target o:PGOC5D.output #LACE=0.003 L
NLP=0.544394 LNPDP=0.558326 nc=6 ndata=21000
6118 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:Cal1D.target o:PGOCallD.output #LACE=0.5
64905 LNP=0.687181 LNPDP=1.20611 nc=6 ndata=126000
6119 ##### result for gibbs=1 d2=-.../2012/12/voicedata/iconip14data:d2sep="" ##### result for "for iCs in
0 0 0; do"
6120 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C0D.target o:PGIC0D.output #LACE=0.01271
6121 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C0D.target o:PGIC0D.output #LACE=0.01271
6122 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C1D.target o:PGIC1D.output #LACE=0.92814
3 LNP=0.985175 LNPDP=1.00412 nc=6 ndata=21000
6123 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C2D.target o:PGIC2D.output #LACE=0.049 L
NLP=0.179564 LNPDP=0.203926 nc=6 ndata=21000
6124 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C3D.target o:PGIC3D.output #LACE=0.03114
29 LNP=0.0998847 LNPDP=0.117324 nc=6 ndata=21000
6125 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C4D.target o:PGIC4D.output #LACE=0.204 L
NLP=0.292467 LNPDP=0.302644 nc=6 ndata=21000
6126 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:C5D.target o:PGIC5D.output #LACE=0.00071
4286 LNP=0.227756 LNPDP=0.228644 nc=6 ndata=21000
6127 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D.dat t:Cal1D.target o:PGICallD.output #LACE=0.2
04286 LNP=0.378127 LNPDP=0.393332 nc=6 ndata=126000
6128 ##### result for gibbs=0 d2=-.../2012/12/voicedata/iconip14data:d2sep="" ##### result for "for iCs in
0 0 0; do"
6129 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C0D.target o:PGOC0D.output #LACE=0.01685
71 LNP=0.865077 LNPDP=0.932841 nc=6 ndata=21000
6130 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C1D.target o:PGOC1D.output #LACE=0.992 L
NLP=0.518033 LNPDP=1.34533 nc=6 ndata=21000
6131 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C2D.target o:PGOC2D.output #LACE=0.73 LN
LP=0.713465 LNPDP=1.72322 nc=6 ndata=21000
6132 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C3D.target o:PGOC3D.output #LACE=0.96142
9 LNP=0.637666 LNPDP=1.86358 nc=6 ndata=21000
6133 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C4D.target o:PGOC4D.output #LACE=0.87757
1 LNP=0.700784 LNPDP=1.55488 nc=6 ndata=21000
6134 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:C5D.target o:PGOC5D.output #LACE=0.00728
571 LNP=0.592511 LNPDP=0.619936 nc=6 ndata=21000
6135 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D.dat t:Cal1D.target o:PGOCallD.output #LACE=0.5
97524 LNP=0.671256 LNPDP=1.33996 nc=6 ndata=126000
6136 #####
6137 #####
6138 # (2-3) eval loss for D with the combed class new class C0,C1,...,C4 for old {C0 \cup C1}, C2, C3, C4
, C5
6139 #####copy and paste from here for (2-3)
6140 d0=-/sotu/2015/can2b
6141 d1=-/sotu/2015/result-onsei_ics1cd_saka
6142 cd $d1;
6143 SD="D"; #SD="S D"; # SD="S";
6144 for gibbs in 1 0; do
6145 fpgd=ProbbistCGS{gibbs}${Sord}
6146 fpgd=ProbbistCGS{gibbs}${Sord}4
6147 cat /dev/null > ${fpgd4}.dat
6148 for Sord in $SD ; do #for Sord in S D ; do
6149 cat ${fpgd}.dat |awk '{print $1,$2-$3,$4,$5,$6,$7}' >> ${fpgd4}.dat
6150 done #for Sord
6151 done #for gibbs
6152 #####
6153 for gibbs in 1 0; do
6154 for Sord in $SD ; do #for Sord in S D ; do
6155 f0all=PGS{gibbs}Call${Sord}4;cat /dev/null >${f0all}.output #####
6156 f0all=Call${Sord}4;cat /dev/null > ${f0all} > ${f0all}.target #####
6157 for iCd in 0 1 2 3 4 5; do #####
6158 if [ $iCd -le 1 ] ; then iCd4=0; else iCd4='expr $iCd - 1'; fi
6159 Crgt=${iCd4};
6160 f0t=PGS{gibbs}CS{Crgt}${Sord}4
6161 f0t=CS{Crgt}${Sord}4
6162 if [ $iCd =ne 1 ] ; then
6163 cat /dev/null > ${f0t}.output
6164 cat /dev/null > ${f0t}.target
6165 fi
6166 ##### for iCs in 0 0 0; do #for iconip2015 with SD="D" #####
6167 t=15
6168 f0=t-PGS{t}${Sord}
6169 fbr=resultP_1CS{ics}iCd${iCd}G${gibbs}_${f0b}
```

```
6170 #cat ${fbr}_PPrain.dat >> ${f0ut}.output
6171 cat ${fbr}_PPrst.dat >> ${f0ut}.output
6172 i=1;while [ $i -le 7000 ] ;do echo "${Crgt}" >> ${f0t}.target; if [ 'expr $i $ 500' = "0" ] ; then
echo -n " "; fi; i='expr $i + 1'; done
6173 #
6174 done #for iCs
6175 cat ${f0ut}.output >> ${f0all}.output; cat ${f0t}.target >> ${f0tall}.target; #####
6176 if [ $iCd =ne 0 ] ; then
6177 fpgd=ProbbistCGS{gibbs}${Sord}4
6178 cmd=${fpgd}/evalloss4p p:${fpgd4}.dat t:${f0t}.target o:${f0t}.output"
6179 echo -n "$cmd " ;$cmd
6180 fi
6181 done #for iCd
6182 cmd=${fpgd}/evalloss4p p:${fpgd4}.dat t:${f0tall}.target o:${f0tall}.output"; echo -n "$cmd " ;$cmd;
#####
6183 done #for Sord
6184 done #for gibbs
6185 #####copy and paste to here for (2-3)
6186 #result for gibbs=1 d2=-.../2012/12/voicedata/iconip14data:d2sep=""
6187 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C0D4.target o:PGIC0D4.output #LACE=0.02
50952 LNP=0.063238 LNPDP=0.067647 nc=5 ndata=42000
6188 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C1D4.target o:PGIC1D4.output #LACE=0.04
70952 LNP=0.201527 LNPDP=0.207524 nc=5 ndata=21000
6189 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C2D4.target o:PGIC2D4.output #LACE=0.02
89048 LNP=0.0986392 LNPDP=0.115061 nc=5 ndata=21000
6190 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C3D4.target o:PGIC3D4.output #LACE=0.20
4 LNP=0.289884 LNPDP=0.296209 nc=5 ndata=21000
6191 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C4D4.target o:PGIC4D4.output #LACE=0.00
138095 LNP=0.228384 LNPDP=0.230516 nc=5 ndata=21000
6192 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:Cal1D4.target o:PGICallD4.output #LACE=
0.0482109 LNP=0.1371 LNPDP=0.142893 nc=5 ndata=147000
6193 #result for gibbs=0 d2=-.../2012/12/voicedata/iconip14data:d2sep=""
6194 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C0D4.target o:PGOC0D4.output #LACE=0.10
8976 LNP=0.391038 LNPDP=0.508928 nc=5 ndata=42000
6195 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C1D4.target o:PGOC1D4.output #LACE=0.73
6762 LNP=1.05606 LNPDP=1.72339 nc=5 ndata=21000
6196 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C2D4.target o:PGOC2D4.output #LACE=0.98
7429 LNP=0.817889 LNPDP=1.87119 nc=5 ndata=21000
6197 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C3D4.target o:PGOC3D4.output #LACE=0.87
681 LNP=0.78953 LNPDP=1.55115 nc=5 ndata=21000
6198 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C4D4.target o:PGOC4D4.output #LACE=0.00
880952 LNP=0.6068 LNPDP=0.634509 nc=5 ndata=21000
6199 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:Cal1D4.target o:PGOCallD4.output #LACE=
0.40598 LNP=0.632364 LNPDP=1.02852 nc=5 ndata=147000
6200 #####
6201 ##### result for gibbs=1 d2=/media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/d2sep="" ##### result
for "for iCs in 0 0 0; do" ##### same as result of Fig3 in iconip2015
6202 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C0D4.target o:PGIC0D4.output #LACE=0.02
17857 LNP=0.0050923 LNPDP=0.0611775 nc=5 ndata=42000
6203 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C1D4.target o:PGIC1D4.output #LACE=0.05
14286 LNP=0.200484 LNPDP=0.219791 nc=5 ndata=21000
6204 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C2D4.target o:PGIC2D4.output #LACE=0.05
81429 LNP=0.16212 LNPDP=0.180976 nc=5 ndata=21000
6205 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C3D4.target o:PGIC3D4.output #LACE=0.12
8714 LNP=0.27072 LNPDP=0.272206 nc=5 ndata=21000
6206 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C4D4.target o:PGIC4D4.output #LACE=0.02
3 LNP=0.108757 LNPDP=0.111188 nc=5 ndata=21000
6207 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:Cal1D4.target o:PGICallD4.output #LACE=
0.043698 LNP=0.122701 LNPDP=0.130521 nc=5 ndata=147000
6208 ##### result for gibbs=1 d2=/media/sf_D_DRIVE/cdata/15iconip/20151005sakashita/d2sep="" ##### result
for "for iCs in 0 0 0; do" ##### same as result of Fig3 in iconip2015
6209 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C0D4.target o:PGOC0D4.output #LACE=0.09
54286 LNP=0.289083 LNPDP=0.393362 nc=5 ndata=42000
6210 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C1D4.target o:PGOC1D4.output #LACE=0.85
7286 LNP=1.0923 LNPDP=1.68285 nc=5 ndata=21000
6211 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C2D4.target o:PGOC2D4.output #LACE=0.89
1429 LNP=0.824134 LNPDP=1.7526 nc=5 ndata=21000
6212 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C3D4.target o:PGOC3D4.output #LACE=0.67
5714 LNP=0.864123 LNPDP=1.19678 nc=5 ndata=21000
6213 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C4D4.target o:PGOC4D4.output #LACE=0.00
3 LNP=0.544394 LNPDP=0.558326 nc=5 ndata=21000
6214 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:Cal1D4.target o:PGOCallD4.output #LACE=
0.375429 LNP=0.593527 LNPDP=0.891944 nc=5 ndata=147000
6215 #####
6216 ##### result for gibbs=1 d2=-.../2012/12/voicedata/iconip14data:d2sep="" ##### result for "for iCs in 0
0 0; do"
6218 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C0D4.target o:PGIC0D4.output #LACE=0.02
32143 LNP=0.0580005 LNPDP=0.0644127 nc=5 ndata=42000
6219 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C1D4.target o:PGIC1D4.output #LACE=0.04
9 LNP=0.193214 LNPDP=0.203926 nc=5 ndata=21000
6220 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C2D4.target o:PGIC2D4.output #LACE=0.03
```

```
11429 INLPD=0.0998847 INLPD=0.117324 nC=5 ndata=21000
6221 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C3D4.target o:PGIC3D4.output #LACE=0.20
4 INLPD=.292467 INLPD=0.302644 nC=5 ndata=21000
6222 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C4D4.target o:PGIC4D4.output #LACE=0.00
6223 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG1D4.dat t:C4D4.target o:PGIC4D4.output #LACE=0.00
6224 #result for gibbs=0 d2=../2012/12/voicedata/iconip14data/d2sep="" ##### result for "for iCs in 0 0
0;"
6225 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C0D4.target o:PGOC0D4.output #LACE=0.10
0429 INLPD=0.392616 INLPD=0.501917 nC=5 ndata=42000
6226 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:CLD4.target o:PGOC1D4.output #LACE=0.77
5143 INLPD=1.0349 INLPD=1.72322 nC=5 ndata=21000
6227 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C2D4.target o:PGOC2D4.output #LACE=0.96
1429 INLPD=0.838984 INLPD=1.86358 nC=5 ndata=21000
6228 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C3D4.target o:PGOC3D4.output #LACE=0.87
6229 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C4D4.target o:PGOC4D4.output #LACE=0.00
7571 INLPD=0.793607 INLPD=1.15488 nC=5 ndata=21000
6230 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:C4D4.target o:PGOC4D4.output #LACE=0.00
728571 INLPD=0.592843 INLPD=0.619936 nC=5 ndata=21000
6231 #/home/kuro/sotu/2015/can2b/evalloss4p p:ProbbistG0D4.dat t:CallD4.target o:PGOCallD4.output #LACE=
0.404673 INLPD=0.631888 INLPD=1.02259 nC=5 ndata=147000
6232 #####
6233 #####for confirmation 20151008 below sakashita
6234 #2015/10/08
6235 #####
6236 (1) 原因判明: iconip2015 の良い結果は、iCs=0 としていたから!!!
6237 これは、話者照合が成功したときだけ数字識別を行うときに有効
6238 #####
6239 ##### cut and pase from here
6240 make
6241 tmp=/tmp;if [ ! -e $tmp ]; then mkdir $tmp;fi
6242 dl=/result-onsei_iCsCd.d; if [ ! -e $dl ]; then mkdir $dl;fi
6243 dl=/result-onsei_iCsCd_saka;
6244 for gibbs in 1 0; do
6245 fig-$tmp/histG${gibbs}.dat
6246 cat /dev/null > $fig
6247 for iCd in 0 1 2 3 4 5; do
6248 #####
6249 if [ $gibbs -eq 1 ]; then
6250 pAs=0.80;pAd=0.96;T=5;TT=15;gibbs=1; #for GEBI pApAd:pA:pAd
6251 else
6252 pAs=0.99;pAd=0.80;T=5;TT=15;gibbs=0; #for BI pApAd:pA:pAd
6253 fi
6254 #for iCs in 0 2 3; do
6255 iCs=0; ## result of this line is submitted for iconip2015 <==== 原因はこれ!
6256 cat /dev/null > resultsum.dat
6257 cat /dev/null > psdsum.dat
6258 d2=../2012/12/voicedata/iconip14data
6259 d2=../2012/12/voicedata/allpole;
6260 d2=/sotu/2015iconip/iconip_saigen/2012/12voicedata/allpole;d2sep=":"
6261 for sX in 0 1 2 3 4 5 6; do sP=1;
6262 test=test:5:2000:5{iCs}:5{iCd}:5{15}; #test=test->id:test->n:test->riCs:test->t.iCd:th->T
6263 cnd=speakerdigit_v5 fa:5{d2}/oob4s=-lN40mbas2:300:1.6:1eX$5{ax}.y fd:5{d2}/oob4di=-lN100mbas2:300:1.6
:1eX$5{ax}.y nSPD:7:10:10 ymin:0.01 ytm:1:0 9:2000 gibbs:$gibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 edT:0:0
:1:2:3:4:5:6:7:8:9 ver=-2 pApAd:$5{pAs}:5{pAd} LAR:0:0:-1 test:5:2000:5{iCs}:5{iCd}:5T:5TT sX:$sX sP:$sP void
:0:/scmd > /dev/null
6264 cat $tmp/tested.stat.dat >> resultsum.dat
6265 echo -e "\n" >> resultsum.dat
6266 cat $tmp/pAd.dat >> psdsum.dat ##### <== speakerdigit_v5.c
6267 done
6268 #####
6269 export t=15;fD0=t-ps$5{t}
6270 fbr=$5{dl}/result_ics$5{iCs}iCd$5{15}gibbs}-${5fbo}
6271 cat /dev/null > $5fbo.dat
6272 ##echo "pgc.t,n,pgc.pgcA" >> $5fbo.dat
6273 cat psdsum.dat|awk 'BEGIN{t=ENVIRON["t"];}{if ($1==t){print $4,$0;}}' >> $5fbo_.dat
6274 cnd1="cp $5fbo.dat $5fbr.dat"
6275 echo $cmd1;$cmd1
6276 cat /dev/null > $5fbr_.head.dat
6277 #head -n 3500 $5fbr_.dat > $5fbr_.head.dat
6278 cat /dev/null > $5fbr_.tail.dat
6279 #tail -n 3500 $5fbr_.dat > $5fbr_.tail.dat
6280 sed -n '1,1000p' $5fbr_.dat >> $5fbr_.tail.head.dat
6281 sed -n '1001,2000p' $5fbr_.dat >> $5fbr_.tail
6282 sed -n '2001,3000p' $5fbr_.dat >> $5fbr_.head.dat
6283 sed -n '3001,4000p' $5fbr_.dat >> $5fbr_.tail.dat
6284 sed -n '4001,5000p' $5fbr_.dat >> $5fbr_.head.dat
6285 sed -n '5001,6000p' $5fbr_.dat >> $5fbr_.tail.dat
6286 sed -n '6001,7000p' $5fbr_.dat >> $5fbr_.head.dat
6287 sed -n '7001,8000p' $5fbr_.dat >> $5fbr_.tail.dat
```

```
6288 #sed -n '8001,9000p' $5fbr_.dat>> $5fbr_.head.dat
6289 #sed -n '9001,10000p' $5fbr_.dat>> $5fbr_.tail.dat
6290 #sed -n '10001,11000p' $5fbr_.dat >> $5fbr_.head.dat
6291 #sed -n '11001,12000p' $5fbr_.dat>> $5fbr_.tail.dat
6292 #sed -n '12001,13000p' $5fbr_.dat>> $5fbr_.head.dat
6293 #sed -n '13001,14000p' $5fbr_.dat>> $5fbr_.tail.dat
6294 #echo $cmd1;$cmd1
6295 #####
6296 x0=0;ndiv=100;nmav=3
6297 cnd="histnav1-onsei $x0 $ndiv $nmav $5fbr_.head.dat"
6298 echo $cmd; $cmd
6299 fhe=$5{dl}/hist-ics$5{iCs}iCd$5{15}gibbs}.eps
6300 cp $tmp/hist.eps $fhe
6301 gV $fhe$
6302 cp $fig $tmp/histtmp.dat
6303 paste $tmp/histtmp.dat tmp/hist.dat > $fig
6304 sleep 2;
6305 #done
6306 done
6307 fpgd=$dl/ProbbistG${gibbs}.dat
6308 #cat $fig|awk '{psum=$3+$7+$11+$15+$19+$23+$27+$31+$35+$39+$43+$47+$51+$55+$59+$63+$67+$71+$75+$79+$83+$87+$91+$95+$99+$103+$107+$111+$115+$119+$123+$127+$131+$135+$139+$143+$147+$151+$155+$159+$163+$167+$171+$175+$179+$183+$187+$191+$195+$199+$203+$207+$211+$215+$219+$223+$227+$231+$235+$239+$243+$247+$251+$255+$259+$263+$267+$271+$275+$279+$283+$287+$291+$295+$299+$303+$307+$311+$315+$319+$323+$327+$331+$335+$339+$343+$347+$351+$355+$359+$363+$367+$371+$375+$379+$383+$387+$391+$395+$399+$403+$407+$411+$415+$419+$423+$427+$431+$435+$439+$443+$447+$451+$455+$459+$463+$467+$471+$475+$479+$483+$487+$491+$495+$499+$503+$507+$511+$515+$519+$523+$527+$531+$535+$539+$543+$547+$551+$555+$559+$563+$567+$571+$575+$579+$583+$587+$591+$595+$599+$603+$607+$611+$615+$619+$623+$627+$631+$635+$639+$643+$647+$651+$655+$659+$663+$667+$671+$675+$679+$683+$687+$691+$695+$699+$703+$707+$711+$715+$719+$723+$727+$731+$735+$739+$743+$747+$751+$755+$759+$763+$767+$771+$775+$779+$783+$787+$791+$795+$799+$803+$807+$811+$815+$819+$823+$827+$831+$835+$839+$843+$847+$851+$855+$859+$863+$867+$871+$875+$879+$883+$887+$891+$895+$899+$903+$907+$911+$915+$919+$923+$927+$931+$935+$939+$943+$947+$951+$955+$959+$963+$967+$971+$975+$979+$983+$987+$991+$995+$999+$1003+$1007+$1011+$1015+$1019+$1023+$1027+$1031+$1035+$1039+$1043+$1047+$1051+$1055+$1059+$1063+$1067+$1071+$1075+$1079+$1083+$1087+$1091+$1095+$1099+$1103+$1107+$1111+$1115+$1119+$1123+$1127+$1131+$1135+$1139+$1143+$1147+$1151+$1155+$1159+$1163+$1167+$1171+$1175+$1179+$1183+$1187+$1191+$1195+$1199+$1203+$1207+$1211+$1215+$1219+$1223+$1227+$1231+$1235+$1239+$1243+$1247+$1251+$1255+$1259+$1263+$1267+$1271+$1275+$1279+$1283+$1287+$1291+$1295+$1299+$1303+$1307+$1311+$1315+$1319+$1323+$1327+$1331+$1335+$1339+$1343+$1347+$1351+$1355+$1359+$1363+$1367+$1371+$1375+$1379+$1383+$1387+$1391+$1395+$1399+$1403+$1407+$1411+$1415+$1419+$1423+$1427+$1431+$1435+$1439+$1443+$1447+$1451+$1455+$1459+$1463+$1467+$1471+$1475+$1479+$1483+$1487+$1491+$1495+$1499+$1503+$1507+$1511+$1515+$1519+$1523+$1527+$1531+$1535+$1539+$1543+$1547+$1551+$1555+$1559+$1563+$1567+$1571+$1575+$1579+$1583+$1587+$1591+$1595+$1599+$1603+$1607+$1611+$1615+$1619+$1623+$1627+$1631+$1635+$1639+$1643+$1647+$1651+$1655+$1659+$1663+$1667+$1671+$1675+$1679+$1683+$1687+$1691+$1695+$1699+$1703+$1707+$1711+$1715+$1719+$1723+$1727+$1731+$1735+$1739+$1743+$1747+$1751+$1755+$1759+$1763+$1767+$1771+$1775+$1779+$1783+$1787+$1791+$1795+$1799+$1803+$1807+$1811+$1815+$1819+$1823+$1827+$1831+$1835+$1839+$1843+$1847+$1851+$1855+$1859+$1863+$1867+$1871+$1875+$1879+$1883+$1887+$1891+$1895+$1899+$1903+$1907+$1911+$1915+$1919+$1923+$1927+$1931+$1935+$1939+$1943+$1947+$1951+$1955+$1959+$1963+$1967+$1971+$1975+$1979+$1983+$1987+$1991+$1995+$1999+$2003+$2007+$2011+$2015+$2019+$2023+$2027+$2031+$2035+$2039+$2043+$2047+$2051+$2055+$2059+$2063+$2067+$2071+$2075+$2079+$2083+$2087+$2091+$2095+$2099+$2103+$2107+$2111+$2115+$2119+$2123+$2127+$2131+$2135+$2139+$2143+$2147+$2151+$2155+$2159+$2163+$2167+$2171+$2175+$2179+$2183+$2187+$2191+$2195+$2199+$2203+$2207+$2211+$2215+$2219+$2223+$2227+$2231+$2235+$2239+$2243+$2247+$2251+$2255+$2259+$2263+$2267+$2271+$2275+$2279+$2283+$2287+$2291+$2295+$2299+$2303+$2307+$2311+$2315+$2319+$2323+$2327+$2331+$2335+$2339+$2343+$2347+$2351+$2355+$2359+$2363+$2367+$2371+$2375+$2379+$2383+$2387+$2391+$2395+$2399+$2403+$2407+$2411+$2415+$2419+$2423+$2427+$2431+$2435+$2439+$2443+$2447+$2451+$2455+$2459+$2463+$2467+$2471+$2475+$2479+$2483+$2487+$2491+$2495+$2499+$2503+$2507+$2511+$2515+$2519+$2523+$2527+$2531+$2535+$2539+$2543+$2547+$2551+$2555+$2559+$2563+$2567+$2571+$2575+$2579+$2583+$2587+$2591+$2595+$2599+$2603+$2607+$2611+$2615+$2619+$2623+$2627+$2631+$2635+$2639+$2643+$2647+$2651+$2655+$2659+$2663+$2667+$2671+$2675+$2679+$2683+$2687+$2691+$2695+$2699+$2703+$2707+$2711+$2715+$2719+$2723+$2727+$2731+$2735+$2739+$2743+$2747+$2751+$2755+$2759+$2763+$2767+$2771+$2775+$2779+$2783+$2787+$2791+$2795+$2799+$2803+$2807+$2811+$2815+$2819+$2823+$2827+$2831+$2835+$2839+$2843+$2847+$2851+$2855+$2859+$2863+$2867+$2871+$2875+$2879+$2883+$2887+$2891+$2895+$2899+$2903+$2907+$2911+$2915+$2919+$2923+$2927+$2931+$2935+$2939+$2943+$2947+$2951+$2955+$2959+$2963+$2967+$2971+$2975+$2979+$2983+$2987+$2991+$2995+$2999+$3003+$3007+$3011+$3015+$3019+$3023+$3027+$3031+$3035+$3039+$3043+$3047+$3051+$3055+$3059+$3063+$3067+$3071+$3075+$3079+$3083+$3087+$3091+$3095+$3099+$3103+$3107+$3111+$3115+$3119+$3123+$3127+$3131+$3135+$3139+$3143+$3147+$3151+$3155+$3159+$3163+$3167+$3171+$3175+$3179+$3183+$3187+$3191+$3195+$3199+$3203+$3207+$3211+$3215+$3219+$3223+$3227+$3231+$3235+$3239+$3243+$3247+$3251+$3255+$3259+$3263+$3267+$3271+$3275+$3279+$3283+$3287+$3291+$3295+$3299+$3303+$3307+$3311+$3315+$3319+$3323+$3327+$3331+$3335+$3339+$3343+$3347+$3351+$3355+$3359+$3363+$3367+$3371+$3375+$3379+$3383+$3387+$3391+$3395+$3399+$3403+$3407+$3411+$3415+$3419+$3423+$3427+$3431+$3435+$3439+$3443+$3447+$3451+$3455+$3459+$3463+$3467+$3471+$3475+$3479+$3483+$3487+$3491+$3495+$3499+$3503+$3507+$3511+$3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```

```
6360 cat /dev/null > pdsdsum.dat
6361 for sx in 0 1 2 3 4 5 6; do sp=-1;
6362 test=test:5:2000:$(iCs):$(iCd);5:15; #test:test->id:test->n:test->riCs:test->t_id:th->T
6363 ###
6364 trainDS=iconipl4data# trainDS=allpols# choose
6365 cmd=speakerdigit_v5 fs:../../2012/12voicedata/${trainDS}/oob4s:-lN40mbas2:300:1.6:1sX${sx}.y fd:../../2012/12voicedata/iconipl4data/oob4s:-lN100mbas2:300:1.6:1sX${sx}.y nsDL:7:10:10 pmin:0.01 ytm:1:0.9:1000
6366 gbsbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lr:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pApAd:$(pAs):$(pAd) LAR:
0:0:-1 test:5:2000:$(iCs):$(iCd):$T:$Tt sx:$sx sp:$sp void:0:0:$cmd > /dev/null
6366 cat $tmp/tested_stat.dat >> resultsum.dat
6367 echo -e "\n" >> resultsum.dat
6368 cat $tmp/psd.dat >> pdsdsum.dat ##### <== speakerdigit_v5.c ,pg for speaker and digits #psd.dat
t->pdsdsum.dat
6369 done #for sx excluded speaker
6370 #####
6371 #####
6372 #####for Sord in "S" "D"; do #####
6373 export t=15;
6374 fBo=t-pG${t}
6375 fBr=${dl}/result-ics${iCs}{iCd}{s}{gibbs}_$${fBo}$
6376 cat /dev/null > ${fBo}.dat
6377 #echo "pGc,t.n,pGc,pGcd" >> ${fBo}.dat ???
6378 if [ "$Sord" = "D" ]; then cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]} {(if($1==t){print $4,$0;}}' >> $
{fBo}.dat ; fi ##pdsdsum.dat ->fBo for digits
6379 if [ "$Sord" = "S" ]; then cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]} {(if($1==t){print $3,$0;}}' >> $
{fBo}.dat ; fi ##pdsdsum.dat ->fBo for speakers
6380 #cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]} {(if($1==t){print $3,$0;}}' >> ${fBo}.dat ##pdsdsum.dat -
>fBo for speakers
6381 cmd1="cp ${fBo}.dat ${fBr}.dat"
6382 echo $cmd1;$cmd1
6383 #####
6384 cat /dev/null > ${fBr}_PPrtrain.dat
6385 cat /dev/null > ${fBr}_PpTest.dat
6386 for sx in 0 1 2 3 4 5 6; do
6387 export ex1000="expr $sx \^ 1000"
6388 sed -n -e "expr $(ex1000) + 1000"p" $${fBr}.dat >> ${fBr}_pPrtrain.dat
6389 sed -n -e "expr $(ex1000) + 1001" ,expr ${sx1000} + 2000"p" $${fBr}.dat >> ${fBr}_PpTest.dat
6390 done #for sx
6391 #####
6392 x0=0;ndiv=100;rmav=3
6393 cmd="histmavi-onsei $x0 $ndiv $mav ${fBr}_PPrtrain.dat"
6394 echo $cmd;$cmd
6395 fhe=${dl}/hist-ics${iCs}{iCd}{s}{gibbs}.eps
6396 cp $tmp/hist.eps $fhe
6397 #gv $fhe& #disp result
6398 cp $fBg $tmp/histtmp.dat
6399 cat tmp/hist.dat |awk '{print $3}'> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fBg ##
6400 #paste $tmp/histtmp.dat tmp/hist.dat > $fBg
6401 sleep 2;
6402 #####done # for Sord
6403 #####
6404 done # for iCs
6405 done # for iCd
6406 #####
6407 #####for Sord in $SD; do #####
6408 cp $fBg $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.dat tm
p/hist1.dat > $fBg ##
6409 #####
6410 fdg=${dl}/ProbDistG$(gibbs).dat
6411 cat /dev/null > $fdg
6412 ###
6413 if [ "$Sord" = "D" ]; then
6414 cat $fBg |awk '{p0sum=$1+$2+$3;p1sum=$4+$5+$6;p2sum=$7+$8+$9;p3sum=$10+$11+$12;p4sum=$13+$14+$15;p5su
m=$16+$17+$18;psum=p0sum+p1sum+p2sum+p3sum+p4sum+p5sum;printf("%e %e %e %e\n",$19, p0sum/psum,p1sum
/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5sum/psum);}' >> $fdg
6415 else
6416 cat $fBg |awk '{p0sum=$1+$4+$7+$10+$13+$16;p1sum=$2+$5+$8+$11+$14+$17;p2sum=$3+$6+$9+$12+$15+$18;psum
=p0sum+p1sum+p2sum;printf("%e %e %e\n",$19, p0sum/psum,p1sum/psum,p2sum/psum);}' >> $fdg
6417 fi
6418 #####
6419 cd $d1
6420 if [ "$Sord" = "D" ]; then
6421 gnuplot <<EOF
6422 set xrange [0:1.3]; set style data boxes; #set style data histeps
6423 set style fill solid border lc rgb "black"
6424 set term tgif;set output "ProbDistG$(gibbs).obi";
6425 plot "ProbDistG$(gibbs).dat" using 1:((($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:((
$3+$4+$5+$6+$7) lc rgb "blue" t "4/5", "" using 1:((($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:
($5+$6+$7) lc rgb "red" t "2/5", "" using 1:((($6+$7) lc rgb "green" t "1/5", "" using 1:((($7) lc rgb "pi
nk" t "0/5"
6426 set term postscript;set output "ProbDistG$(gibbs).eps";replot
6427 quit
```

```
6428 EOF
6429 else
6430 gnuplot <<EOF
6431 set xrange [0:1.3]; set style data boxes; #set style data histeps
6432 set style fill solid border lc rgb "black"
6433 set term tgif;set output "ProbDistG$(gibbs).obi";
6434 plot "ProbDistG$(gibbs).dat" using 1:((($2+$3+$4) lc rgb "blue" t "Correct Speaker", "" using 1:((
3+$4) lc rgb "yellow" t "Unregistered Speaker", "" using 1:((($3) lc rgb "red" t "Incorrect Speaker"
6435 set term postscript;set output "ProbDistG$(gibbs).eps";replot
6436 quit
6437 EOF
6438 fi
6439 gv ProbDistG$(gibbs).eps&
6440 cd -; #previous directory
6441 #####done # for Sord
6442 done #for gibbs
6443 #####
6444 #####
6445 #####
6446 #####
6447 #####
6448 #####back good
6449 make
6450 tmp=-/tmp;if [ ! -e $tmp ]; then mkdir $tmp;fi
6451 dl=-./result-onsei_iCsIcd; if [ ! -e $dl ]; then mkdir $dl;fi
6452 for gibbs in 1 0; do
6453 fBg=$tmp/histG$(gibbs).dat
6454 cat /dev/null > $fBg
6455 for iCd in 0 1 2 3 4 5; do
6456 #####
6457 if [ $gibbs -eq 1 ]; then
6458 pAs=0.80;pAd=0.96;t=5;IT=15;gibbs=1; #for GEBI pApAd:pA:pAd
6459 pAs=0.99;pAd=0.80;t=5;IT=15;gibbs=0; #for BI pApAd:pA:pAd
6460 fi
6461 for iCs in 0 2 3; do
6462 cat /dev/null > resultsum.dat
6463 cat /dev/null > pdsdsum.dat
6464 for sx in 0 1 2 3 4 5 6; do sp=-1;
6465 test=test:5:2000:$(iCs):$(iCd);5:15; #test:test->id:test->n:test->riCs:test->t_id:th->T
6466 ###
6467 trainDS=iconipl4data# trainDS=allpols# choose
6468 cmd=speakerdigit_v5 fs:../../2012/12voicedata/${trainDS}/oob4s:-lN40mbas2:300:1.6:1sX${sx}.y fd:../../2012/12voicedata/iconipl4data/oob4s:-lN100mbas2:300:1.6:1sX${sx}.y nsDL:7:10:10 pmin:0.01 ytm:1:0.9:1000
6469 gbsbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lr:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pApAd:$(pAs):$(pAd) LAR:
0:0:-1 test:5:2000:$(iCs):$(iCd):$T:$Tt sx:$sx sp:$sp void:0:0:$cmd > /dev/null
6470 cat $tmp/tested_stat.dat >> resultsum.dat
6471 echo -e "\n" >> resultsum.dat
6472 cat $tmp/psd.dat >> pdsdsum.dat ##### <== speakerdigit_v5.c ,pg for speaker and digits #psd.dat
t->pdsdsum.dat
6473 done #for sx excluded speaker
6474 #####
6475 export t=15;
6476 fBo=t-pG${t}
6477 fBr=${dl}/result-ics${iCs}{iCd}{s}{gibbs}_$${fBo}
6478 cat /dev/null > ${fBo}.dat
6479 #echo "pGc,t.n,pGc,pGcd" >> ${fBo}.dat ???
6480 cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]} {(if($1==t){print $4,$0;}}' >> ${fBo}.dat
6481 cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]} {(if($1==t){print $3,$0;}}' >> ${fBo}.dat ##pdsdsum.dat -
>fBo for digits
6482 cat pdsdsum.dat |awk 'BEGIN{t=ENVIRON["t"]} {(if($1==t){print $3,$0;}}' >> ${fBo}.dat ##pdsdsum.dat -
>fBo for speakers
6483 cmd1="cp ${fBo}.dat ${fBr}.dat"
6484 echo $cmd1;$cmd1
6485 #####
6486 cat /dev/null > ${fBr}_PPrtrain.dat
6487 cat /dev/null > ${fBr}_PpTest.dat
6488 for sx in 0 1 2 3 4 5 6; do
6489 export ex1000="expr $sx \^ 1000"
6490 sed -n -e "expr $(ex1000) + 1" ,expr ${sx1000} + 1001" ,expr ${sx1000} + 2000"p" $${fBr}.dat >> ${fBr}_PpTest.dat
6491 done #for sx
6492 #####
6493 x0=0;ndiv=100;rmav=3
6494 cmd="histmavi-onsei $x0 $ndiv $mav ${fBr}_PPrtrain.dat"
6495 echo $cmd;$cmd
6496 fhe=${dl}/hist-ics${iCs}{iCd}{s}{gibbs}.eps
6497 cp $tmp/hist.eps $fhe
6500 cp $tmp/histtmp.dat >> $fBg
6501 gv $fhe& #disp result
6502
```



```
6503 cp $fhg $tmp/histtmp.dat
6504 cat tmp/hist.dat |awk '{print $3}> tmp/hist3.dat;paste $tmp/histtmp.dat tmp/hist3.dat > $fhg ###
6505 #paste $tmp/histtmp.dat tmp/hist.dat > $fhg
6506 #####
6507 sleep 2;
6508 done # for iCs
6509 done # for iCd
6510 cp $fhg $tmp/histtmp.dat;cat tmp/hist.dat |awk '{print $1}'> tmp/hist1.dat;paste $tmp/histtmp.dat tm
p/hist1.dat > $fhg ##
6511 fdg=$d1/ProbstG$(gibbs).dat
6512 cat /dev/null > $fpdg
6513 ###
6514 #cat $fhg|awk '{psum=$3+$7+$11;p1sum=$15+$19+$23;p2sum=$27+$31+$35;p3sum=$39+$43+$47;p4sum=$51+$55+$
59;p5sum=$63+$67+$71;psum=p0sum+p1sum+p2sum+p3sum+p4sum+p5sum;printf("%e %e %e %e\n",$1, p0sum/psum
,p1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5sum/psum);}' >> $fpdg
6515 cat $fhg|awk '{p0sum=$1+$2+$3;p1sum=$4+$5+$6+$7+$8+$9;p3sum=$10+$11+$12;p4sum=$13+$14+$15;p5sum
=$16+$17+$18;psum=p0sum+p1sum+p2sum+p3sum+p4sum+p5sum;printf("%e %e %e %e\n",$19, p0sum/psum,p1sum
/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5sum/psum);}' >> $fpdg
6517 done #for gibbs
6518 #####
6519 cd $d1
6520 gnuplot <<EOF
6521 set xrange [0:1.3]; set style data boxes; #set style data histograms
6522 set style fill solid border lc rgb "black"
6523 set term gif;set output "ProbstG1.obj";
6524 plot "ProbstG1.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+
$5+$6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$
6+$7) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "
0/5"
6526 set term postscript;set output "ProbstG1.eps";replot
6527 set term gif;set output "ProbstG0.obj"
6528 plot "ProbstG0.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+
$5+$6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$
6+$7) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "
0/"
6529 set term postscript;set output "ProbstG0.eps";replot
6530 quit
6531 EOF
6532 gv ProbstG1.eps&
6533 gv ProbstG0.eps&
6534 cd -
6535 #####
6536
6537
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6551
6552
6553
6554
6555
6556
6557 20150909
6558 #####
6559 ### copy and paste from here
6560 make
6561 tmp=/tmp;[ ! -e $tmp ]; then mkdir $tmp;fi
6562 dl=../result-onsei.iCsIcd; if [ ! -e $d1 ]; then mkdir $d1;fi
6563 for gibbs in 1 0; do
6564 fhg=$tmp/histG$(gibbs).dat
6565 cat /dev/null > $fhg
6566
6567 for iCd in 0 1 2 3 4 5; do
6568 #####
6569 if [ $gibbs -eq 1 ]; then
6570 pAs=0.80;pAd=0.96;TT=5;TT=15;gibbs=1; #for GEBI pAd:pA:pAd
6571 else
6572 pAs=0.99;pAd=0.80;TT=5;TT=15;gibbs=0; #for BI pAd:pA:pAd
6573 fi
```

```
6574 for iCs in 0 2 3; do
6575 cat /dev/null > resultsum.dat
6576 cat /dev/null > psdsum.dat
6577 for ex in 0 1 2 3 4 5 6; do sp=-1;
6578 test=test:5:2000:$(iCs):$(iCd):$T:$T $X:$X $P:$P void:0";$cmd > /dev/null
6579 ##
6580 trainD8=allpois;#
6581 trainD8=iconipl4data;#choo
6582 cmd="speakerdigit_v5 fs:../../2012/12/voicedata/iconipl4data/ooB4s:-lN40mbas2:300:1.6:1sX$(sx).y fd:
../../2012/12/voicedata/iconipl4data/ooB4d:-lN100mbas2:300:1.6:1sX$(sx).y nSDL:7:10:10 pmin:0.01 ytm:1:0.9:100
0 gibbs:$gibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd:$(pAs):$(pAd) LAR:0:0:-1
R:0:0:-1 test:5:2000:$(iCs):$(iCd):$T:$T $X:$X $P:$P void:0";$cmd > /dev/null
6583 ##
6584 #cmd="speakerdigit_v5 fs:../../2012/12/voicedata/allpois/ooB4s:-lN40mbas2:300:1.6:1sX$(sx).y fd:../../
2012/12/voicedata/allpois/ooB4d:-lN100mbas2:300:1.6:1sX$(sx).y nSDL:7:10:10 pmin:0.01 ytm:1:0.9:100 gibbs:$
gibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd:$(pAs):$(pAd) LAR:0:0:-1
test:5:1000:$(iCs):$(iCd):$T:$T $X:$X $P:$P void:0";$cmd > /dev/null
6585 cat $tmp/tested_stat.dat >> resultsum.dat
6586 echo -e '\n' >> resultsum.dat
6587 cat $tmp/psd.dat >> psdsum.dat ##### <== speakerdigit_v5.c
6588 done
6589 #####
6590 export t=15;fbo=t-pG$(t)
6591 fbr=$(dl)/result_ics$(iCs)iCd$(iCd)G$(gibbs)-$(fbo)
6592 cat /dev/null > $(fbo).dat
6593 echo "#pG,t,n,pG,pGcd" >> $(fbo).dat
6594 cat psdsum.dat|awk 'BEGIN{t=ENVIRON["t"]};{if($1==t){print $4,$0;}}' >> $(fbo).dat
6595 cmd1="cp $(fbo).dat $(fbr).dat"
6596 echo $cmd1;$cmd1
6597 #####
6598 cat /dev/null > $(fbr).head.dat
6599 cat /dev/null > $(fbr).tail.dat
6600 sed -n '1,1000p' $(fbr).dat >> $(fbr).head.dat
6601 sed -n '1001,2000p' $(fbr).dat >> $(fbr).tail.dat
6602 sed -n '2001,3000p' $(fbr).dat >> $(fbr).head.dat
6603 sed -n '3001,4000p' $(fbr).dat >> $(fbr).tail.dat
6604 sed -n '4001,4000p' $(fbr).dat >> $(fbr).head.dat
6605 sed -n '5001,6000p' $(fbr).dat >> $(fbr).tail.dat
6606 sed -n '6001,7000p' $(fbr).dat >> $(fbr).head.dat
6607 sed -n '7001,8000p' $(fbr).dat >> $(fbr).tail.dat
6608 sed -n '8001,9000p' $(fbr).dat >> $(fbr).head.dat
6609 sed -n '9001,10000p' $(fbr).dat >> $(fbr).tail.dat
6610 sed -n '10001,11000p' $(fbr).dat >> $(fbr).head.dat
6611 sed -n '11001,12000p' $(fbr).dat >> $(fbr).tail.dat
6612 sed -n '12001,13000p' $(fbr).dat >> $(fbr).head.dat
6613 sed -n '13001,14000p' $(fbr).dat >> $(fbr).tail.dat
6614 #####
6615 x0=0;ndiv=100;mvav=3
6616 cmd="histmavl-onsei $x0 $ndiv $mvav $(fbr).head.dat"
6617 echo $cmd;$cmd
6618 fh=$$(dl)/hist-ics$(iCs)iCd$(iCd)G$(gibbs).eps
6619 cp $tmp/hist.eps $fhe
6620 gv $fhe&
6621 cp $fhg $tmp/histtmp.dat
6622 paste $tmp/histtmp.dat tmp/hist.dat > $fhg
6623 sleep 2;
6624 done # for iCs
6625 done # for iCd
6626 fpdg=$d1/ProbstG$(gibbs).dat
6627 cat /dev/null > $fpdg
6628 ###
6629 #cat $fhg|awk '{psum=$3+$7+$11+$15+$19+$23+$27+$31+$35+$39+$43+$47+$51+$55+$59+$63+$67+$71;psum=p0sum+p1sum+p2sum+p3sum+p4sum+p5sum;printf("%e %e %e %e\n",$1, p0sum/psum
,p1sum/psum,p2sum/psum,p3sum/psum,p4sum/psum,p5sum/psum);}' >> $fpdg
6630 ##
6631 cd $d1
6632 gnuplot <<EOF
6633 set xrange [0:1.3]; set style data boxes; #set style data histograms
6634 set style fill solid border lc rgb "black"
6635 set term gif;set output "ProbstG1.obj";
6636 plot "ProbstG1.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+
$5+$6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$
6+$7) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "
0/5"
6639 set term postscript;set output "ProbstG1.eps";replot
6640 set term gif;set output "ProbstG0.obj"
6641 plot "ProbstG0.dat" using 1:($2+$3+$4+$5+$6+$7) lc rgb "black" t "5/5", "" using 1:($3+$4+
$5+$6+$7) lc rgb "blue" t "4/5", "" using 1:($4+$5+$6+$7) lc rgb "yellow" t "3/5", "" using 1:($5+$
6+$7) lc rgb "red" t "2/5", "" using 1:($6+$7) lc rgb "green" t "1/5", "" using 1:($7) lc rgb "pink" t "
0/5"
```

```
6642 set term postscript;set output "ProbbistG0.eps";replot
6643 quit
6644 EOF
6645 gv ProbbistG1.eps&
6646 gv ProbbistG0.eps&
6647 cd -
6648 ### copy and paste to here
6649
6650
6651 #####
6652 20141119
6653 [1] 次の誤りを修正した:
6654 oob4speakerdigit+sx_c の233行目から243行目のコメントアウトを外した。
6655 特に243行目は必須な学習なのにコメントアウトしていた: 233~239行目は同じ学習をしない
6656 ための前処理。
6657
6658
```

```
20141103 読者
[1] (6) 下の 20140502 at mesahol の(1)~(5)で作成したファイルを使い、
    なお、histmavl.c&histmavl-onsei.cに修正。
6663 ## copy and paste from here
6664 make
```

```
6665 tmp=. /tmp;if [ ! -e $tmp ]; then mkdir $tmp;fi
6666 dl=../result-onsei; if [ ! -e $dl ]; then mkdir $dl;fi
6667 for gibbs in 1 0; do
6668   fig=$tmp/histG${gibbs}.dat
6669   cat /dev/null > $fig
6670   for iCs in 0 2 3; do #0 for CSR, 2 for ISR, 3 for ISU
6671     #####
6672     if [ $gibbs -eq 1 ]; then
6673       pAs=0.80;pAd=0.96;T=5;TT=15;gibbs=1;      #for GEBI  pAdAd:pA:pAd
6674     else
6675       pAs=0.99;pAd=0.80;T=5;TT=15;gibbs=0;      #for BI   pAdAd:pA:pAd
6676     fi
6677     iCd=0;
6678     cat /dev/null > resultsum.dat
6679     cat /dev/null > psdsum.dat
6680     for sx in 0 1 2 3 4 5 6; do sp=-1;
6681       test=test:5:1000;${iCs}:${iCd}:${s15};      #test:test->id:test->n:test->riCs:test->t_id:th->T
6682       cmd=speakerdigit_v5 fs:../2012/12voicedata/iconipldata/oob4s:-IN40mbas2:300:1.6:1sx${sx}.y fdi.
6683       bs:$gibbs beta:1 sdp:0:1:2:3:4:5:6:7:8:9 lr:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd: ${pAs} :${pAd} LAR:0:0
6684       -1 test:5:1000;${iCs}:${iCd}:${T}:${TT} sx:$sx sp:$sp void:0;${cmd} > /dev/null
6685       cmd=speakerdigit_v5 fs:../2012/12voicedata/allpole/oob4s:-IN40mbas2:300:1.6:1sx${sx}.y fd:../2012/12voicedata/allpole/oob4s:-IN100mbas2:300:1.6:1sx${sx}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:$
6686       gibbs beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lr:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd: ${pAs} :${pAd} LAR:0:0:-1
6687       test:5:1000;${iCs}:${iCd}:${T}:${TT} sx:$sx sp:$sp void:0;${cmd} > /dev/null
6688       cat $tmp/tested_stat.dat >> resultsum.dat
6689       echo -e "\n" >> resultsum.dat
6690       cat $tmp/pad.dat >> psdsum.dat #####
6691       done
6692       export t=15;fD0=t-pG${t}
6693       fbr=${dl}/resultp_iCs${iCs}iCd${iCs}gibbs}-${fD0}
6694       cat /dev/null > ${fD0}.dat
6695       echo "pGc:t,n,pGc,pGCa"> ${fD0}.dat
6696       cat psdsum.dat|awk 'BEGIN{(t=ENVIRON["t"]);}{if ($1==t){print $3,$0:}}}' >> ${fD0}.dat
6697       cmd=cp ${fD0}.dat ${fbr}.dat
6698       #####
6699       echo $cmdl;$cmdl
6700       x0=0;ndiv=100;rnnav=3
6701       cmd=histmavl-onsei $x0 $ndiv $nnav ${fbr}.dat*
6702       fhe=${dl}/hist-ics${iCs}iCd${iCs}gibbs}.eps
6703       cp $tmp/hist_eps $fhe
6704       gv $fig&
6705       cp $fig $tmp/histtmp.dat
6706       paste $tmp/histtmp.dat $tmp/hist.dat > $fig
6707       sleep 2;
6708       done # for iCs
6709       fDg=${dl}/ProbbistG${gibbs}.dat
6710       cat /dev/null > $fDg
6711       cat $fig|awk '{psum=$3+$7+$11-le-20;printf("%e %e %e\n", $1, $3/psum, $7/psum, $11/psum);}' >> $fP
6712       done # for gibbs
6713       #####
6714       cd $dl
6715       gnuplot <<EOF
6716       set style data boxes; #set style data histeps
6717       set fill fill solid border lc rgb "black"
6718       set term tgif;set output "ProbbistG1.obj";
```

```
6717 plot "ProbbistG1.dat" using 1:($2+$3+$4) lc rgb "blue" t "Correct Speaker Registered", "" using 1
:($3+$4) lc rgb "yellow" t "Incorrect Speaker UnRegistered", "" using 1:($3) lc rgb "red" t "Incorrect Sp
eaker Registered"
6718 set term postscript;set output "ProbbistG0.eps";replot
6719 set term tgif;set output "ProbbistG0.obj"
6720 plot "ProbbistG0.dat" using 1:($2+$3+$4) lc rgb "blue" t "Correct Speaker Registered", "" using 1
:($3+$4) lc rgb "yellow" t "Incorrect Speaker UnRegistered", "" using 1:($3) lc rgb "red" t "Incorrect Sp
eaker Registered"
6721 set term postscript;set output "ProbbistG0.eps";replot
6722 quit
6723 EOF
6724 gv ProbbistG1.eps&
6725 gv ProbbistG0.eps&
6726 ## copy and paste to here
6727
6728
6729
6730 #####
6731 20140502 at mesaho
6732 (1) tune a,b,N via checking error for sX of speaker-CAN2
6733 make data-clean
6734 for sx in -1 0 1 2 3 4 5 6; do
6735   a=1.6;b=300;N=40
6736   cmd="oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mmt:mnh:myt tx:zero:ichi:ni:sani:yon:go:roku:nana:hachi:k
yu ntxi:10 k:36 mbas:2:${b}:${a}:1 dir:../2012/12voicedata/allpole s:-1 N:${N} sx:${sx}"
6738   echo $cmdl;$cmdl
6739   cmdl="cat ../2012/12voicedata/allpole/oob4s:-IN${N}mbas2:${b}:${a}:1sx${sx}.ystat"
6740   echo $cmdl;$cmdl
6741   done
6742   # for check UnReg error
6743   a=1.6;b=300;N=40;for sx in -1 0 1 2 3 4 5 6; do speakerdigit_v3 fs:../2012/12voicedata/allpole/o
b4s:-IN${N}mbas2:${b}:${a}:1sx${sx}.y nsdl:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5
:6:7:8:9 lr:1 sdr:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAdAd: LAR:0:0:-1 test:5:1000:3:0:5:15 sx:${sx} void:0 |grep
"ntp">tp.dat;echo -n "${s(a)b${b}(b)N${N} }";cat TP.dat; done
6744   ##
6745   #a1.6b300N40 #TP0.933 TN0.976 ERL.851e-05 n4900(Reg)
6746   #a1.6b300N40 #TP0.938 TN0.982 ERL.909e-05 n4200(Reg) TP0.000 TN0.907 ERL.327e-04 n700(UnReg:sX0) TP0
.811 TN0.970 ERL.474e-05 n4900(All)***
6747   #a1.6b300N40 #TP0.947 TN0.985 ERL.634e-05 n4200(Reg) TP0.000 TN0.923 ERL.102e-04 n700(UnReg:sX1) TP0
.839 TN0.975 ERL.803e-05 n4900(All)
6748   #a1.6b300N40 #TP0.952 TN0.987 ERL.455e-05 n4200(Reg) TP0.000 TN0.903 ERL.388e-04 n700(UnReg:sX2) TP0
.834 TN0.973 ERL.937e-05 n4900(All)
6749   #a1.6b300N40 #TP0.940 TN0.983 ERL.766e-05 n4200(Reg) TP0.000 TN0.920 ERL.143e-04 n700(UnReg:sX3) TP0
.826 TN0.972 ERL.4110e-05 n4900(All)
6750   #a1.6b300N40 #TP0.970 TN0.986 ERL.052e-05 n4200(Reg) TP0.000 TN0.919 ERL.163e-04 n700(UnReg:sX4) TP0
.843 TN0.975 ERL.707e-05 n4900(All)
6751   #a1.6b300N40 #TP0.940 TN0.988 ERL.726e-05 n4200(Reg) TP0.000 TN0.901 ERL.408e-04 n700(UnReg:sX5) TP0
.832 TN0.973 ERL.973e-05 n4900(All)
6752   #a1.6b300N40 #TP0.943 TN0.988 ERL.640e-05 n4200(Reg) TP0.000 TN0.923 ERL.102e-04 n700(UnReg:sX6) TP0
.852 TN0.977 ERL.477e-05 n4900(All)
6753
```

```
6754   #a1.6b100N100 #TP0.946 TN0.986 ERL.399e-05 n4900(Reg)
6755   #a1.6b100N100 #TP0.928 TN0.988 ERL.984e-05 n4200(Reg) TP0.000 TN0.859 ER2.020e-04 n700(UnReg:sX0) TP
0.798 TN0.967 ER4.792e-05 n4900(All)
6756   #a1.6b100N100 #TP0.938 TN0.988 ERL.759e-05 n4200(Reg) TP0.000 TN0.854 ER2.082e-04 n700(UnReg:sX1) TP
0.794 TN0.966 ER4.895e-05 n4900(All)
6757   #a1.6b100N100 #TP0.940 TN0.991 ERL.653e-05 n4200(Reg) TP0.000 TN0.857 ER2.041e-04 n700(UnReg:sX2) TP
0.808 TN0.969 ER4.554e-05 n4900(All)
6758   #a1.6b100N100 #TP0.950 TN0.993 ERL.362e-05 n4200(Reg) TP0.000 TN0.859 ER2.020e-04 n700(UnReg:sX3) TP
0.820 TN0.971 ER4.264e-05 n4900(All)
6759   #a1.6b100N100 #TP0.942 TN0.991 ERL.607e-05 n4200(Reg) TP0.000 TN0.856 ER2.061e-04 n700(UnReg:sX4) TP
0.808 TN0.969 ER4.548e-05 n4900(All)
6760   #a1.6b100N100 #TP0.948 TN0.990 ERL.462e-05 n4200(Reg) TP0.000 TN0.857 ER2.041e-04 n700(UnReg:sX5) TP
0.808 TN0.969 ER4.554e-05 n4900(All)
6761   #a1.6b100N100 #TP0.960 TN0.993 ERL.131e-05 n4200(Reg) TP0.000 TN0.854 ER2.082e-04 n700(UnReg:sX6) TP
0.817 TN0.970 ER4.347e-05 n4900(All)
6762
```

```
6763   #a1.6b100N40 #TP0.929 TN0.977 ERL.924e-05 n4900(Reg)
6764   #a1.6b100N40 #TP0.925 TN0.983 ER2.183e-05 n4200(Reg) TP0.000 TN0.851 ER2.122e-04 n700(UnReg:sX0) TP0
.772 TN0.962 ER5.433e-05 n4900(All)
6765   #a1.6b100N40 #TP0.942 TN0.984 ERL.779e-05 n4200(Reg) TP0.000 TN0.849 ER2.163e-04 n700(UnReg:sX1) TP0
.774 TN0.962 ER5.396e-05 n4900(All)
6766   #a1.6b100N40 #TP0.952 TN0.985 ERL.501e-05 n4200(Reg) TP0.000 TN0.850 ER2.143e-04 n700(UnReg:sX2) TP0
.783 TN0.963 ER5.173e-05 n4900(All)
6767   #a1.6b100N40 #TP0.942 TN0.984 ERL.779e-05 n4200(Reg) TP0.000 TN0.850 ER2.143e-04 n700(UnReg:sX3) TP0
.775 TN0.962 ER5.369e-05 n4900(All)
6768   #a1.6b100N40 #TP0.933 TN0.981 ER2.037e-05 n4200(Reg) TP0.000 TN0.846 ER2.204e-04 n700(UnReg:sX4) TP0
.761 TN0.959 ER5.716e-05 n4900(All)
6769   #a1.6b100N40 #TP0.928 TN0.984 ER2.090e-05 n4200(Reg) TP0.000 TN0.859 ER2.020e-04 n700(UnReg:sX5) TP0
.780 TN0.963 ER5.233e-05 n4900(All)
6770   #a1.6b100N40 #TP0.937 TN0.983 ERL.925e-05 n4200(Reg) TP0.000 TN0.846 ER2.204e-04 n700(UnReg:sX6) TP0
```

```

7771 .767 TNO.960 ER5.573e-05 n4900(All)
7772 (2) tune a,b,N via checking error for sX of digit-CAN2
7773 #see 2013/02/27
7774 for sX in -1 0 1 2 3 4 5 6 7; do
7775 a=1.6*b-300;N=100
7776 cmd= `cat /dev/urandom | tr -dc 'a-z0-9' | fold -w 100 | xargs echo`
7777 ynu nxx1:0 k:36 mbas:225${b} | ${a} | 1 dir:./../2012/12voicedata/allpole d:1 N:${N} sX:${sX}
7778 echo $cmd | $cmd
7779 echo $cmd | $cmd
7780 done
7781 a=1.6*b-300;N=100;for sX in -1 0 1 2 3 4 5 6; do speakerdigit_v3 fd:./../2012/12voicedata/allpole/o:
7782 56:48:-1NS${N}mbas:225${b} | ${a} | isx${sX}; y NSDL7:10:10 pmin:0.01 ytn:1:0.9:1000 gibbs:1 beta:1 sdp:0:0:1:2:3:4:
7783 5:5:7:8:9 1T1 sdr:0:0:1:2:3:4:5:7:8:9 ver:-2 pAPad:1 LAR:0:0:-1 test:5:1000:3:0:5:15 sX:${sX} void:0 | gre
7784 p "HTP->TP.dat;echo -n "#a${a}b${b}N${N}" | cat TP.dat; do
7785 #T82 #a1.6b100N100 #TP0.953 TNO.994 ER7.551e-06 n7000(Reg)
7786 #T83 #a1.6b100N100 #TP0.963 TNO.996 ER6.821e-06 n6000(Reg) TP0.940 TNO.993 ER6.667e-05 n1000(UnReg:sX0) T
7787 #P0.959 TNO.995 ER6.568e-06 n7000(All)**
7788 #T84 #a1.6b100N100 #TP0.962 TNO.998 ER6.790e-06 n6000(Reg) TP0.990 TNO.998 ER1.222e-05 n1000(UnReg:sX1) T
7789 #P0.978 TNO.998 ER3.441e-06 n7000(All)
7790 #T85 #a1.6b100N100 #TP0.973 TNO.996 ER5.062e-06 n6000(Reg) TP1.000 TNO.998 ER2.222e-06 n1000(UnReg:sX2) T
7791 #P0.969 TNO.997 ER4.951e-06 n7000(All)
7792 #T86 #a1.6b100N100 #TP0.963 TNO.997 ER6.574e-06 n6000(Reg) TP0.990 TNO.999 ER1.111e-05 n1000(UnReg:sX3) T
7793 #P0.977 TNO.997 ER3.661e-06 n7000(All)
7794 #T87 #a1.6b100N100 #TP0.952 TNO.996 ER8.704e-06 n6000(Reg) TP0.990 TNO.998 ER1.222e-05 n1000(UnReg:sX4) T
7795 #P0.967 TNO.996 ER5.263e-06 n7000(All)
7796 #T88 #a1.6b100N100 #TP0.955 TNO.995 ER8.364e-06 n6000(Reg) TP0.980 TNO.998 ER2.222e-05 n1000(UnReg:sX5) T
7797 #P0.957 TNO.995 ER6.794e-06 n7000(All)
7798 #T89 #a1.6b100N100 #TP0.953 TNO.996 ER8.488e-06 n6000(Reg) TP0.990 TNO.998 ER1.222e-05 n1000(UnReg:sX6) T
7799 #P0.964 TNO.996 ER5.698e-06 n7000(All)
7800 #T90 #a1.6b300N100 #TP0.951 TNO.994 ER7.823e-06 n7000(Reg)
7801 #P0.9791 #a1.6b300N100 #TP0.960 TNO.995 ER7.500e-06 n6000(Reg) TP0.940 TNO.993 ER6.667e-05 n1000(UnReg:sX0) T
7802 #P0.953 TNO.995 ER7.454e-06 n7000(All)**$oSo
7803 #T91 #a1.6b300N100 #TP0.968 TNO.996 ER5.895e-06 n6000(Reg) TP0.980 TNO.999 ER2.111e-05 n1000(UnReg:sX1) T
7804 #P0.970 TNO.997 ER4.762e-06 n7000(All)
7805 #T92 #a1.6b300N100 #TP0.968 TNO.996 ER5.864e-06 n6000(Reg) TP0.980 TNO.999 ER2.111e-05 n1000(UnReg:sX2) T
7806 #P0.971 TNO.997 ER4.541e-06 n7000(All)
7807 #T93 #a1.6b300N100 #TP0.962 TNO.996 ER7.006e-06 n6000(Reg) TP0.980 TNO.998 ER2.222e-05 n1000(UnReg:sX3) T
7808 #P0.968 TNO.997 ER5.008e-06 n7000(All)
7809 #T94 #a1.6b300N100 #TP0.967 TNO.996 ER6.204e-06 n6000(Reg) TP0.970 TNO.999 ER3.111e-05 n1000(UnReg:sX4) T
7810 #P0.969 TNO.997 ER4.955e-06 n7000(All)
7811 #T95 #a1.6b300N100 #TP0.962 TNO.995 ER7.191e-06 n6000(Reg) TP0.980 TNO.997 ER2.333e-05 n1000(UnReg:sX5) T
7812 #P0.959 TNO.995 ER6.542e-06 n7000(All)
7813 #T96 #a1.6b300N100 #TP0.950 TNO.995 ER9.198e-06 n6000(Reg) TP0.970 TNO.999 ER3.111e-05 n1000(UnReg:sX6) T
7814 #P0.958 TNO.995 ER6.610e-06 n7000(All)
7815 #T97 #a1.6b100N40 #TP0.943 TNO.989 ER9.751e-06 n7000(Reg)
7816 #P0.9601 #a1.6b100N40 #TP0.957 TNO.994 ER8.302e-06 n6000(Reg) TP0.940 TNO.992 ER6.778e-05 n1000(UnReg:sX0) TP
7817 0.941 TNO.993 ER3.403e-06 n7000(All)
7818 #T98 #a1.6b100N40 #TP0.962 TNO.992 ER7.654e-06 n6000(Reg) TP0.960 TNO.993 ER4.667e-05 n1000(UnReg:sX1) TP
7819 0.935 TNO.993 ER1.039e-05 n7000(All)
7820 #T99 #a1.6b100N40 #TP0.950 TNO.993 ER9.475e-06 n6000(Reg) TP0.930 TNO.989 ER8.111e-05 n1000(UnReg:sX2) TP
7821 0.934 TNO.993 ER1.052e-05 n7000(All)
7822 #T100 #a1.6b100N40 #TP0.938 TNO.993 ER1.142e-05 n6000(Reg) TP0.920 TNO.989 ER9.111e-05 n1000(UnReg:sX3) TP
7823 0.933 TNO.993 ER1.063e-05 n7000(All)
7824 #T101 #a1.6b100N40 #TP0.955 TNO.993 ER8.735e-06 n6000(Reg) TP0.960 TNO.990 ER5.000e-05 n1000(UnReg:sX4) TP
7825 0.932 TNO.992 ER1.086e-05 n7000(All)
7826 #T102 #a1.6b100N40 #TP0.942 TNO.987 ER1.185e-05 n6000(Reg) TP0.950 TNO.983 ER6.667e-05 n1000(UnReg:sX5) TP
7827 0.887 TNO.987 ER1.803e-05 n7000(All)
7828 #T103 #a1.6b100N40 #TP0.935 TNO.988 ER1.290e-05 n6000(Reg) TP0.930 TNO.981 ER8.889e-05 n1000(UnReg:sX6) TP
7829 0.886 TNO.987 ER1.816e-05 n7000(All)
7830 #T104 #a1.6b300N40 #TP0.929 TNO.990 ER1.156e-05 n7000(Reg)
7831 #P0.6809 #a1.6b300N40 #TP0.950 TNO.992 ER9.691e-06 n6000(Reg) TP0.280 TNO.957 ER7.633e-04 n1000(UnReg:sX0) TP
7832 0.878 TNO.987 ER1.929e-05 n7000(All)NG for sX
7833 #T105 #a1.6b300N40 #TP0.952 TNO.991 ER9.568e-06 n6000(Reg) TP0.410 TNO.962 ER6.278e-04 n1000(UnReg:sX1) TP
7834 0.881 TNO.987 ER1.894e-05 n7000(All)
7835 #T106 #a1.6b300N40 #TP0.940 TNO.993 ER1.114e-05 n6000(Reg) TP0.650 TNO.976 ER3.744e-04 n1000(UnReg:sX2) TP
7836 0.914 TNO.991 ER1.359e-05 n7000(All)
7837 #T107 #a1.6b300N40 #TP0.953 TNO.995 ER8.673e-06 n6000(Reg) TP0.590 TNO.981 ER4.289e-04 n1000(UnReg:sX3) TP
7838 0.932 TNO.993 ER1.075e-05 n7000(All)
7839 #T108 #a1.6b300N40 #TP0.953 TNO.994 ER8.796e-06 n6000(Reg) TP0.450 TNO.961 ER5.889e-04 n1000(UnReg:sX4) TP
7840 0.901 TNO.989 ER1.572e-05 n7000(All)
7841 #T109 #a1.6b300N40 #TP0.958 TNO.994 ER7.932e-06 n6000(Reg) TP0.760 TNO.987 ER2.533e-04 n1000(UnReg:sX5) TP
7842 0.937 TNO.993 ER1.004e-05 n7000(All)
7843 #T110 #a1.6b300N40 #TP0.953 TNO.
```

```

6819 #a1.6b10N0A40 #TP0.957 TNO.994 ER8.302e-06 n6000(Reg) TP0.940 TNO.992 ER6.778e-05 n1000(UnReg:sx0)
6820 #TP0.941 TNO.993 ER.403e-06 n7000(All)
6820 #a1.6b10N0L00 #TP0.963 TNO.996 ER6.821e-06 n6000(Reg) TP0.940 TNO.993 ER6.667e-05 n1000(UnReg:sx0)
6820 #TP0.959 TNO.995 ER6.568e-06 n7000(All)**
6821 #a0.7f10N0A40 #TP0.957 TNO.981 ER2.704e-05 n6000(Reg) TP0.780 TNO.971 ER2.489e-04 n1000(UnReg:sx0) TP
0.822 TNO.980 ER2.830e-05 n7000(All)
6822 #a1.6b20N0A40 #TP0.917 TNO.987 ER1.608e-05 n6000(Reg) TP0.840 TNO.976 ER1.844e-04 n1000(UnReg:sx0) TP
0.872 TNO.985 ER2.038e-05 n7000(All)
6823 #a1.965N0A40 #TP0.950 TNO.992 ER9.691e-06 n6000(Reg) TP0.280 TNO.957 ER7.633e-04 n1000(UnReg:sx0) TP
0.878 TNO.987 ER1.929e-05 n7000(All)
6824
6825 (3) commands for speaker+digit verification
6826 pAs=0.99;pAd=0.80;T=5;TT=15;gibbs=0; #for BI pAPad:pA:pAd
6827 pAS=0.80;pAD=0.96;T=5;TT=15;gibbs=1; #for GERI pAPad:pA:pAd
6828 iCS=0;iCD=0; # test correct (registered) speaker
6829 iCS=1;iCD=0; # test incorrect registered and unregistered sx
6830 iCS=2;iCD=0; # test incorrect registered
6831 iCS=3;iCD=0; # test (incorrect) unregistered sx
6832 cat /dev/null > resultsum.dat
6833 for sx in 0 1 2 3 4 5 6; do
6834 test-test=5:1000:$iCS;$iCD;$i5:15; #test:test->id:test->n:test->riCS:test->t_iCD:th->T
6835 cmd=speakerdigit_v5 fs:.../2012/l2voicedata/allpole/cob4s-IN40mbas2:300:1.6:1xs${sx}_v fdi:.../...a
6836 2012/l2voicedata/allpole/cob4d-IN100mbas2:300:1.6:1xs${sx}_v nsDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 gibbs:${i
gibbs} beta:1 sdP:0.0:$iCD;$iCI;$m:JMT ex:$sx void:0;$cmd > /dev/null
6837 test=5:1000:$iCS:$iCD;$m:JMT ex:$sx void:0;$cmd > /dev/null
6838 cat tmp/tested_stat.dat >> resultsum.dat
6839 echo -e "\n" >> resultsum.dat
6840 done
6841 for t in 15; do #for tex
6842 export tcat resultsum.dat awk 'BEGIN{t=ENVIRON["t"];Asd=As=asd=0;n=0;} {if($1==t){Asd=$10;Rsd=$11;T
Asd=$12;Rs=$13;Ad=$14;Td=$15;a16=a17;a18=$19;a19=a20;AsRs={}}'
6843 As=${As}:Asd for pAsd;%g iCd;%d&d nId "\n,t,100*Ad/(Ad+Rd),100*As/(As+Rs),100*Asd/(Asd+Rsd),a16,a17,a18,a19,a20,AsRs"}
6844 done
6845
6846 (4) tune pAs and pAd via EER (Equal Error Rate; FA %same FR) using (3); --> result pAsd=0.8:0.96 f
or Gibbs , pAsd=0.99:0.80 for Bayes(gibbs:0)
#####tune pAs for FA %same FR, Gibbs pAsd=0.8:0.96
Gibbs (gibbs:1)
#t15 [99.0]{1.2}{1.1}{Ad:As:Asd for pAsd0.8:0.96 iC3:0/5 n7000} FAR=1.1
#t15 [99.0]{99.8}{98.8}{Ad:As:Asd for pAsd0.8:0.96 iC0:0/5 n7000} FRR=1.2=100-98.8
#bayes (gibbs:0)
#t15 [97.7]{95.4}{94.0}{Ad:As:Asd for pAsd0.99:0.8 iC0:0/5 n7000} FRR=6.0=100-94.0
#t15 [98.2]{5.1}{5.0}{Ad:As:Asd for pAsd0.99:0.8 iC3:0/5 n7000} FRR=5.0
#####FAR for registered incorrect? nonsense result pAs=0.2 ?
#t15 [99.9]{100.0}{99.9}{Ad:As:Asd for pAsd0.2:0.85 iC0:0/5 n7000} FRR=0.1 pAsd=0.2:0.85
#t15 [99.9]{0.1}{0.1}{Ad:As:Asd for pAsd0.2:0.85 iC2:0/5 n7000} FAR=0.1 pAs=0.2 is nonsense? dang
erous?
6855
6856
6857
6858 #####the following result is obtained with speakerdigit-v5-
6859 #####Gibbs (gibbs:1)
6860 #####t15 [99.2]{1.2}{1.2}{Ad:As:Asd for pAsd0.8:0.96 iC3:0/5 n7000} FAR=1.2 *** Use pAsd=0.80:0.96 f
or Gibbs
6861 #####t15 [99.1]{99.9}{99.0}{Ad:As:Asd for pAsd0.8:0.96 iC0:0/5 n7000} FR=0.9
6862 ###
6863 #####t15 [100.0]{0.1}{0.1}{Ad:As:Asd for pAsd0.8:0.96 iC3:0/5 n7000} using l[t] 20140514 at mesa
o
6864 #####t15 [99.9]{100.0}{99.9}{Ad:As:Asd for pAsd0.8:0.96 iC0:0/5 n7000} using l[t] 20140514 at mesa
no
6865 ###
6866 #####t15 [98.2]{99.9}{98.2}{Ad:As:Asd for pAsd0.8:0.97 iC0:0/5 n7000} FR=1.8
6867 #####t15 [98.7]{1.2}{1.2}{Ad:As:Asd for pAsd0.8:0.97 iC3:0/5 n7000} FR=1.2
6868 ###
6869 #####t15 [99.3]{1.2}{1.2}{Ad:As:Asd for pAsd0.8:0.95 iC3:0/5 n7000} FAR=1.2$
6870 #####t15 [99.3]{99.9}{99.2}{Ad:As:Asd for pAsd0.8:0.95 iC0:0/5 n7000} FR=0.8$
6871 ###
6872 #####Bayes(gibbs:0)
6873 #####t15 [99.5]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.1 iC3:0/5 n7000}
6874 #####t15 [99.1]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.2 iC3:0/5 n7000}
6875 #####t15 [99.1]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.3 iC3:0/5 n7000}
6876 #####t15 [98.7]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.4 iC3:0/5 n7000}
6877 #####t15 [98.3]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.5 iC3:0/5 n7000}
6878 #####t15 [98.1]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.6 iC3:0/5 n7000}
6879 #####t15 [98.2]{0.1}{0.1}{Ad:As:Asd for pAsd0.99:0.6 iC2:0/5 n7000}
6880 #####t15 [97.9]{95.3}{93.9}{Ad:As:Asd for pAsd0.99:0.6 iC0:0/5 n7000} FR=6.1
6881 ###
6882 #####t15 [98.1]{5.5}{5.5}{Ad:As:Asd for pAsd0.99:0.7 iC3:0/5 n7000} FAR=5.5
6883 #####t15 [97.9]{95.3}{93.9}{Ad:As:Asd for pAsd0.99:0.7 iC0:0/5 n7000} FR=6.1
6884 #####t15 [55.9]{95.5}{53.9}{Ad:As:Asd for pAsd0.99:0.7 iC0:2/5 n7000} FAR=53.9 worse than below

```



```
UMS+=$(s$4);UMS+=$(s$5);pD+=$6;UMD+=$(s$7);UMD+=$(s$8);n++}} END(print f{"&d %g %g %g %g\n",t,pS/n
,sqrt(UMS/n),sqrt(UMS/n),pD/n,sqrt(UMD/n), sqrt(UMD/n))}' >> resultcp.dat
7042 #done
7043 dl=-../result-onsei; if [ ! -e $dl ]; then mkdir $dl;fi
7044 cmd+=cp pdsstat.dat $dl/result-ics$[iCS]{iCS}{gibbs}.txt"
7045 echo $cmdal.$cmdcl
7046 #####
7047 #
7048 cd ../result-onsei
7049 gnuplot
7050 #gibbs speaker
7051 #set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid; set xrange [-1.5:15.9];
set xrange [-0.1:1.4];
7052 #set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid; set xrange [-0.5:17.9];
set xrange [-0.2:1.2];
7053 #set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid; set xrange [-0.5:15.9]; s
et xrange [-0.2:1.2];
7054 plot "resultcp_ics01cd00g1.txt" using 1:2 t "pG" lt 1, "" using 1:($2):($2-$3):($2+$4) with yerrorbar
s t "" pt 7 lt 1, \
7055 "resultcp_ics21cd00g1.txt" using ($1+0.2):2 t "pG" lt 1, "" using 1:($2):($2-$3):($2+$4) with yerrorbar
s t "" pt 6 lt 1, \
7056 "resultcp_ics31cd00g1.txt" using ($1+0.4):2 t "pG" lt 1, "" using ($1+0.6):($5):($5-$6):($5+$7) with y
errorbars t "" pt 4 lt 1
7057 set term tgif;set output "pds-t.obj";replot;set term X11
7058 !cp pgs-t.obj ~/14iconip/iconip2014speech/draft
7059 #gibbs digits
7060 #set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.96,1.0);set grid/set xrange [-1.5:15.9];
set xrange [-0.1:1.4];
7061 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.96,1.0);set grid; set xrange [-0.5:18.9];
set xrange [-0.2:1.2];
7062 plot "resultcp_ics01cd00g1.txt" using 1:5 t "pG" lt 1, "" using 1:($5):($5-$6):($5+$7) with yerrorbars
t "" pt 7 lt 1, \
7063 "resultcp_ics01cd01g1.txt" using ($1+0.2):5 t "pG" lt 1, "" using ($1+0.2):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7064 "resultcp_ics01cd02g1.txt" using ($1+0.4):5 t "pG" lt 1, "" using ($1+0.4):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7065 "resultcp_ics01cd03g1.txt" using ($1+0.6):5 t "pG" lt 1, "" using ($1+0.6):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1
7066 set term tgif;set output "pbd-t.obj";replot;set term X11
7067 !cp pbd-t.obj ~/14iconip/iconip2014speech/draft
7068 #bytes speaker
7069 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.99,1.0);set grid/set xrange [-1.5:15.9]; s
et xrange [-0.1:1.4];
7070 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.99,1.0);set grid; set xrange [-0.5:17.9];
set xrange [-0.2:1.2];
7071 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.99,1.0);set grid; set xrange [-0.5:15.9];
set xrange [-0.2:1.2];
7072 plot "resultcp_ics01cd00g0.txt" using 1:2 t "pB" lt 1, "" using 1:($2):($2-$3):($2+$4) with yerrorbars
t "" pt 7 lt 1, \
7073 "resultcp_ics21cd00g0.txt" using ($1+0.2):2 t "pB" lt 1, "" using ($1+0.2):($2):($2-$3):($2+$4) with y
errorbars t "" pt 6 lt 1, \
7074 "resultcp_ics31cd00g0.txt" using ($1+0.4):2 t "pB" lt 1, "" using ($1+0.4):($2):($2-$3):($2+$4) with y
errorbars t "" pt 4 lt 1
7075 set term tgif;set output "pbs-t.obj";replot;set term X11
7076 !cp pbs-t.obj ~/14iconip/iconip2014speech/draft
7077 #bytes digits
7078 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid;set xrange [-1.5:15.9]; s
et xrange [-0.1:1.4];
7079 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid; set xrange [-0.5:18.9]; s
et xrange [-0.2:1.2];
7080 plot "resultcp_ics01cd00g0.txt" using 1:5 t "pB" lt 1, "" using 1:($5):($5-$6):($5+$7) with yerrorbars
t "" pt 7 lt 1, \
7081 "resultcp_ics01cd01g0.txt" using ($1+0.2):5 t "pB" lt 1, "" using ($1+0.2):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7082 "resultcp_ics01cd02g0.txt" using ($1+0.4):5 t "pB" lt 1, "" using ($1+0.4):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7083 "resultcp_ics01cd03g0.txt" using ($1+0.6):5 t "pB" lt 1, "" using ($1+0.6):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1
7084 set term tgif;set output "pbd-t.obj";replot;set term X11
7085 !cp pbd-t.obj ~/14iconip/iconip2014speech/draft
7086
7087
7088
7089
7090
7091 #####worig
7092 cd ../result-onsei
7093 gnuplot
7094 #gibbs speaker
7095 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid; set xrange [-1.5:15.9]; s
et xrange [-0.1:1.4];
7096 plot "../result-onsei/resultcp_ics01cd00g1.txt" using 1:2 t "pG" lt 1, "" using 1:($2):($2-$3):($2+$4
```

```
) with yerrorbars t "" pt 7 lt 1, \
7097 "../result-onsei/resultcp_ics21cd00g1.txt" using ($1+0.2):2 t "pG" lt 2, "" using ($1+0.2):($2):($2-$3)
):($2+$4) with yerrorbars t "" pt 6 lt 1, \
7098 "resultcp_ics31cd00g1.txt" using ($1+0.4):2 t "pG" lt 3, "" using ($1+0.4):($2):($2-$3):($2+$4) with y
errorbars t "" pt 4 lt 1
7099 set term tgif;set output "pds-t_ics0231cd0.obj";replot;set term X11
7100 !cp pds-t_ics0231cd0.obj ~/14iconip/iconip2014speech/draft
7101 #gibbs digits
7102 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.96,1.0);set grid;set xrange [-1.5:15.9]; s
et xrange [-0.1:1.4];
7103 plot "resultcp_ics01cd00g1.txt" using 1:5 t "pG" lt 1, "" using 1:($5):($5-$6):($5+$7) with yerrorbars
t "" pt 7 lt 1, \
7104 "resultcp_ics01cd01g1.txt" using ($1+0.2):5 t "pG" lt 2, "" using ($1+0.2):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7105 "resultcp_ics01cd02g1.txt" using ($1+0.4):5 t "pG" lt 3, "" using ($1+0.4):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7106 "resultcp_ics01cd03g1.txt" using ($1+0.6):5 t "pG" lt 4, "" using ($1+0.6):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1
7107 set term tgif;set output "pbd-t_ics01cd0123.obj";replot;set term X11
7108 !cp pbd-t_ics01cd0123.obj ~/14iconip/iconip2014speech/draft
7109 #bytes speaker
7110 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.99,1.0);set grid/set xrange [-1.5:15.9]; s
et xrange [-0.1:1.4];
7111 plot "resultcp_ics01cd00g0.txt" using 1:2 t "pB" lt 1, "" using 1:($2):($2-$3):($2+$4) with yerrorbars
t "" pt 7 lt 1, \
7112 "resultcp_ics21cd00g0.txt" using ($1+0.2):2 t "pB" lt 2, "" using ($1+0.2):($2):($2-$3):($2+$4) with y
errorbars t "" pt 6 lt 1, \
7113 "resultcp_ics31cd00g0.txt" using ($1+0.4):2 t "pB" lt 3, "" using ($1+0.4):($2):($2-$3):($2+$4) with y
errorbars t "" pt 4 lt 1
7114 set term tgif;set output "pbs-t_ics0231cd0.obj";replot;set term X11
7115 !cp pbs-t_ics0231cd0.obj ~/14iconip/iconip2014speech/draft
7116 #bytes digits
7117 set style data l;set xtics (0,5,10,15);set ytics (0,0.5,0.8,1.0);set grid;set xrange [-1.5:15.9]; s
et xrange [-0.1:1.4];
7118 plot "resultcp_ics01cd00g0.txt" using 1:5 t "pB" lt 1, "" using 1:($5):($5-$6):($5+$7) with yerrorbars
t "" pt 7 lt 1, \
7119 "resultcp_ics01cd01g0.txt" using ($1+0.2):5 t "pB" lt 2, "" using ($1+0.2):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7120 "resultcp_ics01cd02g0.txt" using ($1+0.4):5 t "pB" lt 3, "" using ($1+0.4):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1, \
7121 "resultcp_ics01cd03g0.txt" using ($1+0.6):5 t "pB" lt 4, "" using ($1+0.6):($5):($5-$6):($5+$7) with y
errorbars t "" pt 6 lt 1
7122 set term tgif;set output "pbd-t_ics01cd0123.obj";replot;set term X11
7123 !cp pbd-t_ics01cd0123.obj ~/14iconip/iconip2014speech/draft
7124
7125 #####examination with pAsd=pAs:pad=0.95:0.96
7126 #unregistered
7127
7128 #t15 {99.2}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC3:0/5 n7000} FA=0%
7129 #t15 {91.8}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC3:1/5 n7000}
7130 #t15 {0.1}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC3:2/5 n7000}
7131 #t15 {0.0}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC3:3/5 n7000}
7132 #incorrect registered
7133 #correct registered
7134 #t15 {99.0}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC2:0/5 n7000}
7135 #t15 {90.3}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC2:1/5 n7000}
7136 #t15 {0.2}{0.0}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC2:2/5 n7000}
7137 #correct registered
7138 #t15 {99.1}{97.7}{96.9}{Ad:As:Asd for pAsd0.95:0.96 iC0:0/5 n7000} FR =3.1%
7139 #t15 {91.0}{98.2}{99.7}{Ad:As:Asd for pAsd0.95:0.96 iC0:1/5 n7000} FA=89.7%
7140 #t15 {0.2}{98.0}{0.1}{Ad:As:Asd for pAsd0.95:0.96 iC0:2/5 n7000} FA=0.1%
7141 #t15 {0.0}{97.7}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC0:3/5 n7000}
7142 #####
7143 #unregistered Bayes(gibbs:0) with pAsd0.95:0.96
7144 #t15 {98.0}{12.9}{12.7}{Ad:As:Asd for pAsd0.95:0.96 iC3:0/5 n7000}
7145 #t15 {75.8}{12.3}{9.1}{Ad:As:Asd for pAsd0.95:0.96 iC3:1/5 n7000}
7146 #t15 {54.9}{12.7}{7.0}{Ad:As:Asd for pAsd0.95:0.96 iC3:2/5 n7000}
7147 #t15 {35.5}{12.4}{4.8}{Ad:As:Asd for pAsd0.95:0.96 iC3:3/5 n7000}
7148 #incorrect registered Bayes(gibbs:0)
7149 #t15 {98.1}{0.1}{0.1}{Ad:As:Asd for pAsd0.95:0.96 iC2:0/5 n7000}
7150 #t15 {76.3}{0.2}{0.1}{Ad:As:Asd for pAsd0.95:0.96 iC2:1/5 n7000}
7151 #t15 {56.7}{0.2}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC2:2/5 n7000}
7152 #t15 {34.1}{0.1}{0.0}{Ad:As:Asd for pAsd0.95:0.96 iC2:3/5 n7000}
7153 #correct registered Bayes(gibbs:0)
7154 #t15 {97.8}{96.3}{94.7}{Ad:As:Asd for pAsd0.95:0.96 iC0:0/5 n7000} FR=5.3%
7155 #t15 {75.6}{95.8}{73.1}{Ad:As:Asd for pAsd0.95:0.96 iC0:1/5 n7000} FA=73.1%
7156 #t15 {54.5}{96.3}{52.9}{Ad:As:Asd for pAsd0.95:0.96 iC0:2/5 n7000} FA=52.9%
7157 #t15 {35.3}{95.5}{33.8}{Ad:As:Asd for pAsd0.95:0.96 iC0:3/5 n7000}
7158
7159
7160 #worst case unregistered speaker
7161 tmp/testsd.dat
```

```
7162 n343t0 0.01000 #t,pGC,pGic
7163 x0xxxxxLC0.54545 n343t1 0.01198 0.98802 #t,pGC,pGic sdp2:2 sdr1:2 lrt2 icdr0(A1R0S0)
7164 x0xxxxxLC0.99854 n343t2 0.74253 0.25747 #t,pGC,pGic sdp2:4 sdr1:4 lrt2 icdr0(A2R0S0)
7165 x0xxxxxLC0.99854 n343t3 0.94701 0.05299 #t,pGC,pGic sdp2:1 sdr1:1 lrt2 icdr0(A3R0S0)
7166 x0xxxxxLC0.99854 n343t4 0.97802 0.02198 #t,pGC,pGic sdp2:1 sdr1:1 lrt2 icdr0(A4R0S0)
7167 x0xxxxxLC0.54545 n343t5 0.95575 #t,pGC,pGic sdp2:0 sdr1:0 lrt2 icdr0(A5R0S0)
7168 x0xxxxxLC0.99854 n343t6 0.97464 0.02536 #t,pGC,pGic sdp2:5 sdr1:5 lrt2 icdr0(A6R0S0)
7169 x0xxxxxLC0.00862 n343t7 0.92055 #t,pGC,pGic sdp2:6 sdr1:6 lrt2 icdr0(A7R0S0)
7170 x0xxxxxLC0.54545 n343t8 0.89720 0.10280 #t,pGC,pGic sdp2:0 sdr1:0 lrt2 icdr0(A8R0S0)
7171 x0xxxxxLC0.99854 n343t9 0.93410 0.06590 #t,pGC,pGic sdp2:4 sdr1:4 lrt2 icdr0(A9R0S0)
7172 x0xxxxxLC0.99854 n343t10 0.95432 0.04568 #t,pGC,pGic sdp2:4 sdr1:4 lrt2 icdr0(A10R0S0)
7173 x0xxxxxLC0.99854 n343t11 0.96633 0.03367 #t,pGC,pGic sdp2:4 sdr1:4 lrt2 icdr0(A11R0S0)
7174 x0xxxxxLC0.54545 n343t12 0.96567 0.04343 #t,pGC,pGic sdp2:2 sdr1:2 lrt2 icdr0(A12R0S0)
7175 x0xxxxxLC0.99854 n343t13 0.96633 0.03367 #t,pGC,pGic sdp2:5 sdr1:5 lrt2 icdr0(A13R0S0)
7176 x0xxxxxLC0.54545 n343t14 0.96812 0.04188 #t,pGC,pGic sdp2:7 sdr1:7 lrt2 icdr0(A14R0S0)
7177 x0xxxxxLC0.99854 n343t15 0.96633 0.03367 #t,pGC,pGic sdp2:5 sdr1:5 lrt2 icdr0(A15R0S0) Accept! pGC0.96
6>pA0.900000 method->id=1
7178
7179 xxx0xxxLC0.99821 n179t15 0.90756 0.09244 #t,pGC,pGic sdp4:8 sdr10:8 lrt9 icdr70(A15R0S0) Accept! pGC0.90
8>pA0.900000 method->id=1
7180 xxx0xxxLC0.99821 n418t15 0.93690 0.06310 #t,pGC,pGic sdp4:8 sdr10:8 lrt9 icdr70(A15R0S0) Accept! pGC0.93
7>pA0.900000 method->id=1
7181 xxx0xxxLC0.99821 n884t15 0.90821 0.09179 #t,pGC,pGic sdp4:8 sdr10:8 lrt9 icdr70(A15R0S0) Accept! pGC0.90
8>pA0.900000 method->id=1
7182 xxx0xxxLC0.52899 n933t15 0.93736 0.06264 #t,pGC,pGic sdp4:8 sdr10:8 lrt6 icdr70(A15R0S0) Accept! pGC0.93
7>pA0.900000 method->id=1
7183
7184 x0xxxxxLC0.99854 n343t15 0.96633 0.03367 #t,pGC,pGic sdp2:5 sdr1:5 lrt2 icdr70(A15R0S0) Accept! pGC0.96
7249
6>pA0.900000 method->id=1 XXXX sX=1
7250
7185 OxxxxxxLC0.99838 n551t15 0.93668 0.06332 #t,pGC,pGic sdp0:5 sdr1:5 lrt4 icdr70(A15R0S0) Accept! pGC0.93
7>pA0.900000 method->id=1
7186 XxxxxxxLC0.25641 n888t15 0.90931 0.09069 #t,pGC,pGic sdp0:1 sdr1:1 lrt6 icdr70(A15R0S0) Accept! pGC0.90
9>pA0.900000 method->id=1
7187
7188 xxx0xxxLC0.99865 n165t15 0.90139 0.09861 #t,pGC,pGic sdp6:1 sdr12:1 lrt7 icdr70(A15R0S0) Accept! pGC0.90
1>pA0.900000 method->id=1
7189 xxx0xxxLC0.33333 n171t15 0.91275 0.08725 #t,pGC,pGic sdp5:3 sdr12:3 lrt2 icdr70(A15R0S0) Accept! pGC0.91
3>pA0.900000 method->id=1
7190 xxx0xxxLC0.99865 n241t15 0.96319 0.03681 #t,pGC,pGic sdp6:5 sdr12:5 lrt4 icdr70(A15R0S0) Accept! pGC0.96
3>pA0.900000 method->id=1
7191 xxx0xxxLC0.99865 n544t15 0.94908 0.05092 #t,pGC,pGic sdp6:7 sdr12:7 lrt4 icdr70(A15R0S0) Accept! pGC0.94
9>pA0.900000 method->id=1
7192 xxx0xxxLC0.01571 n833t15 0.90508 0.09492 #t,pGC,pGic sdp6:9 sdr12:9 lrt7 icdr70(A15R0S0) Accept! pGC0.90
5>pA0.900000 method->id=1
7193
7194 x0xxxxxLC0.41667 n95t15 0.91614 0.08386 #t,pGC,pGic sdp1:0 sdr14:0 lrt3 icdr70(A15R0S0) Accept! pGC0.916
>pA0.900000 method->id=1
7195 OxxxxxxLC0.99896 n126t15 0.91188 0.08812 #t,pGC,pGic sdp0:0 sdr14:0 lrt0 icdr70(A15R0S0) Accept! pGC0.91
2>pA0.900000 method->id=1
7196 OxxxxxxLC0.99896 n389t15 0.91591 0.08409 #t,pGC,pGic sdp0:4 sdr14:4 lrt0 icdr70(A15R0S0) Accept! pGC0.91
6>pA0.900000 method->id=1
7197 OxxxxxxLC0.99896 n538t15 0.95429 0.04571 #t,pGC,pGic sdp0:4 sdr14:4 lrt0 icdr70(A15R0S0) Accept! pGC0.95
4>pA0.900000 method->id=1
7198 OxxxxxxLC0.99896 n941t15 0.94626 0.05374 #t,pGC,pGic sdp0:6 sdr14:6 lrt0 icdr70(A15R0S0) Accept! pGC0.94
6>pA0.900000 method->id=1
7199
7200 x0xxxxxLC0.99928 n354t15 0.91709 0.08291 #t,pGC,pGic sdp2:2 sdr15:2 lrt6 icdr70(A15R0S0) Accept! pGC0.91
7>pA0.900000 method->id=1
7201
7202 xx0xxxxLC0.61644 n354t15 0.90875 0.09125 #t,pGC,pGic sdp2:2 sdr16:2 lrt6 icdr70(A15R0S0) Accept! pGC0.90
9>pA0.900000 method->id=1
7203 xxx0xxxLC0.99893 n786t15 0.91303 0.08697 #t,pGC,pGic sdp5:0 sdr16:0 lrt5 icdr70(A15R0S0) Accept! pGC0.91
3>pA0.900000 method->id=1
7204 xxx0xxxLC0.99893 n954t15 0.94445 0.05555 #t,pGC,pGic sdp5:9 sdr16:9 lrt5 icdr70(A15R0S0) Accept! pGC0.94
4>pA0.900000 method->id=1
7205
7206 #####
7207 #(incorrect) unregistered Bayes
7208 #t15 Asd25.36 As26.07 Ad97.76 n7000 pAsd0.50:0.96 iC3:0/5
7209 #t15 Asd20.91 As25.81 Ad80.50 n7000 pAsd0.50:0.96 iC3:1/5
7210 #t15 Asd14.97 As25.87 Ad56.30 n7000 pAsd0.50:0.96 iC3:2/5
7211 #t15 Asd8.93 As26.01 Ad35.07 n7000 pAsd0.50:0.96 iC3:3/5
7212 #incorrect registered Bayes
7213 #t15 Asd0.39 As0.44 Ad97.76 n7000 pAsd0.50:0.96 iC2:0/5
7214 #t15 Asd0.29 As0.51 Ad77.39 n7000 pAsd0.50:0.96 iC2:1/5
7215 #t15 Asd0.20 As0.61 Ad55.71 n7000 pAsd0.50:0.96 iC2:2/5
7216 #t15 Asd0.10 As0.63 Ad35.91 n7000 pAsd0.50:0.96 iC2:3/5
7217 #correct registered Bayes
7218 #t15 Asd95.16 As96.69 Ad97.60 n7000 pAsd0.50:0.96 iC0:0/5
7219 #t15 Asd78.26 As97.17 Ad79.90 n7000 pAsd0.50:0.96 iC0:1/5
7220 #t15 Asd54.10 As96.70 Ad55.71 n7000 pAsd0.50:0.96 iC0:2/5
7221 #t15 Asd33.63 As96.66 Ad34.57 n7000 pAsd0.50:0.96 iC0:3/5
```

```
7222 #incorrect unregistered speaker
7223 #t15 Asd21.09 As21.39 Ad98.77 n7000 pAsd0.50:0.96 iC3:0/5
7224 #t15 Asd19.96 As21.66 Ad92.00 n7000 pAsd0.50:0.96 iC3:1/5
7225 #t15 Asd0.01 As20.71 Ad0.10 n7000 pAsd0.50:0.96 iC3:2/5
7226 #t15 Asd0.00 As20.61 Ad0.00 n7000 pAsd0.50:0.96 iC3:3/5
7227 #incorrect registered speaker
7228 #t15 Asd0.00 As0.00 Ad99.39 n7000 pAsd0.50:0.96 iC2:0/5
7229 #t15 Asd0.01 As0.03 Ad91.29 n7000 pAsd0.50:0.96 iC2:1/5
7230 #t15 Asd0.00 As0.03 Ad0.06 n7000 pAsd0.50:0.96 iC2:2/5
7231 #t15 Asd0.00 As0.00 Ad0.00 n7000 pAsd0.50:0.96 iC2:3/5
7232 #correct registered speaker
7233 #t15 Asd98.86 As99.99 Ad98.87 n7000 pAsd0.50:0.96 iC0:0/5
7234 #t15 Asd90.53 As99.97 Ad90.56 n7000 pAsd0.50:0.96 iC0:1/5
7235 #t15 Asd0.17 Asd0.00 Ad0.17 n7000 pAsd0.50:0.96 iC0:2/5
7236 #t15 Asd0.00 As100.00 Ad0.00 n7000 pAsd0.50:0.96 iC0:3/5
7237 #correct registered speaker sX=1
7238 #t15 Asd98.20 As99.90 Ad98.20 n1000 pAsd0.50:0.96 iC0:0/5
7239 #t15 Asd88.50 As99.90 Ad88.50 n1000 pAsd0.50:0.96 iC0:1/5
7240 #t15 Asd0.20 As100.00 Ad0.20 n1000 pAsd0.50:0.96 iC0:2/5
7241 #t15 Asd0.00 As100.00 Ad0.00 n1000 pAsd0.50:0.96 iC0:3/5
7242 #incorrect registered speaker sX=-1
7243 #t15 Asd0.00 As0.00 Ad98.50 n1000 pAsd0.50:0.96 iC2:0/5
7244 #t15 Asd0.00 As0.00 Ad86.90 n1000 pAsd0.50:0.96 iC2:1/5
7245 #t15 Asd0.00 As0.00 Ad0.10 n1000 pAsd0.50:0.96 iC2:2/5
7246 #t15 Asd0.00 As0.00 Ad0.10 n1000 pAsd0.50:0.96 iC2:3/5
7247
7248 #####
7249 cat .././2012/12voicedata/allpole/ob4d:--lN40mbas2:100:1.6:1sX-1.ystat
#t36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:-1
7250 k:36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:-1
7251 #t36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:-1
7252 k:36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:-1
7253 0.986 0.987 0.013 0.014 3.855e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0
7254 0.926 0.994 0.006 0.071 1.111e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1
7255 0.971 0.989 0.011 0.029 5.659e-05 700 2 #TP,TN,FP,FN,ERR,n,txm2
7256 0.986 0.984 0.016 0.014 4.308e-05 700 3 #TP,TN,FP,FN,ERR,n,txm3
7257 0.914 0.983 0.017 0.086 1.474e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4
7258 1.000 0.995 0.005 0.000 6.803e-06 700 5 #TP,TN,FP,FN,ERR,n,txm5
7259 0.843 0.986 0.014 0.157 2.449e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6
7260 0.900 0.990 0.010 0.100 1.565e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7
7261 0.943 0.981 0.019 0.057 1.058e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8
7262 0.957 1.000 0.000 0.043 6.122e-05 700 9 #TP,TN,FP,FN,ERR,n,txm9
7263 cat .././2012/12voicedata/allpole/ob4d:--lN40mbas2:100:1.6:1sX0.ystat
#t36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:0
7264 k:36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:0
7265 0.943 1.000 0.000 0.057 8.163e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX0(TP0.900 TN1.000 ER1.000e+03 n100
)
7266 0.929 0.998 0.002 0.071 1.043e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX0(TP0.900 TN1.000 ER1.000e+03 n100
)
7267 1.000 0.989 0.011 0.000 1.587e-05 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX0(TP1.000 TN0.978 ER2.222e+04 n100
)
7268 0.929 0.987 0.013 0.071 1.202e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX0(TP0.900 TN0.978 ER1.222e+03 n100
)
7269 0.943 0.990 0.010 0.057 9.524e-05 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX0(TP0.900 TN1.000 ER1.000e+03 n100
)
7270 1.000 1.000 0.000 0.000 0.000e+00 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX0(TP1.000 TN1.000 ER0.000e+00 n100
)
7271 0.929 0.989 0.011 0.071 1.179e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX0(TP1.000 TN0.989 ER1.111e+04 n100
)
7272 0.943 0.989 0.011 0.057 9.751e-05 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX0(TP1.000 TN0.989 ER1.111e+04 n100
)
7273 0.929 0.992 0.008 0.071 1.134e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX0(TP0.800 TN0.989 ER2.111e+03 n100
)
7274 1.000 0.998 0.002 0.000 2.268e-06 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX0(TP1.000 TN1.000 ER0.000e+00 n100
)
7275 cat .././2012/12voicedata/allpole/ob4d:--lN40mbas2:100:1.6:1sX1.ystat
7276 #t36 mbas2:100:1.6:1 dlr:.././2012/12voicedata/allpole d:1 N:40 sX:1
7277 0.957 0.997 0.003 0.043 6.576e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX1(TP1.000 TN1.000 ER0.000e+00 n100
)
7278 0.986 0.995 0.005 0.014 2.721e-05 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX1(TP1.000 TN0.989 ER1.111e+04 n100
)
7279 0.957 0.987 0.013 0.043 7.937e-05 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX1(TP0.900 TN0.978 ER1.222e+03 n100
)
7280 0.929 0.994 0.006 0.071 1.111e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX1(TP0.900 TN1.000 ER1.000e+03 n100
)
7281 0.971 0.987 0.013 0.029 5.896e-05 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX1(TP1.000 TN1.000 ER0.000e+00 n100
)
7282 0.971 1.000 0.000 0.029 4.082e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX1(TP1.000 TN1.000 ER0.000e+00 n100
)
7283 0.900 0.995 0.005 0.100 1.497e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX1(TP0.900 TN1.000 ER1.000e+03 n100
)
```


7386 iCs=0;iCd=0; # test correct (registered) speaker
7387 iCs=1;iCd=0; # test incorrect registered and unregistered sx
7388 iCs=2;iCd=0; # test incorrect registered
7389 iCs=3;iCd=0; # test incorrect unregistered sx
7390 #iCs=1;iCd=1;
7391 test=test;5:1000:5{iCs}:5{iCd}: #test=test->id:test->n:test->x{iCs}test->t_iCd:th->T
7392 #
7393 cmd= speakerdigit_v3 fs=.../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX5{sx}.y fd:.../.../2012/12voicedata/allpole/ob4d:-lM40mbas2:300:1.6:1sX5{sx}.y nsDL7:10:10 pmin:0.01 yfm:1:0.9:1000 gibbs:1 b eta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdr:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pApAd:5{pA}:5{pAd} LAR:0:0:-1 test:5:1 000:5{iCs}:5{iCd}:5:15 sX:sX sX void:0"iScmd
7394
7395 #incorrect unregistered
7396 gmin=0.01 ypeknid:10 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdr:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pApAd:5:0:0.96 LAR:0:0:-1 test:5:1000:3:0:5:15 sX:sX void:0
7397 t15 pso.164u0.088um0.045Up0.164C0.407-0.998 iCO:TR0:FA0:SR0 C1000-TA0:FR1000:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dAO pD0.464u0.089um0.045Up0.164 sX=0
7398 t15 pso.164u0.088um0.045Up0.164C0.407-0.998 iCO:TR0:FA0:SR0 C1000-TA0:FR1000:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dAO pD0.662u0.135um0.130Up0.142C0.360-0.998 iCO:TR0:FA0:SR0 C1000-TA0:FR1000:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dAO pD0.662u0.135um0.130Up0.142 sX=1
7399 t15 pso.805u0.132um0.161Up0.107C0.128-0.998 iCO:TR0:FA0:SR0 C1000-TA0:FR902:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dA98 pD0.805u0.132um0.161Up0.107 sX=2
7400 t15 pso.916u0.110um0.189Up0.051C0.006-0.999 iCO:TR0:FA0:SR0 C1000-TA439:FR561:SA0 pAPAd0.5:0.96 LAR :0:0:-1 iCT3:0/5 midzv-2 dA439 pD0.916u0.110um0.189Up0.051 sX=3
7401 t15 pso.806u0.123um0.151Up0.099C0.294-0.998 iCO:TR0:FA0:SR0 C1000-TA46:FR954:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dA46 pD0.806u0.123um0.151Up0.099 sX=4
7402 t15 pso.971u0.044um0.086Up0.016C0.003-0.999 iCO:TR0:FA0:SR0 C1000-TA825:FR175:SA0 pAPAd0.5:0.96 LAR :0:0:-1 iCT3:0/5 midzv-2 dA825 pD0.971u0.044um0.086Up0.016 sX=5
7403 t15 pso.754u0.136um0.155Up0.118C0.136-0.998 iCO:TR0:FA0:SR0 C1000-TA19:FR981:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dA19 pD0.754u0.136um0.155Up0.118 sX=6
7404 t15 pso.315u0.101Um0.119Up0.088C0.001-0.675 iCO:TR0:FA0:SR0 C1000-TA0:FR1000:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dAO pD0.315u0.101Um0.119Up0.088 sX=7
7405 ##<--- bad recognition rate of digits of unregistered speakers!!!!!!!!!!!!!!!!!!!!
7406
7407 t15 pso.488u0.087Um0.044Up0.162C0.431-0.998 iCO:TR0:FA0:SR0 C1000-TA979:FR21:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dA979 pD0.488u0.087Um0.044Up0.162 digit
7408 t15 pso.176u0.114um0.067Up0.172C0.009-0.994 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midv-2 dAO pD0.488u0.087Um0.044Up0.162 speaker<-digit
7409 #incorrect registered
7410 t15 pso.397u0.012Um0.029Up0.003C0.020-0.998 iCO:TR0:FA0:SR0 C1000-TA979:FR21:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midzv-2 dA979 pD0.397u0.012Um0.029Up0.003
7411 t15 pso.015u0.012Um0.004Up0.025C0.003-0.994 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT3:0/5 midv-2 dA979 pD0.397u0.012Um0.029Up0.003
7412 #incorrect registered and unregistered
7413 t15 pso.894u0.198um0.413Up0.094C0.020-0.998 iCO:TR0:FA0:SR0 C1000-TA794:FR206:SA0 pAPAd0.5:0.96 LAR :0:0:-1 iCT1:0/5 midzv-2 dA794 pD0.894u0.198um0.413Up0.094
7414 t15 pso.047u0.078Um0.033Up0.159C0.003-0.994 iC1000=TR999:FA1:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0 :0:-1 iCT1:0/5 midlv-2 dA794 pD0.894u0.198um0.413Up0.094
7415
7416
7417
7418
7419
7420
7421 #result of (1)
7422 real9m43.510s user15m57.272s sys1m13.629s
7423 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7424 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7425 0.970 0.980 0.020 0.030 7.143e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7426 0.920 0.990 0.010 0.080 1.286e-04 700 1 #TP.TN,FP,PN,ERR,n,sm1
7427 0.930 0.972 0.028 0.070 1.405e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7428 0.910 0.977 0.023 0.090 1.619e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7429 0.950 0.973 0.027 0.050 1.095e-04 700 4 #TP.TN,FP,PN,ERR,n,sm4
7430 0.930 0.967 0.023 0.070 1.333e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7431 0.920 0.977 0.033 0.080 1.619e-04 700 6 #TP.TN,FP,PN,ERR,n,sm6
7432 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7433 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7434 0.950 0.953 0.047 0.050 1.381e-04 700 1 #TP.TN,FP,PN,ERR,n,sm1
7435 0.920 0.985 0.015 0.070 1.214e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7436 0.910 0.970 0.030 0.090 1.714e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7437 0.940 0.942 0.058 0.060 1.690e-04 700 4 #TP.TN,FP,PN,ERR,n,sm4
7438 0.970 0.960 0.040 0.030 1.000e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7439 0.930 0.972 0.028 0.070 1.405e-04 700 6 #TP.TN,FP,PN,ERR,n,sm6
7440 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7441 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7442 0.990 0.952 0.048 0.010 8.333e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7443 0.940 0.963 0.037 0.060 1.381e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7444 0.920 0.985 0.015 0.080 1.357e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7445 0.940 0.985 0.015 0.060 1.071e-04 700 4 #TP.TN,FP,PN,ERR,n,sm4

7446 0.930 0.967 0.033 0.070 1.476e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7447 0.960 0.967 0.033 0.040 1.048e-04 700 6 #TP.TN,FP,PN,ERR,n,sm6
7448 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7449 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7450 0.980 0.993 0.007 0.020 3.810e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7451 0.970 0.980 0.020 0.030 7.143e-05 700 1 #TP.TN,FP,PN,ERR,n,sm1
7452 0.940 0.945 0.055 0.060 1.670e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7453 0.940 0.985 0.015 0.060 1.071e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7454 0.970 0.972 0.028 0.030 2.234e-05 700 4 #TP.TN,FP,PN,ERR,n,sm4
7455 0.910 0.935 0.065 0.090 2.211e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7456 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7457 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7458 0.980 0.988 0.012 0.020 4.524e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7459 0.960 0.990 0.010 0.040 7.143e-05 700 1 #TP.TN,FP,PN,ERR,n,sm1
7460 0.950 0.957 0.043 0.100 2.048e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7461 0.950 0.963 0.037 0.050 1.238e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7462 0.960 0.947 0.053 0.040 1.333e-04 700 4 #TP.TN,FP,PN,ERR,n,sm4
7463 0.910 0.957 0.043 0.090 1.905e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7464 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7465 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7466 0.980 0.980 0.020 0.020 5.714e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7467 0.970 0.987 0.013 0.030 6.190e-05 700 1 #TP.TN,FP,PN,ERR,n,sm1
7468 0.960 0.985 0.015 0.040 7.857e-05 700 2 #TP.TN,FP,PN,ERR,n,sm2
7469 0.950 0.962 0.038 0.050 1.262e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7470 0.990 0.968 0.032 0.010 5.952e-05 700 4 #TP.TN,FP,PN,ERR,n,sm4
7471 0.970 0.938 0.062 0.030 1.310e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7472 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7473 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7474 0.980 0.993 0.007 0.020 3.810e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7475 0.960 0.993 0.007 0.040 6.667e-05 700 1 #TP.TN,FP,PN,ERR,n,sm1
7476 0.910 0.973 0.027 0.100 1.810e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7477 0.910 0.972 0.073 0.090 2.333e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7478 0.970 0.958 0.042 0.030 1.024e-04 700 4 #TP.TN,FP,PN,ERR,n,sm4
7479 0.920 0.965 0.035 0.080 1.643e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7480 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7481 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7482 0.970 0.985 0.015 0.030 6.429e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7483 0.960 0.995 0.005 0.040 6.429e-05 700 1 #TP.TN,FP,PN,ERR,n,sm1
7484 0.930 0.965 0.035 0.070 1.500e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7485 0.900 0.943 0.057 0.100 2.238e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7486 0.980 0.962 0.038 0.020 8.333e-05 700 4 #TP.TN,FP,PN,ERR,n,sm4
7487 0.920 0.987 0.013 0.080 1.333e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7488 cat .../2012/12voicedata/allpole/ob4s:-lM40mbas2:300:1.6:1sX-1.ystat
7489 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole s:-1 N:40 sX:-1
7490 0.970 0.980 0.020 0.030 7.143e-05 700 0 #TP.TN,FP,PN,ERR,n,sm0
7491 0.920 0.990 0.010 0.080 1.286e-04 700 1 #TP.TN,FP,PN,ERR,n,sm1
7492 0.930 0.972 0.028 0.070 1.405e-04 700 2 #TP.TN,FP,PN,ERR,n,sm2
7493 0.910 0.977 0.023 0.090 1.619e-04 700 3 #TP.TN,FP,PN,ERR,n,sm3
7494 0.950 0.973 0.027 0.050 1.095e-04 700 4 #TP.TN,FP,PN,ERR,n,sm4
7495 0.930 0.977 0.023 0.070 1.333e-04 700 5 #TP.TN,FP,PN,ERR,n,sm5
7496 0.920 0.967 0.033 0.080 1.619e-04 700 6 #TP.TN,FP,PN,ERR,n,sm6
7497 #result of (2)
7498 cat .../2012/12voicedata/allpole/ob4d:-lM40mbas2:300:1.6:1sX-1.ystat
7499 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole d:-1 N:40 sX:-1
7500 0.929 0.990 0.010 0.071 1.156e-04 700 0 #TP.TN,FP,PN,ERR,n,txm0
7501 0.943 0.994 0.006 0.057 9.070e-05 700 1 #TP.TN,FP,PN,ERR,n,txm1
7502 0.886 0.987 0.013 0.114 1.810e-04 700 2 #TP.TN,FP,PN,ERR,n,txm2
7503 0.943 0.989 0.011 0.057 7.515e-05 700 3 #TP.TN,FP,PN,ERR,n,txm3
7504 0.943 0.979 0.021 0.057 1.111e-04 700 4 #TP.TN,FP,PN,ERR,n,txm4
7505 0.900 1.000 0.000 0.100 1.429e-04 700 5 #TP.TN,FP,PN,ERR,n,txm5
7506 0.929 0.990 0.010 0.071 1.156e-04 700 6 #TP.TN,FP,PN,ERR,n,txm6
7507 0.929 0.983 0.005 0.100 1.497e-04 700 7 #TP.TN,FP,PN,ERR,n,txm7
7508 0.929 0.983 0.017 0.071 1.270e-04 700 8 #TP.TN,FP,PN,ERR,n,txm8
7509 0.986 0.997 0.003 0.014 2.494e-05 700 9 #TP.TN,FP,PN,ERR,n,txm9
7510 cat .../2012/12voicedata/allpole/ob4d:-lM40mbas2:300:1.6:1sX0.ystat
7511 #oob4speakerdigit+sx sp:fs:fs:fmk:mkk:mko:mnt:mhm:mxm tx:zero:ichi:ni:1:san:yon:go:roku:nana:hachi:kyu n tx:1:10 k:36 mbas:2:300:1.6:1 dlr:.../2012/12voicedata/allpole d:-1 N:40 sX:-1
7512 0.829 0.995 0.005 0.171 2.517e-04 700 0 #TP.TN,FP,PN,ERR,n,txm0
7513 0.886 0.989 0.011 0.114 1.791e-04 700 1 #TP.TN,FP,PN,ERR,n,txm1
7514 0.886 0.970 0.030 0.114 2.063e-04 700 2 #TP.TN,FP,PN,ERR,n,txm2
7515 0.771 0.995 0.005 0.229 3.333e-04 700 3 #TP.TN,FP,PN,ERR,n,txm3
7516 0.829 0.995 0.005 0.171 2.517e-04 700 4 #TP.TN,FP,PN,ERR,n,txm4

7516 0.757 0.968 0.032 0.243 3.923e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX0 (TP0.883 TN0.991 ER2.099e-04 n600)
)
7517 0.971 0.994 0.006 0.029 4.989e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX0 (TP0.967 TN0.993 ER6.790e-05 n600)
)
7518 0.914 0.984 0.016 0.086 1.451e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX0 (TP0.983 TN0.985 ER5.247e-05 n600)
)
7519 0.857 0.987 0.013 0.143 2.222e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX0 (TP1.000 TN0.987 ER2.160e-05 n600)
)
7520 0.814 0.990 0.010 0.186 2.789e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX0 (TP0.950 TN0.993 ER9.568e-05 n600)
)
7521 0.857 0.995 0.005 0.143 2.109e-04 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX0 (TP1.000 TN0.994 ER9.259e-06 n600)
)
7522 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX1.ystat
7523 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:1
7524 0.814 0.990 0.010 0.186 2.789e-04 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX1 (TP0.950 TN0.998 ER8.642e-05 n600)
)
7525 0.843 0.995 0.005 0.157 2.313e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX1 (TP0.967 TN0.996 ER6.173e-05 n600)
)
7526 0.914 0.984 0.016 0.086 1.451e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX1 (TP0.917 TN0.996 ER1.451e-04 n600)
)
7527 0.729 0.992 0.008 0.271 3.991e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX1 (TP0.850 TN0.991 ER2.654e-04 n600)
)
7528 0.843 0.990 0.010 0.157 2.381e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX1 (TP0.933 TN0.989 ER1.296e-04 n600)
)
7529 0.943 0.994 0.006 0.057 9.070e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX1 (TP0.983 TN0.998 ER3.086e-05 n600)
)
7530 0.829 0.975 0.025 0.171 2.812e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX1 (TP0.967 TN0.976 ER9.568e-05 n600)
)
7531 0.929 0.965 0.035 0.071 1.519e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX1 (TP0.967 TN0.985 ER8.025e-05 n600)
)
7532 0.900 0.990 0.010 0.100 1.565e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX1 (TP0.983 TN0.989 ER4.630e-05 n600)
)
7533 1.000 0.992 0.008 0.000 1.134e-05 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX1 (TP1.000 TN0.991 ER1.543e-05 n600)
)
7534 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX2.ystat
7535 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:2
7536 0.943 0.994 0.006 0.057 9.070e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX2 (TP0.950 TN0.993 ER9.568e-05 n600)
)
7537 0.929 0.986 0.014 0.071 1.224e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX2 (TP0.933 TN0.993 ER1.235e-04 n600)
)
7538 0.900 0.992 0.008 0.100 1.542e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX2 (TP0.950 TN0.993 ER9.568e-05 n600)
)
7539 0.814 0.995 0.005 0.186 2.721e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX2 (TP0.883 TN0.994 ER2.037e-04 n600)
)
7540 0.843 0.990 0.010 0.157 2.381e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX2 (TP0.883 TN0.998 ER1.975e-04 n600)
)
7541 0.957 0.998 0.002 0.043 6.349e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX2 (TP0.983 TN0.998 ER3.086e-05 n600)
)
7542 0.843 0.987 0.013 0.157 2.426e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX2 (TP0.983 TN0.985 ER5.247e-05 n600)
)
7543 0.886 0.971 0.029 0.114 2.041e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX2 (TP0.867 TN0.987 ER2.438e-04 n600)
)
7544 0.886 0.995 0.005 0.114 1.701e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX2 (TP0.967 TN0.994 ER6.481e-05 n600)
)
7545 0.986 0.997 0.003 0.014 2.494e-05 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX2 (TP1.000 TN0.996 ER6.173e-06 n600)
)
7546 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX3.ystat
7547 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:3
7548 0.914 0.997 0.003 0.086 1.270e-04 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX3 (TP0.933 TN0.998 ER1.142e-04 n600)
)
7549 0.943 0.994 0.006 0.057 9.070e-05 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX3 (TP0.950 TN0.994 ER9.259e-05 n600)
)
7550 0.900 0.995 0.005 0.100 1.497e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX3 (TP0.983 TN0.994 ER3.704e-05 n600)
)
7551 0.900 0.987 0.013 0.100 1.610e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX3 (TP0.917 TN0.993 ER1.512e-04 n600)
)
7552 0.871 0.984 0.016 0.129 2.063e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX3 (TP0.900 TN0.994 ER1.759e-04 n600)
)
7553 0.971 0.995 0.005 0.029 4.762e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX3 (TP0.983 TN0.994 ER3.704e-05 n600)
)
7554 0.886 0.989 0.011 0.114 1.791e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX3 (TP1.000 TN0.991 ER1.543e-05 n600)
)
7555 0.800 0.995 0.005 0.200 2.925e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX3 (TP0.917 TN0.994 ER1.481e-04 n600)
)
7556 0.843 0.994 0.006 0.157 2.336e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX3 (TP0.967 TN0.994 ER6.481e-05 n600)
)
7557 0.986 0.997 0.003 0.014 2.494e-05 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX3 (TP0.983 TN0.998 ER3.086e-05 n600)
)
7558 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX4.ystat

7559 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:4
7560 0.871 0.998 0.002 0.129 1.859e-04 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX4 (TP1.000 TN1.000 ER0.000e+00 n600)
)
7561 0.943 0.992 0.008 0.057 9.297e-05 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX4 (TP0.933 TN0.994 ER1.204e-04 n600)
)
7562 0.914 0.994 0.006 0.086 1.315e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX4 (TP0.967 TN0.993 ER6.790e-05 n600)
)
7563 0.800 0.990 0.010 0.200 2.993e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX4 (TP0.933 TN0.989 ER1.296e-04 n600)
)
7564 0.843 0.986 0.014 0.157 2.449e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX4 (TP0.917 TN0.996 ER1.451e-04 n600)
)
7565 0.871 1.000 0.000 0.129 1.837e-04 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX4 (TP1.000 TN1.000 ER0.000e+00 n600)
)
7566 0.971 0.968 0.032 0.029 8.617e-05 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX4 (TP0.983 TN0.991 ER4.321e-05 n600)
)
7567 0.743 0.989 0.011 0.257 3.832e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX4 (TP0.867 TN0.987 ER2.438e-04 n600)
)
7568 0.871 0.978 0.022 0.129 2.154e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX4 (TP0.950 TN0.993 ER9.568e-05 n600)
)
7569 0.986 0.997 0.003 0.014 2.494e-05 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX4 (TP0.983 TN0.996 ER3.395e-05 n600)
)
7570 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX5.ystat
7571 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:5
7572 0.971 0.998 0.002 0.029 4.308e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX5 (TP0.967 TN0.998 ER5.864e-05 n600)
)
7573 0.886 0.994 0.006 0.114 1.723e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX5 (TP0.933 TN0.994 ER1.204e-04 n600)
)
7574 0.986 0.989 0.011 0.014 3.628e-05 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX5 (TP1.000 TN0.994 ER9.259e-06 n600)
)
7575 0.871 0.989 0.011 0.129 1.995e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX5 (TP0.917 TN0.991 ER1.543e-04 n600)
)
7576 0.886 0.992 0.008 0.114 1.746e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX5 (TP0.950 TN0.991 ER9.877e-05 n600)
)
7577 0.986 0.994 0.006 0.014 2.948e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX5 (TP0.983 TN0.998 ER3.086e-05 n600)
)
7578 0.914 0.987 0.013 0.086 1.406e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX5 (TP0.967 TN0.985 ER8.025e-05 n600)
)
7579 0.914 0.992 0.008 0.086 1.338e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX5 (TP0.917 TN0.994 ER1.481e-04 n600)
)
7580 0.886 0.995 0.005 0.114 1.701e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX5 (TP0.950 TN0.994 ER9.259e-05 n600)
)
7581 1.000 1.000 0.000 0.000 0.000e+00 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX5 (TP1.000 TN1.000 ER0.000e+00 n600)
)
7582 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX6.ystat
7583 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:6
7584 0.986 0.992 0.008 0.014 3.175e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX6 (TP0.983 TN0.994 ER3.704e-05 n600)
)
7585 0.829 0.998 0.002 0.171 2.472e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX6 (TP0.917 TN1.000 ER1.389e-04 n600)
)
7586 0.914 0.990 0.010 0.086 1.361e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX6 (TP1.000 TN0.994 ER9.259e-06 n600)
)
7587 0.857 0.992 0.008 0.143 2.154e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX6 (TP0.900 TN0.991 ER1.821e-04 n600)
)
7588 0.843 0.984 0.016 0.157 2.472e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX6 (TP0.950 TN0.993 ER9.568e-05 n600)
)
7589 0.986 0.998 0.002 0.014 2.268e-05 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX6 (TP1.000 TN0.998 ER3.086e-06 n600)
)
7590 0.857 0.987 0.013 0.143 2.222e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6 sX6 (TP0.967 TN0.991 ER7.099e-05 n600)
)
7591 0.800 0.987 0.013 0.200 3.039e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7 sX6 (TP0.850 TN0.991 ER2.654e-04 n600)
)
7592 0.857 0.990 0.010 0.143 2.177e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8 sX6 (TP0.983 TN0.989 ER4.630e-05 n600)
)
7593 0.986 0.997 0.003 0.014 2.494e-05 700 9 #TP,TN,FP,FN,ERR,n,txm9 sX6 (TP0.983 TN1.000 ER2.778e-05 n600)
)
7594 cat .././2012/12voicedata/allpole/ooB4d:-lN40mbas2:300:1.6:1sX7.ystat
7595 #oob4speakerdigit+sx sp:fhs:fms:nkk:mko:mnt:imh:myt tx:zero:ichi:ni: san:yon:go:roku:nana:hachi:kyu n
txi:10 k:36 mbas:2:300:1.6:1 dir:.././2012/12voicedata/allpole d:-1 N:40 sX:7
7596 0.929 0.990 0.010 0.071 1.156e-04 700 0 #TP,TN,FP,FN,ERR,n,txm0 sX7 (TP0.929 TN0.990 ER1.156e-04 n700)
)
7597 0.943 0.994 0.006 0.057 9.070e-05 700 1 #TP,TN,FP,FN,ERR,n,txm1 sX7 (TP0.943 TN0.994 ER9.070e-05 n700)
)
7598 0.886 0.987 0.013 0.114 1.814e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2 sX7 (TP0.886 TN0.987 ER1.814e-04 n700)
)
7599 0.943 0.989 0.011 0.057 9.751e-05 700 3 #TP,TN,FP,FN,ERR,n,txm3 sX7 (TP0.943 TN0.989 ER9.751e-05 n700)
)
7600 0.943 0.979 0.021 0.057 1.111e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4 sX7 (TP0.943 TN0.979 ER1.111e-04 n700)
)
7601 0.900 1.000 0.000 0.100 1.429e-04 700 5 #TP,TN,FP,FN,ERR,n,txm5 sX7 (TP0.900 TN1.000 ER1.429e-04 n700)

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)
7602 0.929 0.990 0.010 0.071 1.156e-04 700 6 #TP, TN, FP, FN, ERR, n, txxm6 sX7 (TP0.929 TN0.990 ER1.156e-04 n700
)
7603 0.900 0.995 0.005 0.100 1.497e-04 700 7 #TP, TN, FP, FN, ERR, n, txxm7 sX7 (TP0.900 TN0.995 ER1.497e-04 n700
)
7604 0.929 0.983 0.017 0.071 1.270e-04 700 8 #TP, TN, FP, FN, ERR, n, txxm8 sX7 (TP0.929 TN0.983 ER1.270e-04 n700
)
7605 0.986 0.997 0.003 0.014 2.494e-05 700 9 #TP, TN, FP, FN, ERR, n, txxm9 sX7 (TP0.986 TN0.997 ER2.494e-05 n700
)
7606
7607 oob4speakerdigit+sx sp:fhs:fms:mkk:mmt:mmh:mytm tx:zero:ichi:n1:san:yon:go:roku:nana:hachi:kyu nt
xi:l0 k:36 mbas:2:300:1.6:1 dir:../../2012/12voicedata/allpole sdi:-1 N:40 sX:0
7608 cat ../../2012/12voicedata/allpole/cob4sd:-lN40mbas2:300:1.6:1sx3.ystat
7609 #oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mmt:mmh:mytm tx:zero:ichi:n1:san:yon:go:roku:nana:hachi:kyu n
tx:l:l0 k:36 mbas:2:300:1.6:1 dir:../../2012/12voicedata/allpole sdi:-1 N:40 sX:0
7610 0.900 0.999 0.001 0.100 1.449e-04 700 1 0 #TP, TN, FP, FN, ERR, n, sm1 txxm0 sX0 (TP0.900 TN0.998 ER1.695e-0
4 n600)
7611 0.800 0.996 0.004 0.200 2.919e-04 700 1 1 #TP, TN, FP, FN, ERR, n, sm1 txxm1 sX0 (TP0.800 TN0.995 ER3.418e-0
4 n600)
7612 0.900 0.996 0.004 0.100 1.491e-04 700 1 2 #TP, TN, FP, FN, ERR, n, sm1 txxm2 sX0 (TP0.900 TN0.997 ER1.723e-0
4 n600)
7613 0.900 1.000 0.000 0.100 1.429e-04 700 1 3 #TP, TN, FP, FN, ERR, n, sm1 txxm3 sX0 (TP0.900 TN1.000 ER1.667e-0
4 n600)
7614 0.800 0.996 0.004 0.200 2.919e-04 700 1 4 #TP, TN, FP, FN, ERR, n, sm1 txxm4 sX0 (TP0.800 TN0.995 ER3.418e-0
4 n600)
7615 1.000 0.984 0.016 0.000 2.277e-05 700 1 5 #TP, TN, FP, FN, ERR, n, sm1 txxm5 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7616 1.000 0.999 0.001 0.000 2.070e-06 700 1 6 #TP, TN, FP, FN, ERR, n, sm1 txxm6 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7617 0.800 0.996 0.004 0.200 2.919e-04 700 1 7 #TP, TN, FP, FN, ERR, n, sm1 txxm7 sX0 (TP0.800 TN0.995 ER3.418e-0
4 n600)
7618 0.900 1.000 0.000 0.100 1.429e-04 700 1 8 #TP, TN, FP, FN, ERR, n, sm1 txxm8 sX0 (TP0.900 TN1.000 ER1.667e-0
4 n600)
7619 1.000 1.000 0.000 0.000 0.000e+00 700 1 9 #TP, TN, FP, FN, ERR, n, sm1 txxm9 sX0 (TP1.000 TN1.000 ER0.000e+0
4 n600)
7620 0.900 1.000 0.000 0.100 1.429e-04 700 2 0 #TP, TN, FP, FN, ERR, n, sm2 txxm0 sX0 (TP0.900 TN1.000 ER1.667e-0
4 n600)
7621 0.900 0.996 0.004 0.100 1.491e-04 700 2 1 #TP, TN, FP, FN, ERR, n, sm2 txxm1 sX0 (TP0.900 TN0.995 ER1.751e-0
4 n600)
7622 1.000 0.991 0.009 0.000 1.242e-05 700 2 2 #TP, TN, FP, FN, ERR, n, sm2 txxm2 sX0 (TP1.000 TN0.990 ER1.695e-0
5 n600)
7623 0.900 0.997 0.003 0.100 1.470e-04 700 2 3 #TP, TN, FP, FN, ERR, n, sm2 txxm3 sX0 (TP0.900 TN0.997 ER1.723e-0
4 n600)
7624 1.000 0.996 0.004 0.000 6.211e-06 700 2 4 #TP, TN, FP, FN, ERR, n, sm2 txxm4 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7625 1.000 0.997 0.003 0.000 4.141e-06 700 2 5 #TP, TN, FP, FN, ERR, n, sm2 txxm5 sX0 (TP1.000 TN0.997 ER5.650e-0
6 n600)
7626 0.900 1.000 0.000 0.100 1.429e-04 700 2 6 #TP, TN, FP, FN, ERR, n, sm2 txxm6 sX0 (TP0.900 TN1.000 ER1.667e-0
4 n600)
7627 0.900 1.000 0.000 0.100 1.429e-04 700 2 7 #TP, TN, FP, FN, ERR, n, sm2 txxm7 sX0 (TP0.900 TN1.000 ER1.667e-0
4 n600)
7628 0.900 1.000 0.000 0.100 1.429e-04 700 2 8 #TP, TN, FP, FN, ERR, n, sm2 txxm8 sX0 (TP0.900 TN1.000 ER1.667e-0
4 n600)
7629 1.000 0.997 0.003 0.000 4.141e-06 700 2 9 #TP, TN, FP, FN, ERR, n, sm2 txxm9 sX0 (TP1.000 TN0.997 ER5.650e-0
6 n600)
7630 0.800 1.000 0.000 0.200 2.857e-04 700 3 0 #TP, TN, FP, FN, ERR, n, sm3 txxm0 sX0 (TP0.800 TN1.000 ER3.333e-0
4 n600)
7631 1.000 1.000 0.000 0.000 0.000e+00 700 3 1 #TP, TN, FP, FN, ERR, n, sm3 txxm1 sX0 (TP1.000 TN1.000 ER0.000e+0
0 n600)
7632 1.000 0.996 0.004 0.000 6.211e-06 700 3 2 #TP, TN, FP, FN, ERR, n, sm3 txxm2 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7633 1.000 0.999 0.001 0.000 2.070e-06 700 3 3 #TP, TN, FP, FN, ERR, n, sm3 txxm3 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7634 0.900 0.996 0.004 0.100 1.491e-04 700 3 4 #TP, TN, FP, FN, ERR, n, sm3 txxm4 sX0 (TP0.900 TN0.997 ER1.723e-0
4 n600)
7635 0.900 0.999 0.001 0.100 1.449e-04 700 3 5 #TP, TN, FP, FN, ERR, n, sm3 txxm5 sX0 (TP0.900 TN0.998 ER1.695e-0
4 n600)
7636 0.900 0.994 0.006 0.100 1.511e-04 700 3 6 #TP, TN, FP, FN, ERR, n, sm3 txxm6 sX0 (TP0.900 TN0.993 ER1.780e-0
4 n600)
7637 1.000 0.994 0.006 0.000 8.282e-06 700 3 7 #TP, TN, FP, FN, ERR, n, sm3 txxm7 sX0 (TP1.000 TN0.993 ER1.130e-0
5 n600)
7638 1.000 0.996 0.004 0.000 6.211e-06 700 3 8 #TP, TN, FP, FN, ERR, n, sm3 txxm8 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7639 0.800 1.000 0.000 0.200 2.857e-04 700 3 9 #TP, TN, FP, FN, ERR, n, sm3 txxm9 sX0 (TP0.800 TN1.000 ER3.333e-0
4 n600)
7640 1.000 0.999 0.001 0.000 2.070e-06 700 4 0 #TP, TN, FP, FN, ERR, n, sm4 txxm0 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7641 0.800 0.994 0.006 0.200 2.940e-04 700 4 1 #TP, TN, FP, FN, ERR, n, sm4 txxm1 sX0 (TP0.800 TN0.993 ER3.446e-0
4 n600)
7642 1.000 0.981 0.019 0.000 2.692e-05 700 4 2 #TP, TN, FP, FN, ERR, n, sm4 txxm2 sX0 (TP1.000 TN0.993 ER1.130e-0
5 n600)
7643 1.000 0.999 0.001 0.000 2.070e-06 700 4 3 #TP, TN, FP, FN, ERR, n, sm4 txxm3 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
```

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6 n600)
7644 0.700 0.988 0.012 0.300 4.451e-04 700 4 4 #TP, TN, FP, FN, ERR, n, sm4 txxm4 sX0 (TP0.700 TN0.990 ER5.169e-0
4 n600)
7645 0.900 0.999 0.001 0.100 1.449e-04 700 4 5 #TP, TN, FP, FN, ERR, n, sm4 txxm5 sX0 (TP0.900 TN0.998 ER1.695e-0
4 n600)
7646 1.000 0.990 0.010 0.000 1.449e-05 700 4 6 #TP, TN, FP, FN, ERR, n, sm4 txxm6 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7647 0.800 0.997 0.003 0.200 2.899e-04 700 4 7 #TP, TN, FP, FN, ERR, n, sm4 txxm7 sX0 (TP0.800 TN0.997 ER3.390e-0
4 n600)
7648 1.000 0.999 0.001 0.000 2.070e-06 700 4 8 #TP, TN, FP, FN, ERR, n, sm4 txxm8 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7649 1.000 1.000 0.000 0.000 0.000e+00 700 4 9 #TP, TN, FP, FN, ERR, n, sm4 txxm9 sX0 (TP1.000 TN1.000 ER0.000e+0
0 n600)
7650 0.900 0.999 0.001 0.100 1.449e-04 700 5 0 #TP, TN, FP, FN, ERR, n, sm5 txxm0 sX0 (TP0.900 TN0.998 ER1.695e-0
4 n600)
7651 1.000 0.996 0.004 0.000 6.211e-06 700 5 1 #TP, TN, FP, FN, ERR, n, sm5 txxm1 sX0 (TP1.000 TN0.997 ER5.650e-0
6 n600)
7652 1.000 0.999 0.001 0.000 2.070e-06 700 5 2 #TP, TN, FP, FN, ERR, n, sm5 txxm2 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7653 1.000 0.991 0.009 0.000 1.242e-05 700 5 3 #TP, TN, FP, FN, ERR, n, sm5 txxm3 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7654 1.000 0.996 0.004 0.000 6.211e-06 700 5 4 #TP, TN, FP, FN, ERR, n, sm5 txxm4 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7655 1.000 0.999 0.001 0.000 2.070e-06 700 5 5 #TP, TN, FP, FN, ERR, n, sm5 txxm5 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7656 1.000 0.996 0.004 0.000 6.211e-06 700 5 6 #TP, TN, FP, FN, ERR, n, sm5 txxm6 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7657 0.900 0.996 0.004 0.100 1.491e-04 700 5 7 #TP, TN, FP, FN, ERR, n, sm5 txxm7 sX0 (TP0.900 TN0.995 ER1.751e-0
4 n600)
7658 0.800 0.997 0.003 0.200 2.899e-04 700 5 8 #TP, TN, FP, FN, ERR, n, sm5 txxm8 sX0 (TP0.800 TN0.997 ER3.390e-0
4 n600)
7659 0.900 0.994 0.006 0.100 1.511e-04 700 5 9 #TP, TN, FP, FN, ERR, n, sm5 txxm9 sX0 (TP0.900 TN0.993 ER1.780e-0
4 n600)
7660 1.000 0.997 0.003 0.000 4.141e-06 700 6 0 #TP, TN, FP, FN, ERR, n, sm6 txxm0 sX0 (TP1.000 TN0.997 ER5.650e-0
6 n600)
7661 1.000 0.996 0.004 0.000 6.211e-06 700 6 1 #TP, TN, FP, FN, ERR, n, sm6 txxm1 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7662 1.000 1.000 0.000 0.000 0.000e+00 700 6 2 #TP, TN, FP, FN, ERR, n, sm6 txxm2 sX0 (TP1.000 TN1.000 ER0.000e+0
0 n600)
7663 0.700 1.000 0.000 0.300 4.286e-04 700 6 3 #TP, TN, FP, FN, ERR, n, sm6 txxm3 sX0 (TP0.700 TN1.000 ER5.000e-0
4 n600)
7664 0.800 0.999 0.001 0.200 2.878e-04 700 6 4 #TP, TN, FP, FN, ERR, n, sm6 txxm4 sX0 (TP0.800 TN0.998 ER3.362e-0
4 n600)
7665 1.000 0.996 0.004 0.000 6.211e-06 700 6 5 #TP, TN, FP, FN, ERR, n, sm6 txxm5 sX0 (TP1.000 TN0.995 ER8.475e-0
6 n600)
7666 1.000 0.994 0.006 0.000 8.282e-06 700 6 6 #TP, TN, FP, FN, ERR, n, sm6 txxm6 sX0 (TP1.000 TN0.993 ER1.130e-0
5 n600)
7667 1.000 0.997 0.003 0.000 4.141e-06 700 6 7 #TP, TN, FP, FN, ERR, n, sm6 txxm7 sX0 (TP1.000 TN0.997 ER5.650e-0
6 n600)
7668 1.000 0.999 0.001 0.000 2.070e-06 700 6 8 #TP, TN, FP, FN, ERR, n, sm6 txxm8 sX0 (TP1.000 TN0.998 ER2.825e-0
6 n600)
7669 0.900 0.999 0.001 0.100 1.449e-04 700 6 9 #TP, TN, FP, FN, ERR, n, sm6 txxm9 sX0 (TP0.900 TN0.998 ER1.695e-0
4 n600)
7670
7671 #####
7672 20140324
7673 [1] oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mmt:mmh:mytm tx:zero:ichi:n1:san:yon:go:roku:nana:hachi:
kyu ntx:l:10 k:36 mbas:2:10:1.6:1 dir:../../2012/12voicedata/allpole si:-1 N:40 sX:3
7674 #修正エッジ
7675 #time oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mmt:mmh:mytm tx:zero:ichi:n1:san:yon:go:roku:nana:hachi:
7676 #result with rm result-ensrs2ge/tmp/*
7677 #real5m13.994s user4m30.077s sys0m13.337s with rm result-ensrs2ge/tmp/*
7678 #real5m12.825s user4m29.161s sys0m12.469s with copy pred.dat files
7679 #real5m8.242s user4m24.089s sys0m13.205s without anything
7680 #cat ../../12voicedata/allpole/oob4s:-lN40mbas2:10:1.6:1sx3.ystat
7681
7682 #time oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mmt:mmh:mytm tx:zero:ichi:n1:san:yon:go:roku:nana:hachi:
kyu ntx:l:10 k:36 mbas:2:10:1.6:1 dir:../../2012/12voicedata/allpole si:-1 N:40 sX:3
7683 #0.960 0.987 0.013 0.040 7.619e-05 700 0 #TP, TN, FP, FN, ERR, n, sm0 sX3 (TP0.960 TN0.988 ER8.667e-05 n600
)
7684 #0.950 0.998 0.002 0.050 7.381e-05 700 1 #TP, TN, FP, FN, ERR, n, sm1 sX3 (TP0.950 TN0.998 ER8.667e-05 n600
)
7685 #0.970 0.963 0.037 0.030 9.524e-05 700 2 #TP, TN, FP, FN, ERR, n, sm2 sX3 (TP0.970 TN0.986 ER7.333e-05 n600
)
7686 #0.950 0.977 0.023 0.050 1.048e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 sX3 (TP0.950 TN0.996 ER9.000e-05 n600
)
7687 #0.980 0.933 0.067 0.020 1.238e-04 700 5 #TP, TN, FP, FN, ERR, n, sm5 sX3 (TP0.980 TN0.976 ER7.333e-05 n600
)
7688 #0.950 0.972 0.028 0.050 1.119e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 sX3 (TP0.950 TN0.984 ER1.100e-04 n600
)
7689 #mv ../../12voicedata/allpole/oob4s:-lN40mbas2:10:1.6:1sx3.y ../../12voicedata/allpole/oob4s:-lN40mbas2:10
```

```
1.6:1sx3-1.y
7691 修正後
7692 (1)
7693 cat ../12voicedata/allpole/ooB4s:-lN40mbas2:300:1.6:1sx0.ystat
7694 #oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni
tx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole s:-1 N:40 sx:0
7695 0.960 0.953 0.047 0.050 1.381e-04 700 1 #TP,TN,FP,FN,ERR,n,sm1
7696 0.930 0.985 0.015 0.070 1.214e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
7697 0.910 0.970 0.030 0.090 1.714e-04 700 3 #TP,TN,FP,FN,ERR,n,sm3
7698 0.940 0.942 0.058 0.060 1.690e-04 700 4 #TP,TN,FP,FN,ERR,n,sm4
7699 0.970 0.960 0.040 0.030 1.000e-04 700 5 #TP,TN,FP,FN,ERR,n,sm5
7700 0.930 0.972 0.028 0.070 1.405e-04 700 6 #TP,TN,FP,FN,ERR,n,sm6
7701 cat ../12voicedata/allpole/ooB4s:-lN40mbas2:300:1.6:1sx1.ystat
7702 #oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni
tx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole s:-1 N:40 sx:1
7703 0.900 0.952 0.048 0.010 8.333e-05 700 0 #TP,TN,FP,FN,ERR,n,sm1
7704 0.940 0.963 0.037 0.060 1.361e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
7705 0.920 0.985 0.015 0.080 1.357e-04 700 3 #TP,TN,FP,FN,ERR,n,sm3
7706 0.940 0.985 0.015 0.060 1.071e-04 700 4 #TP,TN,FP,FN,ERR,n,sm4
7707 0.930 0.967 0.033 0.070 1.474e-04 700 5 #TP,TN,FP,FN,ERR,n,sm5
7708 0.960 0.967 0.033 0.040 1.048e-04 700 6 #TP,TN,FP,FN,ERR,n,sm6
7709 cat ../12voicedata/allpole/ooB4s:-lN40mbas2:300:1.6:1sx2.ystat
7710 #/home/kuro/sotu/2013/can2b/oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni:san:y
on:go:roku:nana:hachi:kyu ntx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole s:-1 N:40 sx:2
7711 0.980 0.993 0.007 0.020 3.810e-05 700 0 #TP,TN,FP,FN,ERR,n,sm0
7712 0.970 0.980 0.020 0.030 7.143e-05 700 1 #TP,TN,FP,FN,ERR,n,sm1
7713 0.940 0.945 0.055 0.060 1.643e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
7714 0.940 0.985 0.015 0.060 1.071e-04 700 3 #TP,TN,FP,FN,ERR,n,sm3
7715 0.970 0.972 0.028 0.030 8.333e-05 700 4 #TP,TN,FP,FN,ERR,n,sm4
7716 0.910 0.935 0.065 0.090 2.214e-04 700 5 #TP,TN,FP,FN,ERR,n,sm5
7717 at ../12voicedata/allpole/ooB4s:-lN40mbas2:300:1.6:1sx3.ystat
7718 #/home/kuro/sotu/2013/can2b/oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni:san:y
on:go:roku:nana:hachi:kyu ntx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole s:-1 N:40 sx:3
7719 0.980 0.988 0.012 0.020 4.524e-05 700 0 #TP,TN,FP,FN,ERR,n,sm0
7720 0.960 0.990 0.010 0.040 7.143e-05 700 1 #TP,TN,FP,FN,ERR,n,sm1
7721 0.900 0.957 0.043 0.100 2.048e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
7722 0.950 0.963 0.037 0.050 1.238e-04 700 3 #TP,TN,FP,FN,ERR,n,sm3
7723 0.960 0.947 0.053 0.040 1.333e-04 700 4 #TP,TN,FP,FN,ERR,n,sm4
7724 0.910 0.957 0.043 0.090 1.905e-04 700 5 #TP,TN,FP,FN,ERR,n,sm5
7725 #####
7726 20140123 text-prompted speaker verification
7727 (1) CAN2による学習と予測
7728 oob4speakerdigit+sx.c
7729 loc4では認識率が低すぎず → out-of-bagを導入 s \in s についてはout-of-bagで予測, s = sX Ntot\in s
7730 についてはsを学習したネットwegbagging予測
7731 (out-of-bagがなぜいいのかは分からない?)
7732
7733 time oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:k
yu ntx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole s:-1 N:40 sx:0
7734 kuro@kurolab-VB:~/sotu/2013/can2b kuro@kurolab-VB:~/sotu/2013/can2b$ cat ../12voicedata/allpole/oo
B4s:-lN40mbas2:300:1.6:1sx0.ystat
7735 #oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu n
tx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole s:-1 N:40 sx:0
7736 0.941 0.953 0.047 0.059 1.516e-04 700 1 #TP,TN,FP,FN,ERR,n,sm1
7737 0.921 0.985 0.015 0.079 1.346e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
7738 0.910 0.970 0.030 0.099 1.844e-04 700 3 #TP,TN,FP,FN,ERR,n,sm3
7739 0.931 0.942 0.058 0.069 1.825e-04 700 4 #TP,TN,FP,FN,ERR,n,sm4
7740 0.960 0.962 0.040 0.040 1.138e-04 700 5 #TP,TN,FP,FN,ERR,n,sm5
7741 0.931 0.970 0.028 0.069 1.396e-04 700 6 #TP,TN,FP,FN,ERR,n,sm6
7742 real63ml3.461s user49ml1.484s sys8m36.960s
7743 kuro@kurolab-VB:~/sotu/2013/can2b$ kuro@kurolab-VB:~/sotu/2013/can2b$ cat ../12voicedata/allpole/oo
B4s:-lN40mbas2:300:1.6:1sx0.ystat
7744 #oob4speakerdigit+sx sp:fhs:fms:mkk:mko:mnt:mmh:mym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu n
tx:i:10 k:36 mbas:2:300:1.6:1 dlr:../12voicedata/allpole d:-1 N:40 sx:0
7745 0.951 0.995 0.005 0.049 7.696e-05 700 0 #TP,TN,FP,FN,ERR,n,txm0
7746 0.918 0.980 0.020 0.082 1.462e-04 700 1 #TP,TN,FP,FN,ERR,n,txm1
7747 0.902 0.961 0.039 0.098 1.964e-04 700 2 #TP,TN,FP,FN,ERR,n,txm2
7748 0.885 0.995 0.005 0.115 1.706e-04 700 3 #TP,TN,FP,FN,ERR,n,txm3
7749 0.869 0.969 0.031 0.131 2.321e-04 700 4 #TP,TN,FP,FN,ERR,n,txm4
7750 0.951 0.978 0.022 0.049 1.016e-04 700 5 #TP,TN,FP,FN,ERR,n,txm5
7751 0.918 0.980 0.020 0.082 1.462e-04 700 6 #TP,TN,FP,FN,ERR,n,txm6
7752 0.902 0.961 0.039 0.098 1.964e-04 700 7 #TP,TN,FP,FN,ERR,n,txm7
7753 0.885 0.995 0.005 0.115 1.706e-04 700 8 #TP,TN,FP,FN,ERR,n,txm8
7754 0.869 0.969 0.031 0.131 2.321e-04 700 9 #TP,TN,FP,FN,ERR,n,txm9
7755 0.951 0.978 0.022 0.049 1.016e-04 700 10 #TP,TN,FP,FN,ERR,n,txm10
7756 0.918 0.980 0.020 0.082 1.462e-04 700 11 #TP,TN,FP,FN,ERR,n,txm11
7757 0.902 0.961 0.039 0.098 1.964e-04 700 12 #TP,TN,FP,FN,ERR,n,txm12
7758 0.885 0.995 0.005 0.115 1.706e-04 700 13 #TP,TN,FP,FN,ERR,n,txm13
7759 0.869 0.969 0.031 0.131 2.321e-04 700 14 #TP,TN,FP,FN,ERR,n,txm14
7760 0.951 0.978 0.022 0.049 1.016e-04 700 15 #TP,TN,FP,FN,ERR,n,txm15
7761 0.918 0.980 0.020 0.082 1.462e-04 700 16 #TP,TN,FP,FN,ERR,n,txm16
7762 0.902 0.961 0.039 0.098 1.964e-04 700 17 #TP,TN,FP,FN,ERR,n,txm17
7763 0.885 0.995 0.005 0.115 1.706e-04 700 18 #TP,TN,FP,FN,ERR,n,txm18
7764 0.869 0.969 0.031 0.131 2.321e-04 700 19 #TP,TN,FP,FN,ERR,n,txm19
7765 0.951 0.978 0.022 0.049 1.016e-04 700 20 #TP,TN,FP,FN,ERR,n,txm20
7766 0.918 0.980 0.020 0.082 1.462e-04 700 21 #TP,TN,FP,FN,ERR,n,txm21
7767 0.902 0.961 0.039 0.098 1.964e-04 700 22 #TP,TN,FP,FN,ERR,n,txm22
7768 0.885 0.995 0.005 0.115 1.706e-04 700 23 #TP,TN,FP,FN,ERR,n,txm23
7769 0.869 0.969 0.031 0.131 2.321e-04 700 24 #TP,TN,FP,FN,ERR,n,txm24
7770 0.951 0.978 0.022 0.049 1.016e-04 700 25 #TP,TN,FP,FN,ERR,n,txm25
7771 0.918 0.980 0.020 0.082 1.462e-04 700 26 #TP,TN,FP,FN,ERR,n,txm26
7772 0.902 0.961 0.039 0.098 1.964e-04 700 27 #TP,TN,FP,FN,ERR,n,txm27
7773 0.885 0.995 0.005 0.115 1.706e-04 700 28 #TP,TN,FP,FN,ERR,n,txm28
7774 0.869 0.969 0.031 0.131 2.321e-04 700 29 #TP,TN,FP,FN,ERR,n,txm29
7775 0.951 0.978 0.022 0.049 1.016e-04 700 30 #TP,TN,FP,FN,ERR,n,txm30
7776 0.918 0.980 0.020 0.082 1.462e-04 700 31 #TP,TN,FP,FN,ERR,n,txm31
7777 0.902 0.961 0.039 0.098 1.964e-04 700 32 #TP,TN,FP,FN,ERR,n,txm32
7778 0.885 0.995 0.005 0.115 1.706e-04 700 33 #TP,TN,FP,FN,ERR,n,txm33
7779 0.869 0.969 0.031 0.131 2.321e-04 700 34 #TP,TN,FP,FN,ERR,n,txm34
7780 0.951 0.978 0.022 0.049 1.016e-04 700 35 #TP,TN,FP,FN,ERR,n,txm35
7781 0.918 0.980 0.020 0.082 1.462e-04 700 36 #TP,TN,FP,FN,ERR,n,txm36
7782 0.902 0.961 0.039 0.098 1.964e-04 700 37 #TP,TN,FP,FN,ERR,n,txm37
7783 0.885 0.995 0.005 0.115 1.706e-04 700 38 #TP,TN,FP,FN,ERR,n,txm38
7784 0.869 0.969 0.031 0.131 2.321e-04 700 39 #TP,TN,FP,FN,ERR,n,txm39
7785 0.951 0.978 0.022 0.049 1.016e-04 700 40 #TP,TN,FP,FN,ERR,n,txm40
7786 0.918 0.980 0.020 0.082 1.462e-04 700 41 #TP,TN,FP,FN,ERR,n,txm41
7787 0.902 0.961 0.039 0.098 1.964e-04 700 42 #TP,TN,FP,FN,ERR,n,txm42
7788 0.885 0.995 0.005 0.115 1.706e-04 700 43 #TP,TN,FP,FN,ERR,n,txm43
7789 0.869 0.969 0.031 0.131 2.321e-04 700 44 #TP,TN,FP,FN,ERR,n,txm44
7790 0.951 0.978 0.022 0.049 1.016e-04 700 45 #TP,TN,FP,FN,ERR,n,txm45
7791 0.918 0.980 0.020 0.082 1.462e-04 700 46 #TP,TN,FP,FN,ERR,n,txm46
7792 0.902 0.961 0.039 0.098 1.964e-04 700 47 #TP,TN,FP,FN,ERR,n,txm47
7793 0.885 0.995 0.005 0.115 1.706e-04 700 48 #TP,TN,FP,FN,ERR,n,txm48
7794 0.869 0.969 0.031 0.131 2.321e-04 700 49 #TP,TN,FP,FN,ERR,n,txm49
7795 0.951 0.978 0.022 0.049 1.016e-04 700 50 #TP,TN,FP,FN,ERR,n,txm50
7796 0.918 0.980 0.020 0.082 1.462e-04 700 51 #TP,TN,FP,FN,ERR,n,txm51
7797 0.902 0.961 0.039 0.098 1.964e-04 700 52 #TP,TN,FP,FN,ERR,n,txm52
7798 0.885 0.995 0.005 0.115 1.706e-04 700 53 #TP,TN,FP,FN,ERR,n,txm53
7799 0.869 0.969 0.031 0.131 2.321e-04 700 54 #TP,TN,FP,FN,ERR,n,txm54
7800 0.951 0.978 0.022 0.049 1.016e-04 700 55 #TP,TN,FP,FN,ERR,n,txm55
7801 0.918 0.980 0.020 0.082 1.462e-04 700 56 #TP,TN,FP,FN,ERR,n,txm56
7802 0.902 0.961 0.039 0.098 1.964e-04 700 57 #TP,TN,FP,FN,ERR,n,txm57
7803 0.885 0.995 0.005 0.115 1.706e-04 700 58 #TP,TN,FP,FN,ERR,n,txm58
7804 0.869 0.969 0.031 0.131 2.321e-04 700 59 #TP,TN,FP,FN,ERR,n,txm59
7805 0.951 0.978 0.022 0.049 1.016e-04 700 60 #TP,TN,FP,FN,ERR,n,txm60
7806 0.918 0.980 0.020 0.082 1.462e-04 700 61 #TP,TN,FP,FN,ERR,n,txm61
7807 0.902 0.961 0.039 0.098 1.964e-04 700 62 #TP,TN,FP,FN,ERR,n,txm62
7808 0.885 0.995 0.005 0.115 1.706e-04 700 63 #TP,TN,FP,FN,ERR,n,txm63
7809 0.869 0.969 0.031 0.131 2.321e-04 700 64 #TP,TN,FP,FN,ERR,n,txm64
7810 0.951 0.978 0.022 0.049 1.016e-04 700 65 #TP,TN,FP,FN,ERR,n,txm65
7811 0.918 0.980 0.020 0.082 1.462e-04 700 66 #TP,TN,FP,FN,ERR,n,txm66
7812 0.902 0.961 0.039 0.098 1.964e-04 700 67 #TP,TN,FP,FN,ERR,n,txm67
7813 0.885 0.995 0.005 0.115 1.706e-04 700 68 #TP,TN,FP,FN,ERR,n,txm68
7814 0.869 0.969 0.031 0.131 2.321e-04 700 69 #TP,TN,FP,FN,ERR,n,txm69
7815 0.951 0.978 0.022 0.049 1.016e-04 700 70 #TP,TN,FP,FN,ERR,n,txm70
7816 0.918 0.980 0.020 0.082 1.462e-04 700 71 #TP,TN,FP,FN,ERR,n,txm71
7817 0.902 0.961 0.039 0.098 1.964e-04 700 72 #TP,TN,FP,FN,ERR,n,txm72
7818 0.885 0.995 0.005 0.115 1.706e-04 700 73 #TP,TN,FP,FN,ERR,n,txm73
7819 0.869 0.969 0.031 0.131 2.321e-04 700 74 #TP,TN,FP,FN,ERR,n,txm74
7820 0.951 0.978 0.022 0.049 1.016e-04 700 75 #TP,TN,FP,FN,ERR,n,txm75
7821 0.918 0.980 0.020 0.082 1.462e-04 700 76 #TP,TN,FP,FN,ERR,n,txm76
7822 0.902 0.961 0.039 0.098 1.964e-04 700 77 #TP,TN,FP,FN,ERR,n,txm77
7823 0.885 0.995 0.005 0.115 1.706e-04 700 78 #TP,TN,FP,FN,ERR,n,txm78
7824 0.869 0.969 0.031 0.131 2.321e-04 700 79 #TP,TN,FP,FN,ERR,n,txm79
7825 0.951 0.978 0.022 0.049 1.016e-04 700 80 #TP,TN,FP,FN,ERR,n,txm80
7826 0.918 0.980 0.020 0.082 1.462e-04 700 81 #TP,TN,FP,FN,ERR,n,txm81
7827 0.902 0.961 0.039 0.098 1.964e-04 700 82 #TP,TN,FP,FN,ERR,n,txm82
7828 0.885 0.995 0.005 0.115 1.706e-04 700 83 #TP,TN,FP,FN,ERR,n,txm83
7829 0.869 0.969 0.031 0.131 2.321e-04 700 84 #TP,TN,FP,FN,ERR,n,txm84
7830 0.951 0.978 0.022 0.049 1.016e-04 700 85 #TP,TN,FP,FN,ERR,n,txm85
7831 0.918 0.980 0.020 0.082 1.462e-04 700 86 #TP,TN,FP,FN,ERR,n,txm86
7832 0.902 0.961 0.039 0.098 1.964e-04 700 87 #TP,TN,FP,FN,ERR,n,txm87
7833 0.885 0.995 0.005 0.115 1.706e-04 700 88 #TP,TN,FP,FN,ERR,n,txm88
7834 0.869 0.969 0.031 0.131 2.321e-04 700 89 #TP,TN,FP,FN,ERR,n,txm89
7835 0.951 0.978 0.022 0.049 1.016e-04 700 90 #TP,TN,FP,FN,ERR,n,txm90
7836 0.918 0.980 0.020 0.082 1.462e-04 700 91 #TP,TN,FP,FN,ERR,n,txm91
7837 0.902 0.961 0.039 0.098 1.964e-04 700 92 #TP,TN,FP,FN,ERR,n,txm92
7838 0.885 0.995 0.005 0.115 1.706e-04 700 93 #TP,TN,FP,FN,ERR,n,txm93
7839 0.869 0.969 0.031 0.131 2.321e-04 700 94 #TP,TN,FP,FN,ERR,n,txm94
7840 0.951 0.978 0.022 0.049 1.016e-04 700 95 #TP,TN,FP,FN,ERR,n,txm95
7841 0.918 0.980 0.020 0.082 1.462e-04 700 96 #TP,TN,FP,FN,ERR,n,txm96
7842 0.902 0.961 0.039 0.098 1.964e-04 700 97 #TP,TN,FP,FN,ERR,n,txm97
7843 0.885 0.995 0.005 0.115 1.706e-04 700 98 #TP,TN,FP,FN,ERR,n,txm98
7844 0.869 0.969 0.031 0.131 2.321e-04 700 99 #TP,TN,FP,FN,ERR,n,txm99
7845 0.951 0.978 0.022 0.049 1.016e-04 700 100 #TP,TN,FP,FN,ERR,n,txm100
7846 0.918 0.980 0.020 0.082 1.462e-04 700 101 #TP,TN,FP,FN,ERR,n,txm101
7847 0.902 0.961 0.039 0.098 1.964e-04 700 102 #TP,TN,FP,FN,ERR,n,txm102
7848 0.885 0.995 0.005 0.115 1.706e-04 700 103 #TP,TN,FP,FN,ERR,n,txm103
7849 0.869 0.969 0.031 0.131 2.321e-04 700 104 #TP,TN,FP,FN,ERR,n,txm104
7850 0.951 0.978 0.022 0.049 1.016e-04 700 105 #TP,TN,FP,FN,ERR,n,txm105
7851 0.918 0.980 0.020 0.082 1.462e-04 700 106 #TP,TN,FP,FN,ERR,n,txm106
7852 0.902 0.961 0.039 0.098 1.964e-04 700 107 #TP,TN,FP,FN,ERR,n,txm107
7853 0.885 0.995 0.005 0.115 1.706e-04 700 108 #TP,TN,FP,FN,ERR,n,txm108
7854 0.869 0.969 0.031 0.131 2.321e-04 700 109 #TP,TN,FP,FN,ERR,n,txm109
7855 0.951 0.978 0.022 0.049 1.016e-04 700 110 #TP,TN,FP,FN,ERR,n,txm110
7856 0.918 0.980 0.020 0.082 1.462e-04 700 111 #TP,TN,FP,FN,ERR,n,txm111
7857 0.902 0.961 0.039 0.098 1.964e-04 700 112 #TP,TN,FP,FN,ERR,n,txm112
7858 0.885 0.995 0.005 0.115 1.706e-04 700 113 #TP,TN,FP,FN,ERR,n,txm113
7859 0.869 0.969 0.031 0.131 2.321e-04 700 114 #TP,TN,FP,FN,ERR,n,txm114
7860 0.951 0.978 0.022 0.049 1.016e-04 700 115 #TP,TN,FP,FN,ERR,n,txm115
7861 0.918 0.980 0.020 0.082 1.462e-04 700 116 #TP,TN,FP,FN,ERR,n,txm116
7862 0.902 0.961 0.039 0.098 1.964e-04 700 117 #TP,TN,FP,FN,ERR,n,txm117
7863 0.885 0.995 0.005 0.115 1.706e-04 700 118 #TP,TN,FP,FN,ERR,n,txm118
7864 0.869 0.969 0.031 0.131 2.321e-04 700 119 #TP,TN,FP,FN,ERR,n,txm119
7865 0.951 0.978 0.022 0.049 1.016e-04 700 120 #TP,TN,FP,FN,ERR,n,txm120
7866 0.918 0.980 0.020 0.082 1.462e-04 700 121 #TP,TN,FP,FN,ERR,n,txm121
7867 0.902 0.961 0.039 0.098 1.964e-04 700 122 #TP,TN,FP,FN,ERR,n,txm122
7868 0.885 0.995 0.005 0.115 1.706e-04 700 123 #TP,TN,FP,FN,ERR,n,txm123
7869 0.869 0.969 0.031 0.131 2.321e-04 700 124 #TP,TN,FP,FN,ERR,n,txm124
7870 0.951 0.978 0.022 0.049 1.016e-04 700 125 #TP,TN,FP,FN,ERR,n,txm125
7871 0.918 0.980 0.020 0.082 1.462e-04 700 126 #TP,TN,FP,FN,ERR,n,txm126
7872 0.902 0.961 0.039 0.098 1.964e-04 700 127 #TP,TN,FP,FN,ERR,n,txm127
7873 0.885 0.995 0.005 0.115 1.706e-04 700 128 #TP,TN,FP,FN,ERR,n,txm128
7874 0.869 0.969 0.031 0.131 2.321e-04 700 129 #TP,TN,FP,FN,ERR,n,txm129
7875 0.951 0.978 0.022 0.049 1.016e-04 700 130 #TP,TN,FP,FN,ERR,n,txm130
7876 0.918 0.980 0.020 0.082 1.462e-04 700 131 #TP,TN,FP,FN,ERR,n,txm131
7877 0.902 0.961 0.039 0.098 1.964e-04 700 132 #TP,TN,FP,FN,ERR,n,txm132
7878 0.885 0.995 0.005 0.115 1.706e-04 700 133 #TP,TN,FP,FN,ERR,n,txm133
7879 0.869 0.969 0.031 0.131 2.321e-04 700 134 #TP,TN,FP,FN,ERR,n,txm134
7880 0.951 0.978 0.022 0.049 1.016e-04 700 135 #TP,TN,FP,FN,ERR,n,txm135
7881 0.918 0.980 0.020 0.082 1.462e-04 700 136 #TP,TN,FP,FN,ERR,n,txm136
7882 0.902 0.961 0.039 0.098 1.964e-04 700 137 #TP,TN,FP,FN,ERR,n,txm137
7883 0.885 0.995 0.005 0.115 1.706e-04 700 138 #TP,TN,FP,FN,ERR,n,txm138
7884 0.869 0.969 0.031 0.131 2.321e-04 700 139 #TP,TN,FP,FN,ERR,n,txm139
7885 0.951 0.978 0.022 0.049 1.016e-04 700 140 #TP,TN,FP,FN,ERR,n,txm140
7886 0.918 0.980 0.020 0.082 1.462e-04 700 141 #TP,TN,FP,FN,ERR,n,txm141
7887 0.902 0.961 0.039 0.098 1.964e-04 700 142 #TP,TN,FP,FN,ERR,n,txm142
7888 0.885 0.995 0.005 0.115 1.706e-04 700 143 #TP,TN,FP,FN,ERR,n,txm143
7889 0.869 0.969 0.031 0.131 2.321e-04 700 144 #TP,TN,FP,FN,ERR,n,txm144
7890 0.951 0.978 0.022 0.049 1.016e-04 700 145 #TP,TN,FP,FN,ERR,n,txm145
7891 0.918 0.980 0.020 0.082 1.462e-04 700 146 #TP,TN,FP,FN,ERR,n,txm146
7892 0.902 0.961 0.039 0.098 1.964e-04 700 147 #TP,TN,FP,FN,ERR,n,tx
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7799 0.636 0.988 0.012 0.364 5.361e-04 700 4 4 #TP,TN,FP,FP,ERR,n,sm4 txm4 ex0(TP0,700 TN0,990 ER5.169e-0
4 #600)
7800 0.818 0.999 0.001 0.182 2.618e-04 700 4 5 #TP,TN,FP,FP,ERR,n,sm4 txm5 ex0(TP0,900 TN0,998 ER1.695e-0
4 #600)
7801 0.909 0.990 0.010 0.091 1.444e-04 700 4 6 #TP,TN,FP,FP,ERR,n,sm4 txm6 ex0(TP1,000 TN0,995 ER8.475e-0
4 #600)
7802 0.727 0.997 0.003 0.273 3.938e-04 700 4 7 #TP,TN,FP,FP,ERR,n,sm4 txm7 ex0(TP0,800 TN0,997 ER3.390e-0
4 #600)
7803 0.909 0.999 0.001 0.091 1.319e-04 700 4 8 #TP,TN,FP,FP,ERR,n,sm4 txm8 ex0(TP1,000 TN0,998 ER2.825e-0
4 #600)
7804 0.909 1.000 0.000 0.091 1.299e-04 700 4 9 #TP,TN,FP,FP,ERR,n,sm4 txm9 ex0(TP1,000 TN1,000 ER0.000e+0
0 #600)
7805 0.818 0.999 0.001 0.182 2.618e-04 700 5 0 #TP,TN,FP,FP,ERR,n,sm5 txm0 ex0(TP0,900 TN0,998 ER1.695e-0
4 #600)
7806 0.909 0.996 0.004 0.091 1.361e-04 700 5 1 #TP,TN,FP,FP,ERR,n,sm5 txm1 ex0(TP1,000 TN0,997 ER5.650e-0
4 #600)
7807 0.909 0.999 0.001 0.091 1.319e-04 700 5 2 #TP,TN,FP,FP,ERR,n,sm5 txm2 ex0(TP1,000 TN0,998 ER2.825e-0
4 #600)
7808 0.909 0.991 0.009 0.091 1.423e-04 700 5 3 #TP,TN,FP,FP,ERR,n,sm5 txm3 ex0(TP1,000 TN0,995 ER8.475e-0
4 #600)
7809 0.909 0.996 0.004 0.091 1.361e-04 700 5 4 #TP,TN,FP,FP,ERR,n,sm5 txm4 ex0(TP1,000 TN0,995 ER8.475e-0
4 #600)
7810 0.909 0.999 0.001 0.091 1.319e-04 700 5 5 #TP,TN,FP,FP,ERR,n,sm5 txm5 ex0(TP1,000 TN0,998 ER2.825e-0
4 #600)
7811 0.909 0.996 0.004 0.091 1.361e-04 700 5 6 #TP,TN,FP,FP,ERR,n,sm5 txm6 ex0(TP1,000 TN0,995 ER8.475e-0
4 #600)
7812 0.818 0.996 0.004 0.182 2.660e-04 700 5 7 #TP,TN,FP,FP,ERR,n,sm5 txm7 ex0(TP0,900 TN0,995 ER1.751e-0
4 #600)
7813 0.727 0.997 0.003 0.273 3.938e-04 700 5 8 #TP,TN,FP,FP,ERR,n,sm5 txm8 ex0(TP0,800 TN0,997 ER3.390e-0
4 #600)
7814 0.818 0.994 0.006 0.182 2.680e-04 700 5 9 #TP,TN,FP,FP,ERR,n,sm5 txm9 ex0(TP0,900 TN0,993 ER1.780e-0
4 #600)
7815 0.909 0.997 0.003 0.091 1.340e-04 700 6 0 #TP,TN,FP,FP,ERR,n,sm6 txm0 ex0(TP1,000 TN0,997 ER5.650e-0
4 #600)
7816 0.909 0.996 0.004 0.091 1.361e-04 700 6 1 #TP,TN,FP,FP,ERR,n,sm6 txm1 ex0(TP1,000 TN0,995 ER8.475e-0
4 #600)
7817 0.909 1.000 0.000 0.091 1.299e-04 700 6 2 #TP,TN,FP,FP,ERR,n,sm6 txm2 ex0(TP1,000 TN1,000 ER0.000e+0
0 #600)
7818 0.636 1.000 0.000 0.364 5.195e-04 700 6 3 #TP,TN,FP,FP,ERR,n,sm6 txm3 ex0(TP0,700 TN1,000 ER5.000e-0
4 #600)
7819 0.727 0.999 0.001 0.273 3.917e-04 700 6 4 #TP,TN,FP,FP,ERR,n,sm6 txm4 ex0(TP0,800 TN0,998 ER3.362e-0
4 #600)
7820 0.909 0.996 0.004 0.091 1.361e-04 700 6 5 #TP,TN,FP,FP,ERR,n,sm6 txm5 ex0(TP1,000 TN0,995 ER8.475e-0
4 #600)
7821 0.909 0.994 0.006 0.091 1.382e-04 700 6 6 #TP,TN,FP,FP,ERR,n,sm6 txm6 ex0(TP1,000 TN0,993 ER1.130e-0
4 #600)
7822 0.909 0.997 0.003 0.091 1.340e-04 700 6 7 #TP,TN,FP,FP,ERR,n,sm6 txm7 ex0(TP1,000 TN0,997 ER5.650e-0
4 #600)
7823 0.909 0.999 0.001 0.091 1.319e-04 700 6 8 #TP,TN,FP,FP,ERR,n,sm6 txm8 ex0(TP1,000 TN0,998 ER2.825e-0
4 #600)
7824 0.909 0.999 0.001 0.091 1.319e-04 700 6 9 #TP,TN,FP,FP,ERR,n,sm6 txm9 ex0(TP0,900 TN0,998 ER1.695e-0
4 #600)
7825 7826
7827
7828 (2) speakerdigit_v3.c0の修正
7829 sx:0:1 include sx=0 for test speaker
7830 sx:0:1 exclude sx=0 for test speaker (toroku washya nomi)
7831 #gibbs
7832 pAd=0.9;icS=1;icD=sx=sx:0:1;speakerdigit_v3 fs:.../12voicedata/allpole/ob4s:-lN40mbas2:300:1.6:1sx
0,y fd:.../12voicedata/allpole/ob4d:-lN40mbas2:300:1.6:1sx0,y nSdL:7:10:10 void:1 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:1
lbs1:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pAdAtr:0.5:$pAd:15 LAR:0.5:0:0
test:5:1000:$[icS]:$[icD]:5 $sx usevoid:1
7833
7834 #incorrect speaker involving or not involving s=sx
7835 t15 pS0.015U0.011U0.004U0.021LC0.003-0.994 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:1/0/5 midlv-2 dA993 pAd0.987U0.012U0.030Up0.003 better FA0<10 #sx:0:0 usevoid:1
7836
7837 t15 pS0.046U0.077U0.032U0.161LC0.003-0.994 iC1000=TR999:FA1:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:0/5 midlv-2 dA811 pAd0.884U0.217U0.0449U0.104 OK FA1<10 #sx:0:1 usevoid:1 FA1 for n_sxtest=188-
unregistered speaker
7838
7839 t15 pS0.039U0.065U0.026U0.138LC0.003-0.994 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT1:1/5 midlv-2 dA806 pAd0.876U0.200U0.0426U0.093 #sx:0:1 n_sxtest=166 FA0
7840
7841 t15 pS0.039U0.064U0.025U0.141LC0.003-0.994 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT1:2/5 midlv-2 dA959 pAd0.776U0.163U0.270U0.094 #sx:0:1 n_sxtest=161 FA0
7842
7843 t15 pS0.015U0.011U0.004U0.021LC0.003-0.994 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT1:1/5 midlv-2 dA993 pAd0.987U0.012U0.030Up0.003 better FA0 #sx:0:0 usevoid:0
7844 t15 pS0.046U0.077U0.032U0.161LC0.003-0.994 iC1000=TR999:FA1:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:0/5 midlv-2 dA811 pAd0.884U0.217U0.0449U0.104 OK FA1<10 #sx:0:1 usevoid:0
```

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7845 #s usevoid:0 と usevoid:1 の結果は変わらない。なぜ?gibbsだから?y_void=1(すべてのCAM2 の出力が0)と
なることがない(少ない)から?
7846
7847 ##correct speaker
7848 t15 pS0.973U0.037U0.066U0.015LC0.004-0.994 iC0=TR0:FA0:SR0 C1000=TA999:FR1:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT0:1/5 midlv-2 dA100 pAd0.987U0.008U0.018U0.002 GOOD FA1<10 #sx:0:1 usevoid:1
7849 t15 pS0.974U0.036U0.065U0.014LC0.004-0.994 iC1000=TR36:FA964:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA964 pAd0.965U0.027U0.048U0.012 NG FA964, but ... OK
7850 t15 pS0.974U0.033U0.059U0.014LC0.004-0.994 iC1000=TR953:FA47:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA47 pAd0.839U0.077U0.130Up0.040 seems GOOD:FA47
7851 t15 pS0.972U0.037U0.066U0.015LC0.004-0.994 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0 pAd0.488U0.090U0.106U0.075 GOOD! FA0
7852
7853 ##### bytes
7854 pAd=0.9;icS=1;icD=sx=sx:0:1;speakerdigit_v3 fs:.../12voicedata/allpole/ob4s:-lN40mbas2:300:1.6:1sx
0,y fd:.../12voicedata/allpole/ob4d:-lN40mbas2:300:1.6:1sx0,y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 g
ibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pAdAtr:0.5:$pAd:15 LAR:0.5:0:0
test:5:1000:$[icS]:$[icD]:5 $sx usevoid:1
7855 t15 pS0.012U0.037U0.002U0.248LC0.003-0.994 iC1000=TR999:FA1:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:0/5 midlv-2 dA983 pAd0.985U0.044U0.296U0.005 #sx:0:0 usevoid:0
7856 t15 pS0.012U0.037U0.002U0.248LC0.003-0.994 iC1000=TR999:FA1:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:0/5 midlv-2 dA983 pAd0.985U0.044U0.296U0.005 #sx:0:0 usevoid:1
7857 #incorrect speaker involving s=sx
7858 t15 pS0.024U0.099U0.014U0.531LC0.003-0.994 iC1000=TR995:FA5:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:1/5 midlv-2 dA794 pAd0.807U0.369U0.183 #sx:0:1 usevoid:1 n_sxtest=188 FA5
7859 t15 pS0.018U0.066U0.008U0.373LC0.003-0.994 iC1000=TR998:FA2:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:1/5 midlv-2 dA655 pAd0.783U0.348U0.525U0.205 #sx:0:1 usevoid:1 n_sxtest=166 FA2
7860 t15 pS0.017U0.058U0.007U0.363LC0.003-0.994 iC1000=TR998:FA2:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.5
:0:0 iCT1:2/5 midlv-2 dA487 pAd0.671U0.390U0.594U0.264 #sx:0:1 usevoid:1 n_sxtest=161 FA2
7861 #correct speaker
7862 t15 pS0.961U0.123U0.048U0.029LC0.004-0.994 iC0=TR0:FA0:SR0 C1000=TA969:FR31:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:10/5 midlv-2 dA986 pAd0.985U0.050U0.410Up0.005 NG? FR31>10
7863 t15 pS0.955U0.141U0.054U0.034LC0.004-0.994 iC1000=TR245:FA755:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0
5:0:0 iCT0:1/5 midlv-2 dA771 pAd0.920U0.144U0.271Up0.070 FA755
7864 t15 pS0.964U0.120U0.047U0.026LC0.004-0.994 iC1000=TR450:FA550:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0
5:0:0 iCT0:2/5 midlv-2 dA557 pAd0.792U0.291U0.383U0.193 NG FA550
7865 t15 pS0.952U0.149U0.054U0.037LC0.004-0.994 iC1000=TR768:FA232:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0
5:0:0 iCT0:3/5 midlv-2 dA236 pAd0.513U0.395U0.436U0.356 FA232 NG
7866
7867 #####sxtest
7868 pAd=0.95;icS=1;icD=sx=sx:0:1;speakerdigit_v3 fedi.../12voicedata/allpole/ob4s:-lN40mbas2:300:1.6:1
sx0,y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:1
2:3:4:5:6:7:8:9 ver:-2 pAdAtr:0.5:$pAd:15 LAR:0.5:0:0 test:5:1000:$[icS]:$[icD]:5 $sx usevoid:1
7869 #incorrect speaker icS=1;icD=0
7870 t15 pS0.032U0.016U0.011U0.022LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT1:1/0/5 mid3v-2 dA100 pAd0.032U0.016U0.011Up0.022 sx:0:0
7871 t15 pS0.072U0.088U0.044U0.169LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT1:10/5 mid3v-2 dA0 pAd0.072U0.088U0.044Up0.169 sx:0:1 n_sxtest=188
7872 #correct speaker icS=0;icD=?
7873 t15 pS0.988U0.005U0.012U0.001LC0.035-0.999 iC0=TR0:FA0:SR0 C1000=TA1000:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:10/5 mid3v-2 dA100 pAd0.005U0.005U0.012Up0.001
7874 t15 pS0.973U0.023U0.040U0.010LC0.002-0.999 iC1000=TR26:FA974:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:11/5 mid3v-2 dA974 pAd0.973U0.023U0.040Up0.010
7875 t15 pS0.876U0.071U0.108U0.041LC0.002-0.999 iC1000=TR531:FA469:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0
5:0:0 iCT0:2/5 mid3v-2 dA469 pAd0.876U0.071U0.108U0.041 seems NotGood? FA469 #pAd=0.95
7876 t15 pS0.538U0.117U0.130U0.104LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:3/5 mid3v-2 dA0 pAd0.538U0.117U0.130Up0.104
7877
7878 #pAd=0.95
7879 t15 pS0.072U0.088U0.044U0.169LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.95 LAR0
5:0:0 iCT1:0/5 mid3v-2 dA0 pAd0.072U0.088U0.044Up0.169
7880
7881 t15 pS0.988U0.005U0.012U0.001LC0.035-0.999 iC0=TR0:FA0:SR0 C1000=TA996:FR4:SA0 pAPAd0.5:0.95 LAR0.
5:0:0 iCT0:10/5 mid3v-2 dA996 pAd0.988U0.005U0.012Up0.001 FR4<10 OK? #pAd=0.95
7882 t15 pS0.973U0.023U0.040U0.010LC0.002-0.999 iC1000=TR92:FA908:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.95 LAR0
5:0:0 iCT0:1/5 mid3v-2 dA908 pAd0.973U0.023U0.040Up0.010 FA908 NG but ... OK
7883 t15 pS0.876U0.071U0.108U0.041LC0.002-0.999 iC1000=TR991:FA9:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.95 LAR0.
5:0:0 iCT0:2/5 mid3v-2 dA9 pAd0.876U0.071U0.108U0.041 seems OK FA9 #pAd=0.95
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7893 20140121
7894 #for iconip2013 with oob
7895 #time oobaspeakerdigit_v3 sp:fs: fms:mkk:mko:mnt:mmh:myt tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:ky
u nxxl:10 k:36 mbas2:300:1.6:1 dir:.../12voicedata/allpole si-1 N:40
7896 #fs=fs:.../12voicedata/allpole/ob4s:-lN40mbas2:300:1.6:1,y: #file name of y of speaker for iconip201
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8023 0.660 0.915 0.085 0.340 6.071e-04 700 5 #TP,TN,FP,PN,ERR,n,sm5 sX0,TP0.660 TN0.930 ER6.833e-04 n600)
8024 #lo4speakerdigit+ sp:fhs:fms:mkk:mmt:mmh:my:m tx:zero:ichi:ni:sa:yon:go:roku:nana:hachi:kyu ntx
1:10 k:36 dir:../12voicedata/allpole s:5 N:400 sX:0 ops:y:-1.1
8025 0.650 0.918 0.082 0.350 6.167e-04 700 5 #TP,TN,FP,PN,ERR,n,sm5 sX0,TP0.650 TN0.930 ER7.000e-04 n600)
8026 #lo4speakerdigit+ sp:fhs:fms:mkk:mmt:mmh:my:m tx:zero:ichi:ni:sa:yon:go:roku:nana:hachi:kyu ntx
1:10 k:36 dir:../12voicedata/allpole s:5 N:500 sX:0 ops:y:-1.1
8027 0.610 0.917 0.083 0.390 6.762e-04 700 5 #TP,TN,FP,PN,ERR,n,sm5 sX0,TP0.610 TN0.930 ER7.667e-04 n600)
8028 cat ../12voicedata/allpole/loo4s:-LN20S7D10L10sX0.ystat
8030 #lo4speakerdigit+ sp:fhs:fms:mkk:mmt:mmh:my:m tx:zero:ichi:ni:sa:yon:go:roku:nana:hachi:kyu ntx
1:10 k:36 dir:../12voicedata/allpole s:-1 N:20 sX:0 ops:y:-1.1
8031 0.780 0.858 0.142 0.220 5.167e-04 700 1 #TP,TN,FP,PN,ERR,n,sm1 sX(TP0.780 TN0.906 ER600.000 n0)
8032 0.660 0.968 0.132 0.340 6.738e-04 700 2 #TP,TN,FP,PN,ERR,n,sm2 sX(TP0.660 TN0.870 ER600.000 n0)
8033 0.740 0.815 0.185 0.260 6.357e-04 700 3 #TP,TN,FP,PN,ERR,n,sm3 sX(TP0.740 TN0.852 ER600.000 n0)
8034 0.740 0.872 0.128 0.260 5.548e-04 700 4 #TP,TN,FP,PN,ERR,n,sm4 sX(TP0.740 TN0.898 ER600.000 n0)
8035 0.630 0.922 0.178 0.370 7.833e-04 700 5 #TP,TN,FP,PN,ERR,n,sm5 sX(TP0.630 TN0.812 ER600.000 n0)
8036 0.580 0.805 0.195 0.420 8.786e-04 700 6 #TP,TN,FP,PN,ERR,n,sm6 sX(TP0.580 TN0.786 ER600.000 n0)
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8150 t15 ps0.57700.10300.1110p0.0951c0.102-0.875 iC1000=TR983:FA17:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA18 pD0.75700.10300.1130p0.077 #pAd=0.9:1iCs=0:iCd=1;
8151 t15 ps0.57500.10300.1130p0.094LC0.102-0.875 iC1000=FR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.9 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.60100.1100m0.1280p0.094
8152
8153
8154
8155 novod
8156 pAd=0.96:iCs=0:iCd=0:speakerdigit_v3 fs:.../12voicedata/allpole/ooB4s:-IN40mbas2:300:1.6:1.1 y fd:.../12
voicedata/allpole/ooB4d:-IN40mbas2:300:1.6:1.1 y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 s
dp:0:0:1:2:3:4:5:6:7:8:9 itr:1 sdt:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAPAdT:0.5:$pAd:15 LAR:0.5:0:0 test:5:1000:{$
iCs}:$ {iCd}:5 sx:0 usevoid:1
8157 t15 ps0.96200.0600m0.1150p0.021LC0.002-0.991 iC0=TR0:FA0:SR0 C1000=TA976:FR24:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:0/5 midlv-2 dA976 pD0.98700.0130m0.0280p0.003 #pAd=0.96:iCs=0:iCd=0 no sx=0 prompted
8158 t15 ps0.96300.0600m0.1180p0.020LC0.002-0.991 iC1000=TR222:FA778:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.96 LAR
0.5:0:0 iCT0:1/5 midlv-2 dA778 pD0.96100.0550m0.1100p0.021 #pAd=0.96:iCs=0:iCd=0
8159 t15 ps0.96500.0520m0.0980p0.018LC0.002-0.991 iC1000=TR998:FR2:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA2 pD0.84200.1240m0.1970p0.070 #pAd=0.96:iCs=0:iCd=0
8160
8161
8162
8163 pAd=0.96:iCs=0:iCd=0:speakerdigit_v2 fs:.../12voicedata/allpole/ooB4s:-IN40mbas2:300:1.6:1.1 y fd:.../12
voicedata/allpole/ooB4d:-IN40mbas2:300:1.6:1.1 y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 s
dp:0:0:1:2:3:4:5:6:7:8:9 itr:1 sdt:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAPAdT:0.5:$pAd:15 LAR:0.5:0:0 test:5:1000:{$
iCs}:$ {iCd}:5 sx:0 usevoid:1
8164 t15 ps0.95200.0640m0.1070p0.029LC0.002-0.991 iC0=TR0:FA0:SR0 C1000=TA969:FR31:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:0/5 midlv-2 dA971 pD0.98600.0160m0.0400p0.004 #pAd=0.96:iCs=0:iCd=0 sp=0
8165 t15 ps0.95300.0650m0.1150p0.028LC0.002-0.991 iC1000=TR217:FA783:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.96 LAR
0.5:0:0 iCT0:1/5 midlv-2 dA784 pD0.96300.0490m0.0980p0.018 #pAd=0.96:iCs=0:iCd=1;
8166 t15 ps0.95400.0600m0.1000p0.027LC0.002-0.991 iC1000=TR997:FA3:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA3 pD0.81900.1290m0.2060p0.072 #pAd=0.96:iCs=0:iCd=2;
8167
8168
8169
8170
8171
8172 speakerdigit_v3 fs:.../12voicedata/allpole/loo4s:-IN300S7D10L10sx0.0 y fd:.../12voicedata/allpole/loo4d:
-IN300S7D10L10sx0.0 y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 itr
:1 sdt:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAPAdT:0.5:0.96:15 LAR:0.5:0:0 test:5:1000:{$iCs}:$ {iCd}:5 sx:0 usevoid
1
8173 t15 ps0.42400.0000m0.0000p0.000LC0.500-0.500 iC0=TR0:FA0:SR0 C1000=TA0:FR1000:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:0/5 midlv-2 dA0 pD0.42400.0000m0.0000p0.000
8174
8175 #speakerdigit_v3 fs:.../12voicedata/allpole/loo4s:-IN20S7D10L10sx0.0 y fd:.../12voicedata/allpole/loo4
d:-IN20S7D10L10sx0.0 y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9
itr:1 sdt:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAPAdT:0.5:0.96:15 LAR:0.5:0:0 test:5:1000:{$iCs}:$ {iCd}:5 sx:0 usevo
id:1
8176 #speakerdigit_v3 fs:.../12voicedata/allpole/loo4s:-IN300S7D10L10sx0.0 y fd:.../12voicedata/allpole/loo4
d:-IN300S7D10L10sx0.0 y nSdL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 l
T:1 sdt:0:0:1:1:2:3:4:5:6:7:8:9 ver:-2 pAPAdT:0.5:0.96:15 LAR:0.5:0:0 test:5:1000:{$iCs}:$ {iCd}:5 sx:0 usevoid
1;
8177
8178
8179
8180 enacs tmp/testsd.dat
8181 #sf loo4gibbs-sx fn:.../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.7 ts:4:0:3:1:
2 dslp:4 beta:.6 FNR:.8 void:1 gibbs:1 mex:0
8182
8183
8184
8185
8186 2013/10/24
8187 (1) loo4speakerdigit+
8188 オブション 未登録話者 sx:0,..., sx:6
8189 その他はooB4speakerdigit+ と同じ
8190
8191 time loo4speakerdigit+ sp:flhs:fms:mkt:mmt:mmh:nym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 dir:.../12voicedata/allpole s:-1 N:20 sx:0
8192 time loo4speakerdigit+ sp:flhs:fms:mkt:mmt:mmh:nym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 dir:.../12voicedata/allpole d:-1 N:40 sx:0
8193 time loo4speakerdigit+ sp:flhs:fms:mkt:mmt:mmh:nym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 dir:.../12voicedata/allpole sd:-1 N:40 sx:0
8194
8195
8196 real870m5.292a user38m40.389s sys30m7.305s for cat .../12voicedata/allpole/loo4d:-IN40S7D10L10sx0.yst
at by yuka
8197 #loo4speakerdigit+ sp:flhs tx:zero ntxi:10 k:36 dir:.../12voicedata/allpole d:-1 N:40 sx:0
8198 0.80000 0.99375 0.00625 0.20000 2.94643e-04 700 0 #TP,TN,FP,PN,ERR,n.txm0
8199 0.78333 0.96094 0.03906 0.21667 3.65327e-04 700 1 #TP,TN,FP,PN,ERR,n.txm1
8200 0.63333 0.96562 0.03438 0.31667 5.01488e-04 700 2 #TP,TN,FP,PN,ERR,n.txm2
8201 0.63333 0.95312 0.04688 0.36667 5.90774e-04 700 3 #TP,TN,FP,PN,ERR,n.txm3
8202 0.71667 0.94219 0.05781 0.28333 4.87351e-04 700 4 #TP,TN,FP,PN,ERR,n.txm4
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8203 0.81667 0.97969 0.02031 0.18333 2.90923e-04 700 5 #TP,TN,FP,PN,ERR,n.txm5
8204 0.61667 0.95781 0.04219 0.38333 6.07887e-04 700 6 #TP,TN,FP,PN,ERR,n.txm6
8205 0.65000 0.93125 0.06719 0.35000 5.98214e-04 700 7 #TP,TN,FP,PN,ERR,n.txm7
8206 0.68333 0.97813 0.02187 0.31667 4.83631e-04 700 8 #TP,TN,FP,PN,ERR,n.txm8
8207 0.94375 0.98519 0.01481 0.05625 1.01521e-04 700 9 #TP,TN,FP,PN,ERR,n.txm9
8208
8209
8210 real1424m3.830s user1139m14.808s sys29m48.676s for ../12voicedata/allpole/loo4d:-IN300S7D10L10sx0.y
by mesaho
8211 #loo4speakerdigit+ sp:flhs tx:zero ntxi:10 k:36 dir:.../12voicedata/allpole/loo4s:-IN300S7D10L10sx0.y
ntxi:10 k:36 dir:.../12voicedata/allpole s:-1 N:20 sx:0 ops:"y:-2:2"
8212 0.98333 0.99219 0.00781 0.01667 3.49702e-05 700 0 #TP,TN,FP,PN,ERR,n.txm0
8213 0.78333 0.99219 0.00625 0.21667 3.18452e-04 700 1 #TP,TN,FP,PN,ERR,n.txm1
8214 0.95000 0.98125 0.01875 0.05000 9.82143e-05 700 2 #TP,TN,FP,PN,ERR,n.txm2
8215 0.76667 0.96875 0.02312 0.23333 3.77976e-04 700 3 #TP,TN,FP,PN,ERR,n.txm3
8216 0.95000 0.97969 0.03125 0.05000 1.00446e-04 700 4 #TP,TN,FP,PN,ERR,n.txm4
8217 0.96667 1.00000 0.00000 0.03333 4.76190e-05 700 5 #TP,TN,FP,PN,ERR,n.txm5
8218 0.66667 0.98438 0.01562 0.33333 4.98512e-04 700 6 #TP,TN,FP,PN,ERR,n.txm6
8219 0.70000 0.97500 0.02500 0.30000 4.64286e-04 700 7 #TP,TN,FP,PN,ERR,n.txm7
8220 0.76667 0.98750 0.01250 0.23333 3.51190e-04 700 8 #TP,TN,FP,PN,ERR,n.txm8
8221 0.98750 0.99630 0.00370 0.01250 2.31481e-05 700 9 #TP,TN,FP,PN,ERR,n.txm9
8222
8223 real487m32.987s user228m13.120s sys36m10.440s for ../12voicedata/allpole/loo4s:-IN300S7D10L10sx0.y
8224 0.81000 0.99333 0.00667 0.19000 2.80952e-04 700 1 #TP,TN,FP,PN,ERR,n.sml1
8225 0.70000 0.99333 0.04667 0.30000 4.95238e-04 700 2 #TP,TN,FP,PN,ERR,n.sml2
8226 0.75000 0.99333 0.07667 0.25000 4.66667e-04 700 3 #TP,TN,FP,PN,ERR,n.sml3
8227 0.84000 0.97000 0.03000 0.16000 2.71429e-04 700 4 #TP,TN,FP,PN,ERR,n.sml4
8228 0.68000 0.95500 0.04500 0.32000 5.21429e-04 700 5 #TP,TN,FP,PN,ERR,n.sml5
8229 0.84500 0.95200 0.04800 0.15500 2.90000e-04 700 6 #TP,TN,FP,PN,ERR,n.sml6
8230
8231 real287m53.188s user51m49.926s sys21m20.280s for ../12voicedata/allpole/loo4s:-IN100S7D10L10sx0.y
8232 #loo4speakerdigit+ sp:flhs tx:zero ntxi:10 k:36 dir:.../12voicedata/allpole/loo4s:-IN100S7D10L10sx0.y
ntxi:10 k:36 dir:.../12voicedata/allpole s:-1 N:100 sx:0
8233 0.78000 0.98667 0.01333 0.22000 3.33333e-04 700 1 #TP,TN,FP,PN,ERR,n.sml1
8234 0.66000 0.95333 0.04667 0.34000 5.52381e-04 700 2 #TP,TN,FP,PN,ERR,n.sml2
8235 0.58000 0.92000 0.08000 0.42000 7.14286e-04 700 3 #TP,TN,FP,PN,ERR,n.sml3
8236 0.80000 0.94500 0.05500 0.20000 3.64286e-04 700 4 #TP,TN,FP,PN,ERR,n.sml4
8237 0.63000 0.94333 0.05667 0.37000 6.09524e-04 700 5 #TP,TN,FP,PN,ERR,n.sml5
8238 0.80000 0.92800 0.07200 0.20000 3.88571e-04 700 6 #TP,TN,FP,PN,ERR,n.sml6
8239
8240
8241 #retry
real379m40.150s user149m13.012s sys17m47.251s for ../12voicedata/allpole/loo4s:-IN40S7D10L10sx0.ysta
t
8242 0.80000 0.96667 0.03333 0.20000 3.33333e-04 700 1 #TP,TN,FP,PN,ERR,n.sml1
8243 0.60000 0.89167 0.10833 0.40000 7.26190e-04 700 2 #TP,TN,FP,PN,ERR,n.sml2
8244 0.70000 0.92667 0.11333 0.20000 4.47619e-04 700 3 #TP,TN,FP,PN,ERR,n.sml3
8245 0.80000 0.89167 0.07833 0.21000 4.11905e-04 700 4 #TP,TN,FP,PN,ERR,n.sml4
8246 0.63000 0.89000 0.11000 0.37000 6.85714e-04 700 5 #TP,TN,FP,PN,ERR,n.sml5
8247 0.83500 0.88400 0.11600 0.16500 4.01429e-04 700 6 #TP,TN,FP,PN,ERR,n.sml6
8248
8249 real284m6.513s user17m43.442s sys18m35.006s for ../12voicedata/allpole/loo4s:-IN20S7D10L10sx0.ystat
8250 -nan 1.00000 0.00000 -nan -nan 700 0 #TP,TN,FP,PN,ERR,n.sml0
8251 0.80000 0.94500 0.05500 0.32000 3.21429e-04 700 1 #TP,TN,FP,PN,ERR,n.sml1
8252 0.58000 0.90167 0.09833 0.42000 7.40476e-04 700 2 #TP,TN,FP,PN,ERR,n.sml2
8253 0.68000 0.87833 0.12167 0.32000 6.30952e-04 700 3 #TP,TN,FP,PN,ERR,n.sml3
8254 0.70000 0.94833 0.05167 0.30000 5.02381e-04 700 4 #TP,TN,FP,PN,ERR,n.sml4
8255 0.70000 0.85500 0.14500 0.30000 6.35714e-04 700 5 #TP,TN,FP,PN,ERR,n.sml5
8256 0.80000 0.83200 0.16800 0.20000 5.25714e-04 700 6 #TP,TN,FP,PN,ERR,n.sml6
8257
8258 time loo4speakerdigit+ sp:flhs:fms:mkt:mmt:mmh:nym tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 dir:.../12voicedata/allpole s:2 N:20 sx:0 ops:"y:-2:2"
8259 #result in ../12voicedata/allpole/loo4s:2N20S7D10L10sx0.y
8260 0.61000 0.88667 0.11333 0.39000 7.19048e-04 700 2 #TP,TN,FP,PN,ERR,n.sml2 for check.
8261
8262
8263 [0] Set the default environment: Do 0 at 2013/02/27
8264 [1]
8265 話者→数字照合: ver=-2でほしい値の最適化
8266 (1)0/5指定話者+5/5指定数字列のテスト,
8267 (2)5/5指定話者+5/5指定数字列のテスト,
8268 (3)5/5指定話者+4/5指定数字列のテスト,
8269 (4)5/5指定話者+3/5指定数字列のテスト,
8270 (5)5/5指定話者+2/5指定数字列のテスト,
8271 #Expl:after setting default environment 2013/02/27
8272 #No=1;#t=5;nA=1;for C in 1 2 3 4 5 6 7; do
8273 #No=2;#t=5;nA=0;for C in 1 2 3 4 5 6 7; do
8274 #No=3;#t=10;nA=0;for C in 2; do
8275 #No=4;#t=6;nA=0;TD=48;for C in 1 2 3 4 ; do
8276 #No=5;#t=6;nA=0;TD=24;for C in 1 2 3 4 ; do
8277 #No=6;#t=5;nA=0;ID=50;for C in 1 2 3 4 ; do
8278 if [ "$C" = "1" ]; then iCs=1; iCd=0; fi
8279 if [ "$C" = "2" ]; then iCs=0; iCd=0; fi
8280 if [ "$C" = "3" ]; then iCs=0; iCd=1; fi
8281 if [ "$C" = "4" ]; then iCs=0; iCd=2; fi
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8282 if [ "$C" = "5" ]; then ICS=0; ICD=3; fi
8283 if [ "$C" = "6" ]; then ICS=0; ICD=4; fi
8284 if [ "$C" = "7" ]; then ICS=0; ICD=5; fi
8285 f=fs:../12voicedata/allpole/loo4s:-1N40S7D10L10sX0.y
8286 fd=fd:../12voicedata/allpole/loo4s:-1N40S7D10L10sX0.y
8287 test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #be
st for ver:-2 #for No6
8288 #test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #b
est for ver:-2 #for No5
8289 #test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #b
est for ver:-2 #for No4
8290 #test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.97:50:LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #best
for ver:-2
8291 echo "#$test:$PART:$LAR"
8292 cmd="speakerdigit_v3 $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $pApAdT $LAR
R $test";
8293 echo $cmd; $cmd;
8294 echo #Done for $test:$PART:$LAR"
8295 cmdl="cp tmp/tested_stat.dat ../12voicedata/allpole/test2_s+dl1000_C$ {C}_v-2_No$ {No}.dat"
8296 echo $cmdl; $cmdl;
8297 done
8298
8299 speakerdigit_v3 fs:../12voicedata/allpole/loo4s:-1N40S7D10L10sX0.y fd:../12voicedata/allpole/loo4d:-
1N40S7D10L10sX0.y nSDL:7:10:10 pmin:0.01 ytm:1:0.9:1000 void:1 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1
sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pApAdT:0.5:0.96:15 LAR:0.5:0:0 test:5:1000:1:0:5 mx:0
8300 enacs tmp/tested.dat
8301 #cf loo4gibbs-sr fn:../mineishi/text-indexedata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.7 ts:4:0:3:1:
2 tdisp:4 beta:6 pNr:1.8 void:1 gibbs:1 mex:0
8302
8303
8304 t5 p50.215U0.104U0.082Up0.127LC0.045-0.989 iCl1000=TR1000:FAO:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA0 pD0.628U0.240U0.324Up0.174
8305 t5 p50.499U0.204U0.166Up0.246LC0.068-0.989 iCo=TR0:FAO:SR0 Cl1000=TAO:FR1000:SAO pApAd0.5:0.96 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA0 pD0.638U0.232U0.318Up0.166
8306
8307
8308
8309
8310
8311 2013/08/13 for iconip2013
8312 [0] Set the default environment: Do 0 at 2013/02/27
8313 [1]
8314 話者=数字照合:ver=-2でしきい値の最適化
8315 (1)/5指定話者+5/5指定数字列のテスト,
8316 (2)/5指定話者+5/5指定数字列のテスト,
8317 (3)/5指定話者+4/5指定数字列のテスト,
8318 (4)/5指定話者+3/5指定数字列のテスト,
8319 (5)/5指定話者+2/5指定数字列のテスト,
8320 #Exp1:after setting default environment 2013/02/27
8321 #No=1;T=5;nA=0;for C in 1 2 3 4 5 6 7; do
8322 #No=2;T=5;nA=0;for C in 1 2 3 4 5 6 7; do
8323 #No=3;T=10;nA=0;for C in 2; do
8324 #No=4;T=6;nA=0;TD=48;for C in 1 2 3 4; do
8325 #No=5;T=6;nA=0;TD=24;for C in 1 2 3 4; do
8326 #No=6;T=5;nA=0;TD=50;for C in 1 2 3 4; do
8327 if [ "$C" = "1" ]; then ICS=1; ICD=0; fi
8328 if [ "$C" = "2" ]; then ICS=0; ICD=0; fi
8329 if [ "$C" = "3" ]; then ICS=0; ICD=1; fi
8330 if [ "$C" = "4" ]; then ICS=0; ICD=2; fi
8331 if [ "$C" = "5" ]; then ICS=0; ICD=3; fi
8332 if [ "$C" = "6" ]; then ICS=0; ICD=4; fi
8333 if [ "$C" = "7" ]; then ICS=0; ICD=5; fi
8334 test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #be
st for ver:-2 #for No6
8335 echo "#$test:$PART:$LAR"
8336 cmd="speakerdigit_v2 $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $pApAdT $LAR
$test";
8337 #cmd="speakerdigit_v2 $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $pApAdT $L
AR $test";
8338 #cmd="speakerdigit_v $fsd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $pApAdT $LAR
$test";$cmd
8339 echo $cmd; $cmd;
8340 echo #Done for $test:$PART:$LAR"
8341 cmdl="cp tmp/tested_stat.dat ../12voicedata/allpole/test2_sd1000_C$ {C}_v-2_No$ {No}.dat"
8342 echo $cmdl; $cmdl;
8343 done
8344 (1)t15 p50.035U0.042U0.016Up0.070LC0.002-0.999 iCl1000=TR1000:FAO:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 LA
R0.5:0:0 iCT1:0/5 mid3v-2 dA0 pD0.035U0.042U0.016Up0.070
8345 (2)t15 p50.979U0.048U0.122Up0.011LC0.022-0.999 iCo=TR0:FAO:SR0 Cl1000=TA980:FR20:SAO pApAd0.5:0.96 LA
R0.5:0:0 iCT0:0/5 mid3v-2 dA918 pD0.979U0.048U0.122Up0.011
8346 (3)t5 p50.939U0.092U0.168Up0.037LC0.002-0.999 iCl1000=TR457:FA543:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 L
AR0.5:0:0 iCT0:1/5 mid3v-2 dA543 pD0.939U0.092U0.168Up0.037
```

```
8347 (4)t5 p50.806U0.166U0.243Up0.100LC0.002-0.999 iCl1000=TR995:FA5:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 LAR
0.5:0:0 iCT0:2/5 mid3v-2 dA5 pD0.806U0.166U0.243Up0.100
8348 (5)t5 p50.484U0.181U0.204Up0.159LC0.002-0.999 iCl1000=TR1000:FAO:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 LA
R0.5:0:0 iCT0:3/5 mid3v-2 dA0 pD0.484U0.181U0.204Up0.159
8349
8350
8351 (1)t15 p50.035U0.024U0.014Up0.034LC0.002-0.999 iCl1000=TR1000:FAO:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 L
AR0.5:0:0 iCT1:0/5 mid3v-2 dA0 pD0.035U0.024U0.014Up0.034
8352 (2)t15 p50.987U0.010U0.022Up0.003LC0.035-0.999 iCo=TR0:FAO:SR0 Cl1000=TA980:FR20:SAO pApAd0.5:0.96 L
AR0.5:0:0 iCT0:0/5 mid3v-2 dA980 pD0.987U0.010U0.022Up0.003
8353 (3)t15 p50.970U0.033U0.064Up0.013LC0.002-0.999 iCl1000=TR167:FA833:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96
LAR0.5:0:0 iCT0:1/5 mid3v-2 dA833 pD0.970U0.033U0.064Up0.013
8354 (4)t15 p50.876U0.084U0.132Up0.047LC0.002-0.999 iCl1000=TR999:FA1:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 LA
R0.5:0:0 iCT0:2/5 mid3v-2 dA1 pD0.876U0.084U0.132Up0.047
8355 (5)t5 p50.554U0.133U0.156Up0.111LC0.002-0.999 iCl1000=TR1000:FAO:SR0 C0=TAO:FR0:SAO pApAd0.5:0.96 L
AR0.5:0:0 iCT0:3/5 mid3v-2 dA0 pD0.554U0.133U0.156Up0.111
8356
8357
8358
8359 2013/05/26 for iconip2013
8360 [0] Set the default environment: Do 0 at 2013/02/27
8361 [1]
8362 話者=数字照合:ver=-2でしきい値の最適化
8363 (1)/5指定話者+5/5指定数字列のテスト,
8364 (2)/5指定話者+5/5指定数字列のテスト,
8365 (3)/5指定話者+4/5指定数字列のテスト,
8366 (4)/5指定話者+3/5指定数字列のテスト,
8367 (5)/5指定話者+2/5指定数字列のテスト,
8368 #Exp1:after setting default environment 2013/02/27
8369 #No=1;T=5;nA=0;for C in 1 2 3 4 5 6 7; do
8370 #No=2;T=5;nA=0;for C in 1 2 3 4 5 6 7; do
8371 #No=3;T=10;nA=0;for C in 2; do
8372 #No=4;T=6;nA=0;TD=48;for C in 1 2 3 4; do
8373 #No=5;T=6;nA=0;TD=24;for C in 1 2 3 4; do
8374 #No=6;T=5;nA=0;TD=50;for C in 1 2 3 4; do
8375 if [ "$C" = "1" ]; then ICS=1; ICD=0; fi
8376 if [ "$C" = "2" ]; then ICS=0; ICD=0; fi
8377 if [ "$C" = "3" ]; then ICS=0; ICD=1; fi
8378 if [ "$C" = "4" ]; then ICS=0; ICD=2; fi
8379 if [ "$C" = "5" ]; then ICS=0; ICD=3; fi
8380 if [ "$C" = "6" ]; then ICS=0; ICD=4; fi
8381 if [ "$C" = "7" ]; then ICS=0; ICD=5; fi
8382 test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #be
st for ver:-2 #for No6
8383 #test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #b
est for ver:-2 #for No5
8384 #test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.96:$ {TD};LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #b
est for ver:-2 #for No4
8385 #test=test:5:1000:$ {ICS} :$ {ICD} :$ {T};pApAdT=pApAdT:0.5:0.97:50:LAR=LAR:0.5:0:$ {nA};ver=ver:-2; #best
for ver:-2
8386 echo "#$test:$PART:$LAR"
8387 cmd="speakerdigit_v2 $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $pApAdT $LAR
$test";
8388 echo $cmd; $cmd;
8389 echo #Done for $test:$PART:$LAR"
8390 cmdl="cp tmp/tested_stat.dat ../12voicedata/allpole/test2_s+dl1000_C$ {C}_v-2_No$ {No}.dat"
8391 echo $cmdl; $cmdl;
8392 done
8393
8394 #for No6
8395 #for check pG and pG_d and errorbars
8396 cd ~/sotu/2012/12voicedata/allpole/
8397 gnuplot
8398 set style data 1
8399 set xtics (0.5,10.15);set ytics (0.0,5.0,96.1,0);set grid
8400 plot [-2:15,9][0:2:1:1] "test2_s+dl1000_C2_v-2_No6.dat" using ($1):($27) t "pG" lt 1, "" using ($1)
:($27)-($29):($27+$30) with errorbars t "" pt 6 lt 1, "test2_sd1000_C3_v-2_No6.dat" using ($1+0.2):($2
7) t "" lt 2, "" using ($1+0.2):($27)-($29):($27+$30) with errorbars t "" pt 6 lt 2, "test2_sd1000_C4
_v-2_No6.dat" using ($1+0.4):($27) t "" lt 3, "" using ($1+0.4):($27)-($29):($27+$30) with errorbars t "
" pt 6 lt 3
8401 set term tgif;set output "pG-t-gibbs No6.obj";replot;set term x11
8402 icp pG-t-gibbs No6.obj ~/13iconip/speech/draft/
8403 set term x11
8404 set style data 1
8405 plot [-2:15,9][0:2:1:1] "test2_s+dl1000_C2_v-2_No6.dat" using ($1):($2) t "pG" lt 1, "" using ($1):($
2):($2-$4):($2+$5) with errorbars "" pt 6 lt 1, "test2_sd1000_C1_v-2_No6.dat" using ($1+0.2):($2) t ""
lt 2, "" using ($1+0.2):($2):($2-$4):($2+$5) with errorbars t "" pt 4 lt 2
8407 set term tgif;set output "pG-t-gibbs No6.obj";replot;set term x11
8408 #gnuplot
8409 icp pG-t-gibbs No6.obj ~/13iconip/speech/draft/
8410 set term x11
```



```
8524 test=test:s:1000:$(ics):$(icd):$(T);pApAdT=pApAdT:0.5:0.96:$(TD);LAR=LAR:0.5:0:$(na);ver=ver:-2; #be
st for ver:-2 #for No6
8525 test=test:s:1000:$(ics):$(icd):$(T);pApAdT=pApAdT:0.5:0.965:$(TD);LAR=LAR:0.5:0:$(na);ver=ver:-2; #b
est for ver:-2 #for No5
8526 test=test:s:1000:$(ics):$(icd):$(T);pApAdT=pApAdT:0.5:0.97:$(TD);LAR=LAR:0.5:0:$(na);ver=ver:-2; #be
st for ver:-2 #for No4
8527 echo "#$test:$pART:$LAR"
8528 cmd="speakerdigit_v2 $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs:0 $beta $sdp $IT $sdt $ver $pApAdT $L
AR $test";
8529 echo $cmd: $cmd;
8530 echo "#Done for $test:$pART:$LAR"
8531 cmdl="cp tmp/testad_stat.dat ../12voicedata/allpole/test2_s+d1000_c$(C)_v-2_bayes_No$(No).dat"
8532 echo $cmdl: $cmdl;
8533 done
8534 #for No6
8535 cd ~/sotu/2012/12voicedata/allpole/
8536 gnuplot
8537 set style data 1
8538 set xtics (0.5,10,15);set ytics (0,0.5,0.96,1.0);set grid
8539 plot [-2:15,9]([-0.2:1.1] "test2_s+d1000_C2_v-2_bayes_No6.dat" using ($1):($2) t "pgd" lt 1, "" using ($1):($
2) using ($2)-($29):($27+$30) with errorbars t "" pt 6 lt 1, "test2_s+d1000_C1_v-2_bayes_No6.dat" using
($1+0.2):($2) t "" lt 2, "" using ($1+0.2):($27)-($29):($27+$30) with errorbars t "" pt 6 lt 1 2, "test2
_s+d1000_C4_v-2_bayes_No6.dat" using ($1+0.4):($2) t "" lt 3, "" using ($1+0.4):($27)-($29):($27+$30) w
ith errorbars t "" pt 6 lt 3
8540 set term tgif;set output "pgd-t_bayes_No6.obj";replot;set term xll
8541 icp pgd-t_bayes_No6.obj ~/13iconip/speech/draft/
8542 cd ~/sotu/2012/12voicedata/allpole/
8543 set term xll
8544 set style data 1
8545 set xtics (0.5,10,15);set ytics (0,0.5,1.0);set grid
8546 plot [-2:15,9]([-0.2:1.1] "test2_s+d1000_C2_v-2_bayes_No6.dat" using ($1):($2) t "pgd" lt 1, "" using
($1):($2)-($24):($2+$5) with errorbars t "" pt 6 lt 1, "test2_s+d1000_C1_v-2_bayes_No6.dat" using ($1+0.2
):($2) t "" lt 2, "" using ($1+0.2):($2)-($2-$4):($2+$5) with errorbars t "" pt 4 lt 2
8547 set term tgif;set output "pgd-t_bayes_No6.obj";replot;set term xll
8548 icp pg-t_bayes_No6.obj ~/13iconip/speech/draft/
8549 #Exa2
8550 t15 p50.013u0.028u0.003u0.010LC.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.97 LAR0
.5:0:0 iCT0:0/5 midlv-2 dA949 pAd0.9590u0.144u0.621u0.031
8551 t15 p50.366u0.142u0.557u0.024LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA944:FR56:SA0 pApAd0.5:0.97 LAR0
.5:0:0 iCT0:0/5 midlv-2 dA963 pAd0.9700u.0115u0.590u0.020
8552 t15 p50.960u.142u0.142u0.627u0.030LC.003-0.998 iC1000=TR295:FA705:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.97 LAR
0.5:0:0 iCT0:1/5 midlv-2 dA725 pAd0.827u0.289u0.508u0.160
8553 t15 p50.965u0.126u0.584u0.025LC.003-0.998 iC1000=FR563:FA437:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.97 LAR
0.5:0:0 iCT0:2/5 midlv-2 dA445 pAd0.655u0.386u0.456u0.032
8554
8555
8556
8557 2013/05/26 for iconip2013 old
8558 #####
8559 読者+数字 照合 ver=-2で大きい値の最適化
8560 (1/0/5指定読者+5/5指定数字列のテスト,
8561 (2/1/5指定読者+5/5指定数字列のテスト,
8562 (3/1/5指定読者+4/5指定数字列のテスト,
8563 (4/1/5指定読者+3/5指定数字列のテスト,
8564 (5/1/5指定読者+2/5指定数字列のテスト,
8565 #Exo1:after setting default environment 2013/02/27
8566 #No-1:T=5;NA=1;for C in 1 2 3 4 5 6 7; do
8567 #No-2:T=5;NA=0;for C in 1 2 3 4 5 6 7; do
8568 #No-3:T=10;NA=0;for C in 2; do
8569 #No-4:T=6;NA=0;TD=48;for C in 1 2 3 4 ; do
8570 #No-5:T=6;NA=0;TD=24;for C in 1 2 3 4 ; do
8571 if [ "$C" = "1" ]; then iCs=1; iCd=0; fi
8572 if [ "$C" = "2" ]; then iCs=0; iCd=0; fi
8573 if [ "$C" = "3" ]; then iCs=0; iCd=1; fi
8574 if [ "$C" = "4" ]; then iCs=0; iCd=2; fi
8575 if [ "$C" = "5" ]; then iCs=0; iCd=3; fi
8576 if [ "$C" = "6" ]; then iCs=0; iCd=4; fi
8577 if [ "$C" = "7" ]; then iCs=0; iCd=5; fi
8578 test=test:s:1000:$(ics):$(icd):$(T);pApAdT=pApAdT:0.5:0.96:$(TD);LAR=LAR:0.5:0:$(na);ver=ver:-2; #be
st for ver:-2 #for No5
8579 test=test:s:1000:$(ics):$(icd):$(T);pApAdT=pApAdT:0.5:0.96:$(TD);LAR=LAR:0.5:0:$(na);ver=ver:-2; #be
st for ver:-2 #for No4
8580 #test=test:s:1000:$(ics):$(icd):$(T);pApAdT=pApAdT:0.5:0.97:50:LAR=LAR:0.5:0:$(na);ver=ver:-2; #best
for ver:-2
8581 echo "#$test:$pART:$LAR"
8582 cmd="speakerdigit_v2 $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $pApAdT $LA
R $test";
8583 echo $cmd: $cmd;
8584 echo "#Done for $test:$pART:$LAR"
8585 cmdl="cp tmp/testad_stat.dat ../12voicedata/allpole/test2_s+d1000_c$(C)_v-2_No$(No).dat"
8586 echo $cmdl: $cmdl;
8587 done
8588 #for No5
```

```
8588 #for No4
8589 #for check pg and pg_d and errorbars
8590 cd ~/sotu/2012/12voicedata/allpole/
8591 gnuplot
8592 set style data 1
8593 set xtics (0,6,12,18);set ytics (0,0.5,0.96,1.0);set grid #set xtics (0,6,12,18);set ytics (0,0.2,0.
4,0.6,0.8,1.0);
8594 set xtics (0,6,12,18);set ytics (0,0.5,0.96,1.0);set grid #set xtics (0,6,12,18);set ytics (0,0.2,0.
4,0.6,0.8,1.0);
8595 plot [-2:20]([-0.1:1.1] "test2_s+d1000_C2_v-2_No4.dat" using ($1):($2) t "pgd" lt 1, "" using ($1):($
27):($27)-($29):($27+$30) with errorbars t "" pt 6 lt 1, "test2_s+d1000_C1_v-2_No4.dat" using ($1+0.2):($27
) t "" lt 2, "" using ($1+0.2):($27)-($29):($27+$30) with errorbars t "" pt 6 lt 2, "test2_s+d1000_C4_v-
2_No4.dat" using ($1+0.4):($27) t "" lt 3, "" using ($1+0.4):($27)-($29):($27+$30) with errorbars t ""
pt 6 lt 3,0,1,0.97
8596 set term tgif;set output "pgd-t_gibbs_No4.obj";replot;set term xll
8597 icp pgd-t_gibbs_No4.obj ~/13iconip/speech/draft/
8598 #for No4
8599 cd ~/sotu/2012/12voicedata/allpole/
8600 gnuplot
8601 set style data 1
8602 set xtics (0,6,12,18);set ytics (0,0.5,1.0);set grid
8603 plot [-2:20]([-0.1:1.1] "test2_s+d1000_C2_v-2_No4.dat" using ($1):($2) t "pgd" lt 1, "" using ($1):($2
)-($24):($2+$5) with errorbars t "" pt 6 lt 1, "test2_s+d1000_C1_v-2_No4.dat" using ($1+0.2):($2) t "" lt
2, "" using ($1+0.2):($2)-($2-$4):($2+$5) with errorbars t "" pt 4 lt 2
8604 set term tgif;set output "pg-t_gibbs_No4.obj";replot;set term xll
8605 icp pg-t_gibbs_No4.obj ~/13iconip/speech/draft/
8606 #####
8607 #Ex1:gibbs No4
8608 #T=48
8609 t18 p50.020u0.015u0.007u0.027LC.002-0.858 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT1:0/6 midlv-2 dA976 pAd0.987u0.017u0.042u0.003
8610 t18 p50.981u0.030u0.070u0.008LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA980:FR20:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:0/6 midlv-2 dA980 pAd0.987u0.012u0.030u0.003
8611 t18 p50.980u0.029u0.066u0.009LC.003-0.998 iC1000=TR159:FA841:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR
0.5:0:0 iCT0:1/6 midlv-2 dA841 pAd0.971u0.035u0.071u0.014
8612 t18 p50.979u0.041u0.097u0.010LC.003-0.998 iC1000=TR955:FA45:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA45 pAd0.896u0.085u0.142u0.044
8613
8614 t6 p50.969u0.061u0.136u0.018LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA924:FR76:SA0 pApAd0.5:0.96 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA924 pAd0.981u0.039u0.100u0.009
8615 t12 p50.978u0.037u0.084u0.011LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA963:FR37:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:0/6 midlv-2 dA963 pAd0.986u0.014u0.032u0.004
8616 t18 p50.981u0.030u0.070u0.008LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA980:FR20:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:0/6 midlv-2 dA980 pAd0.987u0.012u0.030u0.003
8617 t24 p50.982u0.027u0.063u0.007LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA987:FR13:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:0/6 midlv-2 dA987 pAd0.988u0.009u0.023u0.002
8618 t30 p50.983u0.024u0.056u0.006LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA992:FR8:SA0 pApAd0.5:0.96 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA992 pAd0.988u0.006u0.014u0.002
8619 t36 p50.983u0.023u0.055u0.006LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA993:FR7:SA0 pApAd0.5:0.96 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA993 pAd0.988u0.006u0.014u0.001
8620 t42 p50.984u0.021u0.049u0.005LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA994:FR6:SA0 pApAd0.5:0.96 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA994 pAd0.989u0.004u0.010u0.001
8621 t48 p50.984u0.019u0.043u0.005LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA994:FR6:SA0 pApAd0.5:0.96 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA994 pAd0.989u0.004u0.009u0.001
8622
8623 t6 p50.961u0.089u0.203u0.025LC.003-0.998 iC1000=TR849:FA151:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA151 pAd0.842u0.152u0.232u0.087
8624 t12 p50.975u0.047u0.109u0.013LC.003-0.998 iC1000=TR933:FA67:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA67 pAd0.882u0.106u0.178u0.055
8625 t18 p50.979u0.041u0.097u0.010LC.003-0.998 iC1000=TR955:FA45:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA45 pAd0.896u0.085u0.142u0.044
8626 t24 p50.980u0.034u0.080u0.009LC.003-0.998 iC1000=TR960:FA40:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA40 pAd0.903u0.075u0.125u0.039
8627 t30 p50.982u0.028u0.064u0.008LC.003-0.998 iC1000=TR965:FA35:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA35 pAd0.905u0.073u0.120u0.038
8628 t36 p50.983u0.022u0.049u0.006LC.003-0.998 iC1000=TR973:FA27:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA27 pAd0.908u0.068u0.110u0.036
8629 t42 p50.983u0.019u0.042u0.006LC.003-0.998 iC1000=TR984:FA16:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA16 pAd0.910u0.063u0.100u0.034
8630 t48 p50.984u0.018u0.039u0.005LC.003-0.998 iC1000=TR985:FA15:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR0
.5:0:0 iCT0:2/6 midlv-2 dA15 pAd0.912u0.060u0.096u0.033
8631
8632 #T=18
8633 #t18 p50.020u0.016u0.007u0.029LC.002-0.870 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR
0.5:0:0 iCT1:0/6 midlv-2 dA986 pAd0.987u0.014u0.034u0.003
8634 #t18 p50.979u0.030u0.067u0.009LC.003-0.998 iC0=TR0:FA0:SR0 CI000=TA976:FR24:SA0 pApAd0.5:0.96 LAR
0.5:0:0 iCT0:0/6 midlv-2 dA976 pAd0.987u0.009u0.022u0.003
8635 #t18 p50.980u0.037u0.089u0.009LC.003-0.998 iC1000=TR147:FA853:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LA
R0.5:0:0 iCT0:1/6 midlv-2 dA853 pAd0.972u0.038u0.076u0.013
8636 #t18 p50.981u0.026u0.056u0.008LC.003-0.998 iC1000=TR943:FA57:SR0 CO=TA0:FR0:SA0 pApAd0.5:0.96 LAR
0.5:0:0 iCT0:2/6 midlv-2 dA57 pAd0.897u0.090u0.155u0.045
8637
8638 #for No5
```

```
8639 #for check pg and pg_d and errorbars
8640 cd ~/setu/2012/12/voicedata/allpole/
8641 gnuplot
8642 set style data 1
8643 set xtics (0.6,12,18,24)/set ytics (0.0,5.0,9.65,1.0)/set grid #set xtics (0.6,12,18)/set ytics (0.0,
2.0,4.0,6.0,8.1,10);
8644 plot [-2:26][0:-0.1:1.1] "test2_s+dl000_C2_v-2_No5.dat" using ($1):($27) t "pgd" lt 1, "" using ($1):($27):($27-$29):($27+$30) with yerrorbars t "" pt 6 lt 1, "test2_s+dl000_C3_v-2_No5.dat" using ($1+$0.2):($27)
t "" lt 2, "" using ($1+$0.2):($27):($27-$29):($27+$30) with yerrorbars t "" pt 6 lt 2, "test2_s+dl000_C4_v-
2_No5.dat" using ($1+$0.4):($27) t "" lt 3, "" using ($1+$0.4):($27):($27-$29):($27+$30) with yerrorbars t ""
pt 6 lt 3
8645 set term tgif;set output "pgd_t_gibbs.obj";replot;set term X11
8646 lcp pcd_t_gibbs.obj ~/l3iconip/speech/draft/
8647
8648 cd ~/setu/2012/12/voicedata/allpole/
8649 gnuplot
8650 set style data 1
8651 set xtics (0.6,12,18,24)/set ytics (0.0,5.1,10)/set grid
8652 plot [-2:26][0:-0.1:1.1] "test2_s+dl000_C2_v-2_No5.dat" using ($1):($2) t "pg" lt 1, "" using ($1):($2
):($2-$4):($2+$5) with yerrorbars t "" pt 6 lt 1, "test2_s+dl000_C1_v-2_No5.dat" using ($1+$0.2):($2) t "" lt
2, "" using ($1+$0.2):($2):($2-$4):($2+$5) with yerrorbars t "" pt 4 lt 2
8653 set term tgif;set output "pg-t_gibbs.obj";replot;set term X11
8654 lcp pg-t_gibbs.obj ~/l3iconip/speech/draft/
8655 #for No5
8656 t24 ps0.021U0.015U00.007U00.025LC0.002-0.868 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:1/6 midlv-2 dA992 pD0.988U0.007U00.017U00.002
8657 t24 ps0.983U0.026U00.057U00.007LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA984:FR16:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:0/6 midlv-2 dA984 pD0.988U0.009U00.023U00.002
8658 t24 ps0.981U0.023U00.050U00.008LC0.003-0.998 iC1000=TR127:FA873:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR
0:5:0 iCT0:1/6 midlv-2 dA873 pD0.976U0.022U00.041U00.010
8659 t24 ps0.981U0.029U00.065U00.008LC0.003-0.998 iC1000=TR979:FA21:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:2/6 midlv-2 dA21 pD0.902U0.077U00.128U00.040
8660
8661
8662 #Result is saved in tmp/tested_stat.dat(same order as above) and tmp/tested.dat.
8663 #Done for test:5:000:0:0:6;pAErr: 85;20:10:LAR:0.5:0:0
8664 cp tmp/tested_stat.dat ../12voicedata/allpole/test2_s+dl000_C2_v-2_No4.dat
8665
8666
8667 t24 ps0.021U0.015U00.007U00.025LC0.002-0.868 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.965 LAR
0:5:0 iCT0:1/6 midlv-2 dA989 pD0.988U0.007U00.017U00.002
8668 t24 ps0.983U0.026U00.057U00.007LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA981:FR19:SA0 pAPAd0.5:0.965 LAR
5:0:0 iCT0:0/6 midlv-2 dA981 pD0.988U0.009U00.023U00.002
8669 t24 ps0.981U0.023U00.050U00.008LC0.003-0.998 iC1000=TR157:FA843:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.965 LA
R0:5:0 iCT0:1/6 midlv-2 dA843 pD0.976U0.022U00.041U00.010
8670 t24 ps0.981U0.029U00.065U00.008LC0.003-0.998 iC1000=TR996:FA4:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.965 LAR0
5:0:0 iCT0:2/6 midlv-2 dA4 pD0.902U0.077U00.128U00.040
8671
8672
8673 #Expl:gibbs No4??
8674 t18 ps0.021U0.015:0.010-0.127 LCO.002-0.997 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:1/6 midlv-2 dA961 pD0.987U0.012
8675 t18 ps0.979U0.037:0.338-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA963:FR37:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA963 pD0.987U0.014
8676 t18 ps0.979U0.038:0.482-0.990 LCO.003-0.998 iC1000=TR191:FA809:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:1/6 midlv-2 dA810 pD0.973U0.037
8677 t18 ps0.979U0.034:0.390-0.990 LCO.003-0.998 iC1000=TR998:FA2:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:2/6 midlv-2 dA2 pD0.890U0.094
8678 t18 ps0.980U0.034:0.420-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:3/6 midlv-2 dA0 pD0.624U0.137
8679
8680 t24 ps0.021U0.015:0.010-0.202 LCO.002-0.868 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:1/6 midlv-2 dA990 pD0.988U0.007
8681 t24 ps0.983U0.026:0.580-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA977:FR23:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA977 pD0.988U0.009
8682 t24 ps0.981U0.023:0.688-0.990 LCO.003-0.998 iC1000=TR187:FA813:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:1/6 midlv-2 dA813 pD0.976U0.022
8683 t24 ps0.981U0.029:0.460-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:2/6 midlv-2 dA0 pD0.902U0.077
8684
8685 t24 ps0.021U0.015U00.007U00.025LC0.002-0.868 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:1/6 midlv-2 dA992 pD0.988U0.007U00.017U00.002
8686 t24 ps0.983U0.026U00.057U00.007LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA984:FR16:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:0/6 midlv-2 dA984 pD0.988U0.009U00.023U00.002
8687 t24 ps0.981U0.023U00.050U00.008LC0.003-0.998 iC1000=TR127:FA873:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR
0:5:0 iCT0:1/6 midlv-2 dA873 pD0.976U0.022U00.041U00.010
8688 t24 ps0.981U0.029U00.065U00.008LC0.003-0.998 iC1000=TR979:FA21:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.96 LAR0
5:0:0 iCT0:2/6 midlv-2 dA21 pD0.902U0.077U00.128U00.040
8689
8690 t6 ps0.969U0.061U00.136U00.018LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA995:FR105:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA995 pD0.981U0.039U00.100U00.009
8691 t12 ps0.978U0.037U00.084U00.011LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA946:FR54:SA0 pAPAd0.5:0.97 LAR0
```

```
5:0:0 iCT0:0/6 midlv-2 dA946 pD0.966U0.014U00.032U00.004
8692 t18 ps0.981U0.030U00.070U00.008LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA966:FR34:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA966 pD0.987U0.012U00.030U00.003
8693 t24 ps0.982U0.027U00.063U00.007LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA977:FR23:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA977 pD0.988U0.009U00.023U00.002
8694 t30 ps0.983U0.024U00.056U00.006LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA980:FR20:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA980 pD0.988U0.006U00.014U00.002
8695 t36 ps0.983U0.023U00.055U00.006LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA984:FR16:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA984 pD0.988U0.006U00.014U00.001
8696 t42 ps0.984U0.021U00.049U00.005LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA989:FR11:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA989 pD0.989U0.004U00.010U00.001
8697 t48 ps0.984U0.019U00.043U00.005LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA989:FR11:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/6 midlv-2 dA989 pD0.989U0.004U00.009U00.001
8698
8699
8700
8701 t6 ps0.021U0.025:0.010-0.322 LCO.002-0.997 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:1/6 midlv-2 dA989 pD0.981U0.043
8702 t6 ps0.965U0.077:0.053-0.990 LCO.004-0.998 iC0=TR0:FA0:SR0 C1000=TA872:FR128:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA876 pD0.970U0.049
8703 t6 ps0.961U0.092:0.105-0.990 LCO.003-0.998 iC1000=TR500:FA500:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:1/6 midlv-2 dA505 pD0.947U0.084
8704 t6 ps0.962U0.081:0.110-0.990 LCO.003-0.998 iC1000=TR989:FA11:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:2/6 midlv-2 dA11 pD0.840U0.153
8705
8707 t18 ps0.021U0.015:0.010-0.127 LCO.002-0.997 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.98 LAR0.
5:0:0 iCT0:1/6 midlv-2 dA932 pD0.987U0.012
8708 t18 ps0.979U0.037:0.338-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA916:FR84:SA0 pAPAd0.5:0.98 LAR0.
5:0:0 iCT0:0/6 midlv-2 dA916 pD0.987U0.014
8709 t18 ps0.979U0.038:0.482-0.990 LCO.003-0.998 iC1000=TR353:FA647:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.98 LAR0
5:0:0 iCT0:1/6 midlv-2 dA648 pD0.973U0.037
8710 t18 ps0.979U0.034:0.390-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.98 LAR0.
5:0:0 iCT0:2/6 midlv-2 dA0 pD0.890U0.094
8711 t18 ps0.980U0.034:0.420-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.98 LAR0.
5:0:0 iCT0:3/6 midlv-2 dA0 pD0.624U0.137
8712
8713
8714 cd ../12voicedata/allpole/
8715 gnuplot
8716 set xtics (0.5,10,15,20)/set ytics (0.0,2.0,4.0,6.0,8.1,10);
8717 #set xtics (0.1,2,3,4,5,6,7,8,9,10)/set ytics (0.0,2.0,4.0,6.0,8.1,10);
8718 #plot [-5:20][0:-0.2:1.4] "test2_s+dl000_C1_v-2_No2.dat" using 1:2 w l, "" using 1:2:3 w errorbars
t "" pt 4 lt 1, "test2_s+dl000_C2_v-2_No2.dat" using ($1):2 w l, "" using ($1):2:3 w errorbars t "" pt 6 lt
1, 0, 0.5, 1
8719 set term tgif;set output "test2_s+dl000-gibbs_No2.obj";replot
8720 lcp test2_s+dl000-gibbs_No2.obj ~/l3iconip/speech/draft/
8721 #Expl:by speakerdigit_v2
8722 t20 ps0.021U0.015:0.010-0.145 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA971 pD0.987U0.010
8723 t20 ps0.980U0.030:0.491-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA971:FR29:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA971 pD0.987U0.009
8724 t20 ps0.981U0.024:0.701-0.990 LCO.004-0.998 iC1000=TR304:FA696:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:1/5 midlv-2 dA696 pD0.966U0.039
8725 t20 ps0.979U0.036:0.466-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.822U0.114
8726 t20 ps0.978U0.045:0.313-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.375U0.106
8727 t5 ps0.023U0.037:0.010-0.483 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:0/5 midlv-2 dA880 pD0.974U0.066
8728 t5 ps0.957U0.096:0.101-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA886:FR114:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA889 pD0.976U0.063
8729 t5 ps0.959U0.082:0.181-0.990 LCO.003-0.998 iC1000=TR579:FA421:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA422 pD0.922U0.123
8730 t5 ps0.958U0.093:0.074-0.990 LCO.003-0.998 iC1000=TR996:FA4:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5:
0:0 iCT0:2/5 midlv-2 dA4 pD0.741U0.202
8731 t5 ps0.951U0.110:0.078-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:3/5 midlv-2 dA0 pD0.354U0.174
8732 t5 ps0.957U0.087:0.069-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:4/5 midlv-2 dA0 pD0.077U0.055
8733 t5 ps0.955U0.096:0.024-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:5/5 midlv-2 dA0 pD0.014U0.027
8734
8735 t50 ps0.020U0.013:0.010-0.142 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA992 pD0.980U0.004
8736 t50 ps0.983U0.023:0.678-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA989:FR11:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA989 pD0.980U0.004
8737 t50 ps0.984U0.021:0.549-0.990 LCO.003-0.998 iC1000=TR240:FA760:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:1/5 midlv-2 dA760 pD0.974U0.026
8738 t50 ps0.983U0.022:0.747-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.837U0.091
8739 t50 ps0.982U0.025:0.628-0.990 LCO.003-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
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5:0:0 iCT0:3/5 midlv-2 dA0 pD0.378U0.087
8740 t50 pS0.983U0.024:0.605-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:4/5 midlv-2 dA0 pD0.062U0.014
8741 t50 pS0.984U0.021:0.741-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
5:0:0 iCT0:5/5 midlv-2 dA0 pD0.010U0.001
8742
8743 t100 pS0.020U0.011:0.010-0.093 LC0.002-0.870 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.98 LAR
5:0:0 iCT1:0/5 midlv-2 dA1 pD0.989U0.002
8744 t100 pS0.986U0.014:0.809-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA928:FR72:SA0 pAPAd0.5:0.98 LAR
5:0:0 iCT0:10/5 midlv-2 dA928 pD0.989U0.002
8745 t100 pS0.986U0.013:0.812-0.990 LC0.003-0.998 iC1000=TR702:FA298:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.98 LA
R0.5:0:0 iCT0:1/5 midlv-2 dA298 pD0.976U0.020
8746 t100 pS0.985U0.016:0.831-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.98 LAR
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.845U0.075
8747 t100 pS0.984U0.017:0.763-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.98 LAR
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.381U0.077
8748
8749 t100 pS0.020U0.011:0.010-0.093 LC0.002-0.870 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR
5:0:0 iCT1:0/5 midlv-2 dA962 pD0.989U0.002
8750 t100 pS0.986U0.014:0.809-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA975:FR25:SA0 pAPAd0.5:0.985 LAR
5:0:0 iCT0:0/5 midlv-2 dA975 pD0.989U0.002
8751 t100 pS0.986U0.013:0.812-0.990 LC0.003-0.998 iC1000=TR517:FA483:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LA
R0.5:0:0 iCT0:1/5 midlv-2 dA483 pD0.976U0.020
8752 t100 pS0.985U0.016:0.831-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.845U0.075
8753
8754 t50 pS0.020U0.013:0.010-0.142 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0.
5:0:0 iCT1:0/5 midlv-2 dA937 pD0.989U0.004
8755 t50 pS0.983U0.023:0.678-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA929:FR71:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:0/5 midlv-2 dA929 pD0.989U0.004
8756 t50 pS0.984U0.021:0.549-0.990 LC0.003-0.998 iC1000=TR577:FA423:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR
5:0:0 iCT0:1/5 midlv-2 dA423 pD0.974U0.026
8757 t50 pS0.983U0.022:0.747-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.837U0.091
8758 t50 pS0.982U0.025:0.628-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.378U0.087
8759
8760 t20 pS0.021U0.015:0.010-0.145 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT1:0/5 midlv-2 dA866 pD0.987U0.010
8761 t20 pS0.980U0.030:0.491-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA871:FR129:SA0 pAPAd0.5:0.985 LAR
5:0:0 iCT0:0/5 midlv-2 dA871 pD0.987U0.009
8762 t20 pS0.981U0.024:0.701-0.990 LC0.004-0.998 iC1000=TR764:FA236:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR
5:0:0 iCT0:1/5 midlv-2 dA236 pD0.966U0.039
8763 t20 pS0.979U0.036:0.466-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.822U0.114
8764 t20 pS0.978U0.045:0.313-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.375U0.106
8765 t20 pS0.981U0.025:0.632-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:4/5 midlv-2 dA0 pD0.064U0.022
8766
8767 t5 pS0.023U0.037:0.010-0.483 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0.
5:0:0 iCT1:0/5 midlv-2 dA766 pD0.974U0.066
8768 t5 pS0.957U0.096:0.101-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA781:FR219:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:0/5 midlv-2 dA764 pD0.976U0.063
8769 t5 pS0.959U0.082:0.181-0.990 LC0.003-0.998 iC1000=TR872:FA128:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0
5:0:0 iCT0:1/5 midlv-2 dA129 pD0.922U0.123
8770 t20 pS0.958U0.093:0.074-0.990 LC0.003-0.998 iC1000=TR999:FA1:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0.5
5:0:0 iCT0:2/5 midlv-2 dA1 pD0.741U0.202
8771 t5 pS0.951U0.110:0.078-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.985 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.354U0.174
8772
8773 t20 pS0.021U0.015:0.010-0.145 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT1:0/5 midlv-2 dA726 pD0.987U0.010
8774 t20 pS0.980U0.030:0.491-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA701:FR299:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:0/5 midlv-2 dA701 pD0.987U0.009
8775 t20 pS0.981U0.024:0.701-0.990 LC0.004-0.998 iC1000=TR977:FA3:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.5
5:0:0 iCT0:1/5 midlv-2 dA3 pD0.966U0.039
8776 t20 pS0.979U0.036:0.466-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.822U0.114
8777 t20 pS0.978U0.045:0.313-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.375U0.106
8778
8779 t50 pS0.020U0.013:0.010-0.142 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.95 LAR0
5:0:0 iCT1:0/5 midlv-2 dA998 pD0.987U0.004
8780 t50 pS0.983U0.023:0.678-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA998:FR2:SA0 pAPAd0.5:0.95 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA998 pD0.989U0.004
8781 t50 pS0.984U0.021:0.549-0.990 LC0.003-0.998 iC1000=TR114:FA886:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.95 LAR
5:0:0 iCT0:1/5 midlv-2 dA886 pD0.974U0.026
8782 t50 pS0.983U0.022:0.747-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.95 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.837U0.091
8783 t50 pS0.023U0.037:0.010-0.483 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT1:0/5 midlv-2 dA728 pD0.974U0.066
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8784 t5 pS0.957U0.096:0.101-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA746:FR254:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:0/5 midlv-2 dA749 pD0.976U0.063
8785 t5 pS0.959U0.082:0.181-0.990 LC0.003-0.998 iC1000=TR875:FA125:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:1/5 midlv-2 dA126 pD0.922U0.123
8786 t50 pS0.020U0.013:0.010-0.142 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT1:0/5 midlv-2 dA712 pD0.989U0.004
8787 t50 pS0.983U0.023:0.678-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA719:FR281:SA0 pAPAd0.5:0.99 LAR
5:0:0 iCT0:0/5 midlv-2 dA719 pD0.989U0.004
8788 t50 pS0.984U0.021:0.549-0.990 LC0.003-0.998 iC1000=TR999:FA1:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA1 pD0.974U0.026
8789 t50 pS0.983U0.022:0.747-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.837U0.091
8790 t50 pS0.982U0.025:0.628-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.378U0.087
8791 t50 pS0.983U0.024:0.605-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:4/5 midlv-2 dA0 pD0.062U0.014
8792 t50 pS0.984U0.021:0.741-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:5/5 midlv-2 dA0 pD0.010U0.001
8793 #
8794 t10 pS0.973U0.063:0.172-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA881:FR119:SA0 pAPAd0.5:0.98 LAR
5:0:0 iCT0:0/5 midlv-2 dA882 pD0.983U0.029
8795 t10 pS0.973U0.063:0.172-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA933:FR67:SA0 pAPAd0.5:0.97 LAR0
5:0:0 iCT0:0/5 midlv-2 dA934 pD0.983U0.029
8796 t10 pS0.977U0.039:0.369-0.990 LC0.003-0.998 iC1000=TR344:FA656:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.97 LAR
5:0:0 iCT0:1/5 midlv-2 dA657 pD0.957U0.055
8797 #
8798 t5 pS0.021U0.027:0.010-0.345 LC0.002-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT1:0/5 midlv-2 dA750 pD0.975U0.073
8799 t5 pS0.960U0.093:0.072-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA746:FR254:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:0/5 midlv-2 dA750 pD0.975U0.064
8800 t5 pS0.961U0.086:0.069-0.990 LC0.003-0.998 iC1000=TR864:FA136:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:1/5 midlv-2 dA136 pD0.929U0.104
8801 t5 pS0.956U0.099:0.062-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.730U0.201
8802 t5 pS0.960U0.089:0.040-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.349U0.172
8803 t5 pS0.952U0.101:0.101-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:4/5 midlv-2 dA0 pD0.076U0.060
8804 t5 pS0.953U0.102:0.053-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0.
5:0:0 iCT0:5/5 midlv-2 dA0 pD0.013U0.011
8805 #
8806 t10 pS0.020U0.018:0.010-0.222 LC0.002-0.859 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT1:0/5 midlv-2 dA750 pD0.984U0.033
8807 t10 pS0.973U0.063:0.172-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA754:FR246:SA0 pAPAd0.5:0.99 LAR
5:0:0 iCT0:0/5 midlv-2 dA755 pD0.983U0.029
8808 t10 pS0.977U0.039:0.369-0.990 LC0.003-0.998 iC1000=TR986:FA14:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:1/5 midlv-2 dA14 pD0.957U0.055
8809 t10 pS0.974U0.049:0.381-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.796U0.145
8810 t10 pS0.976U0.041:0.601-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.371U0.134
8811 t10 pS0.972U0.058:0.308-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:4/5 midlv-2 dA0 pD0.068U0.036
8812 t10 pS0.973U0.056:0.144-0.990 LC0.003-0.998 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAPAd0.5:0.99 LAR0
5:0:0 iCT0:5/5 midlv-2 dA0 pD0.011U0.004
8813
8814 #Exp2:gibbs=gibbs:0; ==baves #bavesでは分散が大きく、バラつく
8815 #No=1;T=5;nA=1;for C in 1 2 3 4 5 6 7; do
8816 #No=2;T=5;nA=0;for C in 1 2 3 4 5 6 7; do
8817 #No=3;T=10;nA=0;for C in 2; do
8818 #No=4;T=6;nA=0;TD=24;for C in 1 2 3 4; do
8819 #No=5;T=6;nA=0;TD=24;for C in 1 2 3 4; do
8820 if [ "$C" = "1" ]; then iCs=1; iCd=0; fi
8821 if [ "$C" = "2" ]; then iCs=0; iCd=0; fi
8822 if [ "$C" = "3" ]; then iCs=0; iCd=1; fi
8823 if [ "$C" = "4" ]; then iCs=0; iCd=2; fi
8824 if [ "$C" = "5" ]; then iCs=0; iCd=3; fi
8825 if [ "$C" = "6" ]; then iCs=0; iCd=4; fi
8826 if [ "$C" = "7" ]; then iCs=0; iCd=5; fi
8827 test-test:5:1000:$(iCs):$(iCd):$(T):pAPAdT=pAPAdT:0.5:0.965:$(TD):LAR=LAR:0.5:0:$(nA):ver=ver:-2; #b
est for ver:-2 #for No5
8828 test-test:5:1000:$(iCs):$(iCd):$(T):pAPAdT=pAPAdT:0.5:0.97:$(TD):LAR=LAR:0.5:0:$(nA):ver=ver:-2; #be
st for ver:-2 #for No4
8829 echo "#$test:$PART:$LAR"
8830 cmd=speakerdigit_v2 $fs $fd $nSdL $pmin $ymr $PmR $void gibbs:0 $beta $sdp $LT $sdt $vzr $pAPAdT $L
AR $test";
8831 echo $cmd; $cmd;
8832 echo #done for $test:$PART:$LAR"
8833 cmd=c=/test2_stat.dat ../12voicedata/allpole/test2_s-d1000_C$[c]_v-2_baves_No$[No].dat"
8834 echo $cmd; $cmd;
8835 done
8836 #for No5
```



```
5:0:0 iCT0:0/5 midlv-2 dA963 pD0.97000.115
8944 t15 pS0.96000.142:0.010-0.990 LC0.003-0.998 iCl000=TR295:FA705:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0:0 iCT0:1/5 midlv-2 dA725 pD0.82700.289
8945 t15 pS0.96500.126:0.010-0.990 LC0.003-0.998 iCl000=TR563:FA437:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0:0 iCT0:2/5 midlv-2 dA445 pD0.65500.386
8946 t15 pS0.96500.125:0.010-0.990 LC0.003-0.998 iCl000=TR820:FA180:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0:0 iCT0:3/5 midlv-2 dA183 pD0.45200.428
8947 t15 pS0.96700.122:0.010-0.990 LC0.003-0.998 iCl000=TR995:FA5:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
:0:0 iCT0:4/5 midlv-2 dA5 pD0.19400.350
8948 t15 pS0.96300.137:0.010-0.990 LC0.003-0.998 iCl000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.
8949
8949 #Exp3:ytmc=-1 yth=0
8950 #No=1:T=5:na=1:for C in 1 2 3 4 5 6 7: do
8951 #No=2:T=7:na=0:for C in 1 2 3 4 5 6 7: do
8952 #No=3:T=10:na=0:for C in 2: do
8953 #No=4:T=7:na=0:for C in 1 2 3 4: do
8954 #No=5:T=6:na=0:TD=48:for C in 1 2 3 4: do
8955 #No=5:T=6:na=0:TD=24:for C in 1 2 3 4: do
8956 if [ "$C" = "1" ]; then iCS=1; iCD=0; fi
8957 if [ "$C" = "2" ]; then iCS=1; iCD=0; fi
8958 if [ "$C" = "3" ]; then iCS=0; iCD=1; fi
8959 if [ "$C" = "4" ]; then iCS=0; iCD=2; fi
8960 if [ "$C" = "5" ]; then iCS=0; iCD=3; fi
8961 if [ "$C" = "6" ]; then iCS=0; iCD=4; fi
8962 if [ "$C" = "7" ]; then iCS=0; iCD=5; fi
8963 test=test:5:1000:$(iCS):$(iCD):$(T):pAPAdT=pAPAdT:0.5:0.959:$(TD):LAR=LAR:0.5:0:$(na):ver=ver:-2: #b
est for ver:-2 #for No5
8964 test=test:5:1000:$(iCS):$(iCD):$(T):pAPAdT=pAPAdT:0.5:0.945:$(TD):LAR=LAR:0.5:0:$(na):ver=ver:-2: #b
est for ver:-2 #for No4
8965 #Test=test:5:1000:$(iCS):$(iCD):$(T):pAPAdT=pAPAdT:0.5:0.963:50:ILAR=LAR:0.5:0:$(na):ver=ver:-2: #bes
t for ver:-2
8966 #Test=test:5:1000:$(iCS):$(iCD):$(T):pAPAdT=pAPAdT:0.5:0.97:50:ILAR=LAR:0.5:0:$(na):ver=ver:-2: #best
for ver:-2
8967 echo "#Test:$pARt:$LAR"
8968 cmd= speakerdigit_v2 $fs $fd $nSLD $pmin ytm:-1 $PNR $void $gibbs $beta $sdp $!T $sdt $ver $pAPAdT $
LAR $Test;:
8969 echo $cmd; $cmd;
8970 echo "#Done for $Test:$pARt:$LAR"
8971 cmd1=cp tmp/testcd.stat.dat ../12voicedata/allpole/test2_s-d1000_C$[C]_v-2_yth0_No$[No].dat"
8972 echo $cmd1; $cmd1;
8973 done
8974 #for No4
8975 #for check pg and pG_d and errorbars
8976 cd ~/sotu/2012/12voicedata/allpole/
8977 gnuplot
8978 set style data 1
8979 set xtics (0.6,12,18,24):set ytics (0.0,5.0,945,1.0):set grid #set xtics (0.6,12,18):set ytics (0.0,2.0,2.0
.4,0.6,0.8,1.0):
8980 plot [-2:20][0:-1:1:1] "test2_s-d1000_C2_v-2_yth0_No4.dat" using ($1):($2) t "pGd" lt 1, "" using (
$1):($2):($27-$29):($27+$30) with errorbars t "" pt 6 lt 1, "test2_s-d1000_C3_v-2_yth0_No4.dat" using ($1+
0.2):($27) t "" lt 2, "" using ($1+0.2):($27):($27-$29):($27+$30) with errorbars t "" pt 6 lt 2, "test2_s-d
1000_C4_v-2_yth0_No4.dat" using ($1+0.4):($27) t "" lt 3, "" using ($1+0.4):($27):($27-$29):($27+$30) with y
errorbars t "" pt 6 lt 3
8981 set term tgif;set output "pGd-t_yth0_No4.obj";replot;set term x11
8982 lcp pGd-t_yth0_No4.obj ~/13iconip/speech/draft/
8983
8984 cd ~/sotu/2012/12voicedata/allpole/
8985 gnuplot
8986 set style data 1
8987 set xtics (0.6,12,18):set ytics (0.0,5.1,1.0):set grid
8988 plot [-2:20][0:-1:1:1] "test2_s-d1000_C2_v-2_yth0_No4.dat" using ($1):($2) t "pG" lt 1, "" using ($1
):($2):($2-$4):($2+$5) with errorbars t "" pt 6 lt 1, "test2_s-d1000_C1_v-2_yth0_No4.dat" using ($1+0.2):($
2) t "" lt 2, "" using ($1+0.2):($2):($2-$4):($2+$5) with errorbars t "" pt 4 lt 2
8989 set term tgif;set output "pG-t_yth0_No4.obj";replot;set term x11
8990 lcp pG-t_yth0_No4.obj ~/13iconip/speech/draft/
8991 #cd ../12voicedata/allpole/
8992 #gnuplot
8993 #set xtics (0.6,12,18,24):set ytics (0.0,2.0,2.0,4.0,6.0,8.1,0):
8994 #set xtics (0.1,2.3,4.5,6.7,8.9,10):set ytics (0.0,2.0,4.0,6.0,8.1,0):
8995 #plot [-0.5:18.5][0:-2:1:1] "test2_s-d1000_C1_v-2_yth0_No2.dat" using 1:2 w l, "" using 1:2:3 w erro
rbars t "" pt 4 lt 1, "test2_s-d1000_C2_v-2_yth0_No2.dat" using ($1):2 w l, "" using ($1):2:3 w errorbars t
"" pt 6 lt 1, 0, 0.5, 1
8996 #set term tgif;set output "test2_s-d1000-gibbs_yth0_No2.obj";replot
8997 #lcp test2_s-d1000-gibbs_yth0_No2.obj ~/13iconip/speech/draft/
8998 #Exp3:ytmc=-1 yth=0 T=48
8999 #No=3:ytmc=-1 yth=0 T=48
9000 t18 pS0.01500.01200.0040pD0.023LC0.001-0.998 iCl000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.945 LAR
0.5:0:0 iCT1:0/6 midlv-2 dA395 pD0.98600.02000.0490p0.004
9001 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA978:FR22:SA0 pAPAd0.5:0.945 LAR
0.5:0:0 iCT0:0/6 midlv-2 dA978 pD0.98600.01600.0390p0.004
9002 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA978:FR22:SA0 pAPAd0.5:0.945 LAR
0.5:0:0 iCT0:1/6 midlv-2 dA981 pD0.98600.01600.0390p0.004
9003 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA981:FR19:SA0 pAPAd0.5:0.944 LAR
0.5:0:0 iCT0:2/6 midlv-2 dA981 pD0.98600.01600.0390p0.004
9004 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA981:FR19:SA0 pAPAd0.5:0.944 LAR
0.5:0:0 iCT0:3/6 midlv-2 dA981 pD0.98600.01600.0390p0.004
9005 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA981:FR19:SA0 pAPAd0.5:0.945 LAR
0.5:0:0 iCT0:4/6 midlv-2 dA978 pD0.98600.01600.0390p0.004
9006 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA978:FR22:SA0 pAPAd0.5:0.945 LAR
0.5:0:0 iCT0:5/6 midlv-2 dA978 pD0.98600.01600.0390p0.004
9007 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA976:FR24:SA0 pAPAd0.5:0.95 LAR0
.5:0:0 iCT0:0/6 midlv-2 dA976 pD0.98600.01600.0390p0.004
9008 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA969:FR31:SA0 pAPAd0.5:0.953 LAR
0.5:0:0 iCT0:0/6 midlv-2 dA969 pD0.98600.01600.0390p0.004
9009 t18 pS0.01500.01200.0040pD0.023LC0.001-0.998 iCl000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LAR
0.5:0:0 iCT1:0/6 midlv-2 dA960 pD0.98600.02000.0490p0.004
9010 t18 pS0.98300.02500.0600pD0.066LC0.002-0.999 iCO=TR0:FA0:SR0 Cl000=TA967:FR33:SA0 pAPAd0.5:0.954 LAR
0.5:0:0 iCT0:0/6 midlv-2 dA967 pD0.98600.01600.0390p0.004
9011 t18 pS0.98300.02300.0500pD0.066LC0.002-0.999 iCl000=TR148:FA852:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9012 t18 pS0.98300.02300.0500pD0.066LC0.002-0.999 iCl000=TR144:FA856:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9013 t18 pS0.98300.02300.0500pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9014 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9015 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9016 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9017 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9018 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9019 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9020 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9021 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9022 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9023 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9024 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9025 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9026 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9027 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9028 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9029 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9030 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9031 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9032 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9033 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9034 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9035 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9036 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9037 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9038 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9039 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9040 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9041 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9042 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9043 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9044 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9045 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9046 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9047 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9048 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9049 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9050 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9051 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9052 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9053 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9054 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9055 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9056 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9057 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9058 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9059 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9060 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9061 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9062 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9063 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9064 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9065 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9066 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9067 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9068 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9069 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9070 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9071 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9072 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9073 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9074 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9075 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9076 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9077 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9078 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9079 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9080 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9081 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9082 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9083 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9084 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9085 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9086 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9087 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9088 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9089 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9090 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9091 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9092 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9093 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9094 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9095 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9096 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9097 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9098 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9099 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9100 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9101 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR872:FA128:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.954 LA
9102 t18 pS0.98300.02100.0470pD0.066LC0.002-0.999 iCl000=TR
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9055 t24 p$0.98600.0130m0.0250p0.0041c0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA979:FR21:SA0 pAPAd0.5:0.965 LAR
0:0 iCT0:0/6 midlv-2 dA979 pD0.98700.0140m0.0140p0.0350p0.003
9056 iCT0:0/6 midlv-2 dA979 pD0.98700.0140m0.005C0.002-0.999 iC1000=TR165:FA835:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.965 LA
R0.5:0 iCT0:1/6 midlv-2 dA835 pD0.97500.0270m0.0510p0.011
9057 t24 p$0.98500.0170m0.0360p0.005C0.002-0.999 iC1000=TR994:FA6:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.965 LAR0
.5:0 iCT0:2/6 midlv-2 dA6 pD0.90200.0750m0.1220p0.039
9058
9059 #for No4
9060 #for check pg and pg_d and errorbars
9061 cd ~/sotu/2012/12voicedata/allpole/
9062 #set term tgif;set output "pgd-t_yth0_No4.obj" ~/l3iconip/speech/draft/
9063 gnuplot
9064 set style data 1
9065 set xtics (0,6,12,18);set ytics (0,0.5,0.962,1.0);set grid #set xtics (0,6,12,18);set ytics (0,0.2,0
.4,0.6,0.8,1.0);
9066 plot [-2:20][0:1.1,1,1] "test2_s+dl000_C2_v-2_yth0_No4.dat" using ($1):($2) t "pgd" lt 1, "" using (
$1):($27):($27+$29):($27+$30) with yerrorbars t "" pt 6 lt 1, "test2_s+dl000_C3_v-2_yth0_No4.dat" using ($1+
0.2):($27) t "" lt 2, "" using ($1+0.2):($27):($27+$29):($27+$30) with yerrorbars t "" pt 6 lt 2, "test2_s+d
l000_C4_v-2_yth0_No4.dat" using ($1+0.4):($27) t "" lt 3, "" using ($1+0.4):($27):($27+$29):($27+$30) with y
errorbars t "" pt 6 lt 3
9067 set term tgif;set output "pgd-t_yth0_No4.obj";replot;set term X11
9068 iCp pgd-t_yth0_No4.obj ~/l3iconip/speech/draft/
9069
9070 cd ~/sotu/2012/12voicedata/allpole/
9071 gnuplot
9072 set style data 1
9073 set xtics (0,6,12,18);set ytics (0,0.5,1.0);set grid
9074 plot [-2:20][0:1.1,1,1] "test2_s+dl000_C2_v-2_yth0_No4.dat" using ($1):($2) t "pgd" lt 1, "" using ($1
):($2):($2+$4):($2+$5) with yerrorbars t "" pt 6 lt 1, "test2_s+dl000_C1_v-2_yth0_No4.dat" using ($1+0.2):($
2) t "" lt 2, "" using ($1+0.2):($2):($2+$4):($2+$5) with yerrorbars t "" pt 4 lt 2
9075 set term tgif;set output "pg-t_yth0_No4.obj";replot;set term X11
9076 iCp pg-t_yth0_No4.obj ~/l3iconip/speech/draft/
9077 #cd ~/l2voicedata/allpole/
9078 #gnuplot
9079 #set xtics (0,6,12,18,24);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9080 #set xtics (0,1,2,3,4,5,6,7,8,9,10);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9081 #plot [-0.5:18.5][0:2.1,1,1] "test2_s+dl000_C1_v-2_yth0_No2.dat" using 1:2 w l, "" using 1:2:3 w erro
rbars t " pt 4 lt 1, "test2_s+dl000_C2_v-2_yth0_No2.dat" using ($1):2 w l, "" using ($1):2:3 w errorbars t
"" pt 6 lt 1, 0, 0.5, 1
9082 #set term tgif;set output "test2_s+dl000_gibbs_yth0_No2.obj";replot
9083 #iCp test2_s+dl000_gibbs_yth0_No2.obj ~/l3iconip/speech/draft/
9084 #exp3:ytm:-1 yth=0
9085 #t18 p$0.01500.014:0.010-0.310 LCO.001-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR
0:0 iCT0:0/6 midlv-2 dA967 pD0.98600.020
9086 t18 p$0.98300.021:0.703-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA962:FR38:SA0 pAPAd0.5:0.962 LAR0
.5:0 iCT0:0/6 midlv-2 dA962 pD0.98600.017
9087 t18 p$0.98300.023:0.697-0.990 LCO.002-0.999 iC1000=TR171:FA829:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR
0:0 iCT0:1/6 midlv-2 dA829 pD0.97000.042
9088 t18 p$0.98300.021:0.760-0.990 LCO.002-0.999 iC1000=TR976:FA24:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR0
.5:0 iCT0:2/6 midlv-2 dA24 pD0.89500.096
9089 t18 p$0.98300.024:0.563-0.990 LCO.003-0.999 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR0
.5:0 iCT0:3/6 midlv-2 dA0 pD0.64200.127
9090 #exp3:ytm:-1 yth=0
9091 t24 p$0.01600.015:0.010-0.206 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:0/6 midlv-2 dA967 pD0.98700.011
9092 t24 p$0.98600.013:0.747-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA974:FR26:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:0/6 midlv-2 dA974 pD0.98700.014
9093 t24 p$0.98400.017:0.746-0.990 LCO.002-0.999 iC1000=TR200:FA800:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:1/6 midlv-2 dA800 pD0.97500.027
9094 t24 p$0.98500.017:0.704-0.990 LCO.002-0.999 iC1000=TR998:FA2:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
0:0 iCT0:2/6 midlv-2 dA2 pD0.90200.075
9095
9096 t6 p$0.02000.049:0.010-0.925 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
0:0 iCT0:0/6 midlv-2 dA872 pD0.97700.043
9097 t6 p$0.97200.056:0.257-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA885:FR115:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:0/6 midlv-2 dA887 pD0.97900.057
9098 t6 p$0.96900.067:0.286-0.990 LCO.002-0.999 iC1000=TR479:FA521:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:1/6 midlv-2 dA521 pD0.94400.097
9099 t6 p$0.96800.076:0.066-0.990 LCO.002-0.999 iC1000=TR988:FA12:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
0:0 iCT0:2/6 midlv-2 dA12 pD0.84000.154
9100
9101 #
9102 t24 p$0.01600.015:0.010-0.206 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.968 LAR0
.5:0 iCT0:0/6 midlv-2 dA872 pD0.98700.011
9103 t24 p$0.98600.013:0.747-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA979:FR21:SA0 pAPAd0.5:0.968 LAR0
.5:0 iCT0:0/6 midlv-2 dA979 pD0.98700.014
9104 t24 p$0.98400.017:0.746-0.990 LCO.002-0.999 iC1000=TR187:FA813:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.968 LAR
0:0 iCT0:1/6 midlv-2 dA813 pD0.97500.027
9105 t24 p$0.98500.017:0.704-0.990 LCO.002-0.999 iC1000=TR996:FA4:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.968 LAR0
.5:0 iCT0:2/6 midlv-2 dA4 pD0.90200.075
9106
9107 t5 p$0.01800.069:0.010-0.990 LCO.002-0.998 iC1000=TR997:FA3:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5:
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0:0 iCT0:0/6 midlv-2 dA957 pD0.96300.135
9108 t5 p$0.96300.133:0.010-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA926:FR74:SA0 pAPAd0.5:0.97 LAR0.5
0:0 iCT0:0/6 midlv-2 dA951 pD0.96000.141
9109 t5 p$0.95500.158:0.010-0.990 LCO.003-0.998 iC834=TR218:FA616:SR0 C166=TA156:FR10:SA0 pAPAd0.5:0.97 L
AR0.5:0 iCT0:1/6 midlv-2 dA790 pD0.87200.255
9110 t5 p$0.95800.146:0.010-0.990 LCO.003-0.998 iC1000=TR481:FA519:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:2/6 midlv-2 dA533 pD0.70900.366
9111
9112
9113
9114 t24 p$0.98600.013:0.747-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA975:FR25:SA0 pAPAd0.5:0.969 LAR0
.5:0 iCT0:0/6 midlv-2 dA975 pD0.98700.014
9115
9116
9117
9118
9119 t24 p$0.01600.015:0.010-0.206 LCO.002-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR0
.5:0 iCT0:0/6 midlv-2 dA982 pD0.98700.011
9120 t24 p$0.98600.013:0.747-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA981:FR19:SA0 pAPAd0.5:0.962 LAR0
.5:0 iCT0:0/6 midlv-2 dA981 pD0.98700.014
9121 t24 p$0.98400.017:0.746-0.990 LCO.002-0.999 iC1000=TR150:FA850:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR
0:0 iCT0:1/6 midlv-2 dA850 pD0.97500.027
9122 t24 p$0.98500.017:0.704-0.990 LCO.002-0.999 iC1000=TR989:FA11:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.962 LAR0
.5:0 iCT0:2/6 midlv-2 dA11 pD0.90200.075
9123
9124
9125 t18 p$0.01500.014:0.010-0.310 LCO.001-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.963 LAR0
.5:0 iCT0:0/6 midlv-2 dA965 pD0.98600.020
9126 t18 p$0.98300.021:0.703-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA958:FR42:SA0 pAPAd0.5:0.963 LAR0
.5:0 iCT0:0/6 midlv-2 dA958 pD0.98600.017
9127 t18 p$0.98300.023:0.697-0.990 LCO.002-0.999 iC1000=TR175:FA825:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.963 LAR
0:0 iCT0:1/6 midlv-2 dA825 pD0.97000.042
9128 t18 p$0.98300.021:0.760-0.990 LCO.002-0.999 iC1000=TR981:FA19:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.963 LAR0
.5:0 iCT0:2/6 midlv-2 dA19 pD0.89500.096
9129 t18 p$0.98300.024:0.563-0.990 LCO.003-0.999 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.963 LAR0
.5:0 iCT0:3/6 midlv-2 dA0 pD0.64200.127
9130
9131 t18 p$0.01500.014:0.010-0.310 LCO.001-0.998 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:0/6 midlv-2 dA950 pD0.98600.020
9132 t18 p$0.98300.021:0.703-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA947:FR53:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:0/6 midlv-2 dA947 pD0.98600.017
9133 t18 p$0.98300.023:0.697-0.990 LCO.002-0.999 iC1000=TR224:FA776:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:0/6 midlv-2 dA776 pD0.97000.042
9134 t18 p$0.98300.021:0.760-0.990 LCO.002-0.999 iC1000=TR995:FA5:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0.5
0:0 iCT0:2/6 midlv-2 dA5 pD0.89500.096
9135 t18 p$0.98300.024:0.563-0.990 LCO.003-0.999 iC1000=TR1000:FA0:SR0 CO=TA0:FR0:SA0 pAPAd0.5:0.97 LAR0
.5:0 iCT0:3/6 midlv-2 dA0 pD0.64200.127
9136
9137 #for check pgd for 1.5/6, 4/6
9138 cd ~/sotu/2012/12voicedata/allpole/
9139 gnuplot
9140 set style data 1p
9141 set style data 1p
9142 plot [-0.5:10.5][0:1.1,1,1] "test2_s+dl000_C2_v-2_No4.dat" using 1:($27) t "pgd" lt 2, "" using 1:27:
28 w errorbars, "test2_s+dl000_C3_v-2_No4.dat" using ($1+0.1):($27) t "pgd" lt 2, "" using ($1+0.2):27:28 w err
orbars, "test2_s+dl000_C4_v-2_No4.dat" usin g ($1+0.2):($27) t "pgd" lt 2, "" using ($1+0.2):27:28 w err
orbars, 0.97
9143
9144 set xtics (0,1,2,3,4,5,6,7,8,9,10);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9145 plot [-0.5:10.5][0:1.1,1,1] "test2_s+dl000_C2_v-2_No4.dat" using 1:($13+0.001) t "A" lt 1, "" using 1
:($14+0.001) t "R" lt 1, "" using 1:($15+0.001) t "S" lt 1, "" using 1:($26+0.001) t "AD" w l lt 2, "test2_s
+dl000_C2_v-2_bayes_No4.dat" using 1:($13+0.001) t "A" lt 2, "" using 1:($14+0.001) t "R" lt 2, "" using 1:($
15+0.001) t "S" lt 2, "test2_s+dl000_C2_v-2_yth0_No4.dat" using 1:($13+0.001) t "A" lt 3, "" using 1:($14+0.0
01) t "R" lt 3, "" using 1:($15+0.001) t "S" lt 3, "" using 1:($26+0.001) t "AD" lt 3, 0,1
9146
9147 set term tgif;set output "ARS-t-2.obj";replot;set term X11
9148 iCp ARS-t-2.obj ~/l3iconip/speech/draft/
9149
9150
9151
9152
9153 #####
9154 #for No2
9155 cd ~/l2voicedata/allpole/
9156 gnuplot
9157 set xtics (0,5,10,15,20);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9158 #set xtics (0,1,2,3,4,5,6,7,8,9,10);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9159 plot [-0.5:20.5][0:2.1,1,1] "test2_s+dl000_C1_v-2_yth0_No2.dat" using 1:2 w l, "" using 1:2:3 w error
bars t " pt 4 lt 1, "test2_s+dl000_C2_v-2_yth0_No2.dat" using ($1):2 w l, "" using ($1):2:3 w errorbars t "
" pt 6 lt 1, 0, 0.5, 1
9160 set term tgif;set output "test2_s+dl000_gibbs_yth0_No2.obj";replot
9161 iCp test2_s+dl000_gibbs_yth0_No2.obj ~/l3iconip/speech/draft/
```

```
9162 #Exp3:ytm:-1 yth=0
9163 #pApAd0.5:0.966
9164 t20 pS0.016U0.016:0.010-0.222 LC0.001-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.966 LAR0
5:0:0 iCT0:0/5 midlv-2 dA967 pD0.987U0.014
9165 t20 pS0.983U0.023:0.589-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA972:FR28:SA0 pApAd0.5:0.966 LAR0
5:0:0 iCT0:0/5 midlv-2 dA972 pD0.987U0.011
9166 t20 pS0.984U0.016:0.757-0.990 LC0.002-0.999 iCl0000=TR281:FA719:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.966 LAR
0:5:0:0 iCT0:1/5 midlv-2 dA719 pD0.964U0.044
9167 t20 pS0.983U0.026:0.552-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.966 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.823U0.116
9168 t20 pS0.982U0.033:0.398-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.966 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.399U0.107
9169 t20 pS0.984U0.021:0.698-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.966 LAR0
5:0:0 iCT0:4/5 midlv-2 dA0 pD0.078U0.032
9170 #0.967
9171 t20 pS0.016U0.016:0.010-0.222 LC0.001-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.967 LAR0
5:0:0 iCT0:0/5 midlv-2 dA966 pD0.987U0.014
9172 t20 pS0.983U0.023:0.589-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA968:FR32:SA0 pApAd0.5:0.967 LAR0
5:0:0 iCT0:0/5 midlv-2 dA968 pD0.987U0.011
9173 t20 pS0.984U0.016:0.757-0.990 LC0.002-0.999 iCl0000=TR286:FA714:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.967 LAR
0:5:0:0 iCT0:1/5 midlv-2 dA714 pD0.964U0.044
9174 t20 pS0.983U0.026:0.552-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.967 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.823U0.116
9175 t20 pS0.982U0.033:0.398-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.967 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.399U0.107
9176 #0.965
9177 t20 pS0.016U0.016:0.010-0.222 LC0.001-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.965 LAR0
5:0:0 iCT0:0/5 midlv-2 dA968 pD0.987U0.014
9178 t20 pS0.983U0.023:0.589-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA973:FR27:SA0 pApAd0.5:0.965 LAR0
5:0:0 iCT0:0/5 midlv-2 dA973 pD0.987U0.011
9179 t20 pS0.984U0.016:0.757-0.990 LC0.002-0.999 iCl0000=TR273:FA727:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.965 LAR
0:5:0:0 iCT0:1/5 midlv-2 dA727 pD0.964U0.044
9180 t20 pS0.983U0.026:0.552-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.965 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.823U0.116
9181 t20 pS0.982U0.033:0.398-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.965 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.399U0.107
9182
9183
9184 t20 pS0.016U0.016:0.010-0.222 LC0.001-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.964 LAR0
5:0:0 iCT0:0/5 midlv-2 dA969 pD0.987U0.014
9185 t20 pS0.983U0.023:0.589-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA974:FR26:SA0 pApAd0.5:0.964 LAR0
5:0:0 iCT0:0/5 midlv-2 dA974 pD0.987U0.011
9186 t20 pS0.984U0.016:0.757-0.990 LC0.002-0.999 iCl0000=TR267:FA733:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.964 LAR
0:5:0:0 iCT0:1/5 midlv-2 dA733 pD0.964U0.044
9187 t20 pS0.983U0.026:0.552-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.964 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.823U0.116
9188 t20 pS0.982U0.033:0.398-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.964 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.399U0.107
9189
9190 t20 pS0.016U0.016:0.010-0.222 LC0.001-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.963 LAR0
5:0:0 iCT0:0/5 midlv-2 dA971 pD0.987U0.014
9191 t20 pS0.983U0.023:0.589-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA978:FR22:SA0 pApAd0.5:0.963 LAR0
5:0:0 iCT0:0/5 midlv-2 dA978 pD0.987U0.011
9192 t20 pS0.984U0.016:0.757-0.990 LC0.002-0.999 iCl0000=TR262:FA738:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.963 LAR
0:5:0:0 iCT0:1/5 midlv-2 dA738 pD0.964U0.044
9193 t20 pS0.983U0.026:0.552-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.963 LAR0
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.823U0.116
9194 t20 pS0.982U0.033:0.398-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.963 LAR0
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.399U0.107
9195
9196
9197
9198
9199 t20 pS0.016U0.016:0.010-0.222 LC0.001-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA963 pD0.987U0.014
9200 t20 pS0.983U0.023:0.589-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA959:FR41:SA0 pApAd0.5:0.97 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA959 pD0.987U0.011
9201 t20 pS0.984U0.016:0.757-0.990 LC0.002-0.999 iCl0000=TR319:FA681:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0
5:0:0 iCT0:1/5 midlv-2 dA681 pD0.964U0.044
9202 t20 pS0.983U0.026:0.552-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0 pD0.823U0.116
9203 t20 pS0.982U0.033:0.398-0.990 LC0.002-0.999 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0 pD0.399U0.107
9204 t20 pS0.020U0.044:0.010-0.458 LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.5
0:0 iCT0:1/5 midlv-2 dA885 pD0.971U0.076
9205 t20 pS0.965U0.081:0.072-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA878:FR122:SA0 pApAd0.5:0.97 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA880 pD0.974U0.072
9206 t20 pS0.965U0.079:0.087-0.990 LC0.002-0.999 iC1000=TR590:FA410:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA411 pD0.918U0.135
9207 t20 pS0.966U0.068:0.434-0.990 LC0.002-0.999 iC1000=TR995:FA5:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.5:
0:0 iCT0:2/5 midlv-2 dA5 pD0.745U0.202
9208 t20 pS0.959U0.106:0.079-0.990 LC0.002-0.999 iC1000=TR999:FAL:SR0 C0=TA0:FR0:SA0 pApAd0.5:0.97 LAR0.5:
```

```
0:0 iCT0:3/5 midlv-2 dA1 pD0.368U0.172
9209
9210
9211
9212
9213 2013/05/26 for iconip2013
9214 #new PART:
9215 #wv uncertainty k=1.65 --> k=1(means standard deviation)
9216 pApAdt=pApAdt:<pA><pAd><T># ex. pApAdt: 5:1.97:20;
9217 for <pA>>accept_prob, for speaker (conventional pApA)
9218 <pAd>>accept_prob for digits,
9219 <T>>decision_time.
9220
9221 make DEBUQ=-g speakerdigit.v2
9222
9223 speakerdigit.v2 fd: ../12voicedata/allpole/ooB4d--lM4mbas2:300:1.6:1.y nsDL:7:10:10 pmin:0.01 ytm:1:
0.9:1000 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 pApAdt:0.5:0.
99:10 LAR:0.5:0:0 test:5:1000:0:0:5
9224
2013/05/20 for iconip2013
9225
9226 #set environment variable by the script on 2013/02/27
9227 話者+数字 照合: ver=-2できい値の最適化
9228 (1)0/5指定話者+5/5指定数字列のテスト,
9229 (2)5/5指定話者+5/5指定数字列のテスト,
9230 (3)5/5指定話者+4/5指定数字列のテスト,
9231 (4)5/5指定話者+3/5指定数字列のテスト,
9232 (5)5/5指定話者+2/5指定数字列のテスト,
9233 (6)5/5指定話者+1/5指定数字列のテスト,
9234 (7)5/5指定話者+0/5指定数字列のテスト,
9235 #Exp1:
9236 No=1;T=5;nA=1;for C in 1 2 3 4 5 6 7; do
9237 #NO=2;T=5;nA=0;for C in 1 2 3 4 5 6 7; do
9238 #NO=3;T=10;nA=0;for C in 2; do
9239 if [ "$C" = "1" ]; then iCs=1; iCd=0; fi
9240 if [ "$C" = "2" ]; then iCs=0; iCd=0; fi
9241 if [ "$C" = "3" ]; then iCs=0; iCd=1; fi
9242 if [ "$C" = "4" ]; then iCs=0; iCd=2; fi
9243 if [ "$C" = "5" ]; then iCs=0; iCd=3; fi
9244 if [ "$C" = "6" ]; then iCs=0; iCd=4; fi
9245 if [ "$C" = "7" ]; then iCs=0; iCd=5; fi
9246 test=test:5:1000:5{iCs}:5{iCd}:5{T};PART=PART:0.5:0.5:0:LAR=LAR:0.5:0.5:0:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for v
er:-2
9247
9248 #test=test:5:1000:5{iCs}:5{iCd}:5;PART=PART:0.7:0.15:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ve
r:-2
9249 #test=test:5:1000:5{iCs}:5{iCd}:5;PART=PART:0.6:0.1:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9249 if [ "$T" = "10" ]; then LAR=LAR:0.5:0:2; fi
9250 echo "#$test:$PART:$LAR"
9251 cmd="speakerdigit_v $fs $fd $nsDL $pmin $ytm $sPnr $svoid $gibbs $beta $sdp $lT $sdt $ver $pART $lAR $
test";
9252
9253 echo $cmd; $cmd;
9254 echo "#Done for $test:$PART:$LAR"
9255 cmd="cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+dl000_c${C}_v-2_No${No}.dat"
9256 echo $cmd; $cmd;
9257 done
9258 #
9259 cd ../12voicedata/allpole/
9260 gnuplot
9261 set xtics (0,1,2,3,4,5,6,7,8,9,10);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9262 plot [-0.5:10.5][0.2:1.4] "test_s+dl000_CL_v-2_No2.dat" using 1:2 w l, "" using ($1):2:3 w errorbars t "" pt 6 lt 1, 0, 0.5
"" pt 4 lt 1, \
9263 "test_s+dl000_C2_v-2_No2.dat" using ($1):2 w l, "" using ($1):2:3 w errorbars t "" pt 6 lt 1, 0, 0.5
",
9263
9263 set term tgif;set output "test_s+dl000-gibbs_No2.obj";replot
9264 !cp test_s+dl000-gibbs_No2.obj ~/13/iconip/speech/draft/
9265 ## for change of TP
9266 #NO=1;T=5;nA=1;for C in 1 2 3 4 5 6 7; do
9267 (1)t5 <p>0.021U0.044:0.010-0.345 LC0.002-0.998 iCl0000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 pAR0.5:0.5 LAR0.
5:0:1 iCT0:1/5 midlv-2 dA967
9268 (2)t5 <p>0.960U0.153:0.072-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA951:FR10:SA39 pAR0.5:0.5 LAR0
5:0:1 iCT0:0/5 midlv-2 dA961
9269 (3)t5 <p>0.961U0.142:0.069-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA966:FR4:SA130 pAR0.5:0.5 LAR0
5:0:1 iCT0:0/5 midlv-2 dA970
9270 (4)t5 <p>0.956U0.163:0.062-0.990 LC0.003-0.998 iCl0000=TR4:FA23:SR973 C0=TA0:FR0:SA0 pAR0.5:0.5 LAR0.
5:0:1 iCT0:2/5 midlv-2 dA97
9271 (5)t5 <p>0.960U0.146:0.040-0.990 LC0.003-0.998 iCl0000=TR0:FA2:SR998 C0=TA0:FR0:SA0 pAR0.5:0.5 LAR0.5
0:0:1 iCT0:3/5 midlv-2 dA2
9272 (6)t5 <p>0.952U0.167:0.101-0.990 LC0.003-0.998 iCl0000=TR0:FA0:SR1000 C0=TA0:FR0:SA0 pAR0.5:0.5 LAR0.
5:0:1 iCT0:4/5 midlv-2 dA0
9273 (7)t5 <p>0.953U0.169:0.053-0.990 LC0.003-0.998 iCl0000=TR0:FA0:SR1000 C0=TA0:FR0:SA0 pAR0.5:0.5 LAR0.
5:0:1 iCT0:5/5 midlv-2 dA0
```



```
9389 echo "#$test:$PART:$LAR"
9390 cmd="speakerdigit_v $fs $fd $nsdl $pmin $ytm $pnr $void gibbs:0 $beta $sdp $!t $sdt $ver $PART $LAR
$test";
9391 echo $cmd: $cmd;
9392 echo "#done for $test:$PART:$LAR"
9393 cmd="cp tmp/testsd_stat.dat ../12voicedata/allpole/test_s+di1000_C$c[_v-2-bayes_No$[No].dat"
9394 echo $cmd: $cmd;
9395 done
9396 ##
9397 cd ../12voicedata/allpole/
9398 gnuplot
9399 set xtics (0,1,2,3,4,5,6,7,8,9,10);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9400 plot [-0.5:1.0][0.5:1.4] "test_s+di1000_CL_v-2-bayes_No2.dat" using 1:2 w l, "" using 1:2:3 w error
bars t "" pt 4 lt 1, \
9401 "test_s+di1000_C2_v-2-bayes_No2.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "" pt 6 lt 1, 0, 0.5
,
9402 set term tgif;set output "test_s+di1000-bayes_No2.obj";replot
9403 !cp test_s+di1000-bayes_No2.obj ~/13iconip/speech/draft/
9404
9405 #No=2;T=5;na=0;pA=pR=La=0.5,bayes
9406 (1)t5 <p>0.01300,0.065:0.010-0.806 LCO.002-0.998 iC1000=TR999;FA1:SR0 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.5
:0:0 iCT0:1/5 midlv-2 dA838
9407 (2)t5 <p>0.96600,209:0.010-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA825;FR14:SA161 PAR0.5:0.5 LAR
0.5:0:0 iCT0:0/5 midlv-2 dA839
9408 (3)t5 <p>0.96300,212:0.010-0.990 LCO.003-0.998 iC1000=TR1:FA16:SR983 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA17
9409 (4)t5 <p>0.96000,234:0.010-0.990 LCO.003-0.998 iC1000=TR1:FA0:SR999 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.5
:0:0 iCT0:2/5 midlv-2 dA1
9410 (5)t5 <p>0.96500,209:0.010-0.990 LCO.003-0.998 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0
9411 (6)t5 <p>0.95600,245:0.010-0.990 LCO.003-0.998 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:4/5 midlv-2 dA0
9412 (7)t5 <p>0.96100,228:0.010-0.990 LCO.003-0.998 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:5/5 midlv-2 dA0
9413
9414 #house#0.5
9415 #house#t5 <p>0.96600,209:0.010-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA938;FR23:SA39 PAR0.5:0.5
LAR0.5:0:1 iCT0:0/5 midlv-2 dA961
9416 #house#t5 <p>0.96300,212:0.010-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA856;FR14:SA130 PAR0.5:0.5
LAR0.5:0:1 iCT0:1/5 midlv-2 dA870
9418 #house#t5 <p>0.96000,234:0.010-0.990 LCO.003-0.998 iC1000=TR4:FA23:SR973 CO=TA0:FR0:SA0 PAR0.5:0.5 L
AR0.5:0:1 iCT0:2/5 midlv-2 dA27
9419 #house#t5 <p>0.01300,0.065:0.010-0.806 LCO.002-0.998 iC1000=TR998;FA2:SR0 CO=TA0:FR0:SA0 PAR0.5:0.5 LA
R0.5:0:1 iCT0:1/5 midlv-2 dA967
9420 #house#
9421 #house#(1)t5 <p>0.96600,209:0.010-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA932;FR9:SA59 PAR0.6:0.
1 LAR0.7:0:1 iCT0:0/5 midlv-2 dA957
9422 #house#(2)t5 <p>0.96300,212:0.010-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA848;FR2:SA150 PAR0.6:0
.1 LAR0.7:0:1 iCT0:1/5 midlv-2 dA863
9423 #house#(3)t5 <p>0.96000,234:0.010-0.990 LCO.003-0.998 iC999=TR0:FA16:SR983 CL=TA0:FR1:SA0 PAR0.6:0.1
LAR0.7:0:1 iCT0:2/5 midlv-2 dA19
9424 #house#(4)t5 <p>0.01300,0.065:0.010-0.806 LCO.002-0.998 iC1000=TR998;FA2:SR0 CO=TA0:FR0:SA0 PAR0.6:0.1
LAR0.7:0:1 iCT0:0/5 midlv-2 dA967
9425
9426 #Exp3:ytm:-1 no-tuning of yth
9427 #ytm=0では、PAZ小さくしても、THが大きくできない。なぜか？FNGが大きい？EGGの分散も大きいはず？
9428 #No=1;T=5;na=1;#for C in 1 2 3 4 5 6 7; do
9429 #No=2;T=5;na=0;#for C in 1 2 3 4 5 6 7; do
9430 #No=3;T=10;na=1;#for C in 1 2 3 4 5 7; do
9431 if [ "$C" = "1" ]; then iCs=1; iCd=0; fi
9432 if [ "$C" = "2" ]; then iCs=1; iCd=0; fi
9433 if [ "$C" = "3" ]; then iCs=0; iCd=1; fi
9434 if [ "$C" = "4" ]; then iCs=0; iCd=1; fi
9435 if [ "$C" = "5" ]; then iCs=0; iCd=2; fi
9436 if [ "$C" = "6" ]; then iCs=0; iCd=3; fi
9437 if [ "$C" = "7" ]; then iCs=0; iCd=4; fi
9438 if [ "$C" = "7" ]; then iCs=0; iCd=5; fi
9439 test=test:5:1000:{$iCs}:{$iCd}:{$T};PART=PART:0.5:0.5:0:LAR=LAR:0.5:0:0:{$na};ver=ver:-2; #best for v
er:-2
9440 #test=test:5:1000:{$iCs}:{$iCd}:5;PART=PART:0.5:0.5:10:LAR=LAR:0.5:0:0:1;ver=ver:-2; #best for ver:-2
9441 #test=test:5:1000:{$iCs}:{$iCd}:5;PART=PART:0.6:1.5:10:LAR=LAR:0.7:0.000:1;ver=ver:-2; #best for ver
:-2
9442 #test=test:5:1000:{$iCs}:{$iCd}:5;PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.000:1;ver=ver:-2; #best for ve
r:-2
9443 echo "#$test:$PART:$LAR"
9444 cmd="speakerdigit_v $fs $fd $nsdl $pmin ytm:-1 $Pnr $void $gibbs $beta $sdp $!t $sdt $ver $PART $LAR
$test";
9445 echo $cmd: $cmd;
9446 echo "#done for $test:$PART:$LAR"
9447 cmd="cp tmp/testsd_stat.dat ../12voicedata/allpole/test_s+di1000_C$c[_v-2-yth0_No$[No].dat"
9448 echo $cmd: $cmd;
```

```
9449 done
9450 ####
9451 cd ../12voicedata/allpole/
9452 gnuplot
9453 set xtics (0,1,2,3,4,5,6,7,8,9,10);set ytics (0,0.2,0.4,0.6,0.8,1.0);
9454
9455 plot [-0.5:1.0][0.5:1.4] "test_s+di1000_CL_v-2-yth0_No2.dat" using 1:2 w l, "" using 1:2:3 w errorb
ars t "" pt 4 lt 1, \
9456 "test_s+di1000_C2_v-2-yth0_No2.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "" pt 6 lt 1, 0, 0.5,
1
9457 set term tgif;set output "test_s+di1000-yth0_No2.obj";replot
9458 !cp test_s+di1000-yth0_No2.obj ~/13iconip/speech/draft/
9459
9460 #Exp3:No=2;T=5;na=0;pA=pR=La=0.5,bayes,yth=0
9461 (1)t5 <p>0.01800,0.075:0.010-0.888 LCO.002-0.999 iC1000=TR999;FA1:SR0 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.5
:0:0 iCT0:1/5 midlv-2 dA778
9462 (2)t5 <p>0.96200,158:0.185-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA773;FR3:SA224 PAR0.5:0.5 LAR0.
5:0:0 iCT0:0/5 midlv-2 dA776
9463 (3)t5 <p>0.96400,144:0.089-0.990 LCO.002-0.999 iC1000=TR1:FA13:SR986 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:1/5 midlv-2 dA14
9464 (4)t5 <p>0.96100,150:0.089-0.990 LCO.002-0.999 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:2/5 midlv-2 dA0
9465 (5)t5 <p>0.96500,148:0.025-0.990 LCO.002-0.999 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:3/5 midlv-2 dA0
9466 (6)t5 <p>0.95900,154:0.072-0.990 LCO.002-0.999 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:4/5 midlv-2 dA0
9467 (7)t5 <p>0.95900,160:0.065-0.990 LCO.002-0.999 iC1000=TR0:FA0:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.
5:0:0 iCT0:5/5 midlv-2 dA0
9468
9469 #0.5
9470
9471 t5 <p>0.96200,158:0.185-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA928;FR4:SA68 PAR0.5:0.5 LAR0.5:0
.1 iCT0:0/5 midlv-2 dA932
9472 t5 <p>0.96400,144:0.089-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA814;FR3:SA183 PAR0.5:0.5 LAR0.5:
0:1 iCT0:1/5 midlv-2 dA817
9473 t5 <p>0.96100,150:0.089-0.990 LCO.002-0.999 iC1000=TR2:FA24:SR974 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.5:0
.1 iCT0:2/5 midlv-2 dA26
9474 t5 <p>0.01800,0.075:0.010-0.888 LCO.002-0.999 iC1000=TR999;FA1:SR0 CO=TA0:FR0:SA0 PAR0.5:0.5 LAR0.5:0:
1 iCT0:0/5 midlv-2 dA943
9475
9476
9477 t5 <p>0.96200,158:0.185-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA914;FR0:SA86 PAR0.6:0.0.15 LAR0.7:
0:1 iCT0:0/5 midlv-2 dA918
9478 t5 <p>0.96400,144:0.089-0.990 LCO.002-0.999 iC0=TR0:FA0:SR0 C1000=TA765;FR1:SA234 PAR0.6:0.0.15 LAR0.7
:0:1 iCT0:1/5 midlv-2 dA768
9479 t5 <p>0.96100,150:0.089-0.990 LCO.002-0.999 iC1000=TR0:FA7:SR993 CO=TA0:FR0:SA0 PAR0.6:0.0.15 LAR0.7:0
.1 iCT0:2/5 midlv-2 dA9
9480 t5 <p>0.01800,0.075:0.010-0.888 LCO.002-0.999 iC1000=TR995;FA0:SR5 CO=TA0:FR0:SA0 PAR0.6:0.0.15 LAR0.7:0
.1 iCT0:1/5 midlv-2 dA933
9481
9482 #!Error Rate: FP FN ER yth [%] involving void=em7.
9483 2.000 3.000 2.143 0.000 m0
9484 1.000 8.000 2.000 0.000 m1
9485 2.833 9.000 3.429 0.000 m2
9486 2.333 9.000 3.286 0.000 m3
9487 2.667 5.000 3.000 0.000 m4
9488 2.333 7.000 3.000 0.000 m5
9489 3.333 8.000 4.000 0.000 m6
9490 #<FP>=0.0235714(+0.011236) <FN>=0.0671429+-0.0314482 TotalUncertainty+-0.0236139(k1.65) <ERR>=0.029
7959 ns7 nd10
9491 #!Error Rate: FP FN ER yth [%] involving void=ml0.
9492 1.000 7.143 1.571 0.000 m0
9493 1.000 5.714 1.143 0.000 m1
9494 1.270 11.429 2.286 0.000 m2
9495 1.111 5.714 1.571 0.000 m3
9496 2.063 5.714 2.429 0.000 m4
9497 1.000 10.000 1.000 0.000 m5
9498 1.000 7.143 1.571 0.000 m6
9499 1.000 10.000 1.429 0.000 m7
9500 1.746 7.143 2.286 0.000 m8
9501 1.000 1.429 0.429 0.000 m9
9502 #<FP>=0.00952381(+0.00738646) <FN>=0.0714286+-0.0447236 TotalUncertainty+-0.0320528(k1.65) <ERR>=0.
0157143 ns7 nd10
9503
9504
9505 Exp4: check bayes and gibbs
9506 No=4;T=5;na=5;C=2;for g in 0 1 2; do
9507 if [ "$g" = "0" ]; then gibbs=gibbs:0;_ytm=ytm:1:0.9:1000; fi
9508 if [ "$g" = "1" ]; then gibbs=gibbs:1;_ytm=ytm:1:0.9:1000; fi
9509 if [ "$g" = "2" ]; then gibbs=gibbs:1;_ytm=ytm:-1; fi
9510 if [ "$C" = "1" ]; then iCs=1; iCd=0; fi
9511 if [ "$C" = "2" ]; then iCs=0; iCd=0; fi
```

```
9512 if [ "$C" = "3" ]; then iCs=0; iCd=1; fi
9513 if [ "$C" = "4" ]; then iCs=0; iCd=2; fi
9514 if [ "$C" = "5" ]; then iCs=0; iCd=3; fi
9515 if [ "$C" = "6" ]; then iCs=0; iCd=4; fi
9516 if [ "$C" = "7" ]; then iCs=0; iCd=5; fi
9517 test=test:5:1000:$(iCs):$(iCd):$(T):PART=PART:0.5:0.5:10:LAR=LAR:0.5:0.5:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for v
er:-2
9518 #test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.7:0.15:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ve
r:-2
9519 #test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.6:0.1:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9520 #if [ "$S" = "10" ]; then LAR=LAR:0.5:0:2; fi
9521 echo "#$test:$PART:$LAR"
9522 cmd="speakerdigit_v $fs $fd $nSDL $pmin $(_ytm) $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LA
R $test";
9523 #cmd="speakerdigit_v $fs $fd $nSDL $pmin ytm:-1 $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LA
R $test";
9524 echo $cmd; $cmd;
9525 echo "#Done for $test:$PART:$LAR"
9526 cmd="cp tmp/testsd_stat.dat ../12voicedata/allpole/test_s+d1000_C$(C)_v-2.gibbs$(g)_No$(No).dat"
9527 echo $cmd; $cmd;
9528 done
9529
9530
9531 plot [-0.5:10.5]"test_s+d1000_C2_v-2.No2.dat" using 1:($13*0.1) t "A" pt 6 lt 1, "" using 1:($14*0.1
) t "R" pt 6 lt 1, "" using 1:($15*0.1) t "S" pt 6 lt 1, "" using 1:($26*0.1) t "AD" w 1 lt 2, "test_s+d1000
_C2_v-2-bayes.No2.dat" using 1:($13*0.1) t "A" pt 8 lt 1, "" using 1:($14*0.1) t "R" pt 8 lt 1, "" using 1:($
15*0.1) t "S" pt 8 lt 1, "test_s+d1000_C2_v-2-yth0.No2.dat" using 1:($13*0.1) t "A" pt 10 lt 1, "" using 1:($
14*0.1) t "R" pt 10 lt 1, "" using 1:($15*0.1) t "S" pt 10 lt 1, "" using 1:($26*0.1) t "AD" w 1 lt 2
9532 set term tgif;set output "ARS-t-1.obj";replot;set term X11
9533 !cp ARS-t-1.obj ~/13iconip/speech/draft/
9534
9535 cd ~/sctu/2012/12voicedata/allpole/
9536 gnuplot
9537 set style data lp
9538 plot [-0.5:10.5]"test_s+d1000_C2_v-2.gibbel.No4.dat" using 1:($13*0.1) t "A" pt 7 lt 1, "" using 1:
($14*0.1) t "R" pt 7 lt 1, "" using 1:($15*0.1) t "S" pt 7 lt 1, "test_s+d1000_C2_v-2.gibbo.No4.dat" using
1:($13*0.1) t "A" pt 8 lt 1, "" using 1:($14*0.1) t "R" pt 8 lt 1, "using 1:($15*0.1) t "S" pt 8 lt 1, "tes
t_s+d1000_C2_v-2.gibbes2.No4.dat" using 1:($13*0.1) t "A" pt 10 lt 1, "" using 1:($14*0.1) t "R" pt 10 lt 1, "
" using 1:($15*0.1) t "S" pt 10 lt 1
9539 set term tgif;set output "ARS-t-0.obj";replot;set term X11
9540 !cp ARS-t-0.obj ~/13iconip/speech/draft/
9541
9542
9543
9544
9545
9546
9547
9548
9549 #####
9550 2013/05/17 for iconip2013
9551 oob4speakerdigit+
9552
9553 #set environment variable by the script on 2013/02/27
9554 読者+数字照合:ver=2でいきい値の最適化
9555 #Ex1:
9556 (1)指定読者+指定数字列のテスト,
9557 (2)指定読者+1/5非指定数字列のテスト,
9558 (3)非指定読者+指定数字列のテスト
9559 (4)非指定読者+1/5非指定数字列のテスト,
9560 (5)指定読者+2/5非指定数字列のテスト,
9561
9562 for iCs in 0 1; do for iCd in 0 1; do #for (1),(2),(3),(4)
9563 #for iCs in 0; do for iCd in 0; do # for (5)
9564 test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.7:0.15:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9565 #test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.6:0.1:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9566 echo "#$test:$PART:$LAR"
9567 cmd="speakerdigit_v $fs $fd $nSDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LAR $
test";
9568 echo $cmd; $cmd;
9569 echo "#Done for $test:$PART:$LAR"
9570 cmd="cp tmp/testsd_stat.dat ../12voicedata/allpole/test_s+d1000_$(iCs)_$(iCd)_5_v-2.dat"
9571 echo $cmd; $cmd;
9572 done;done
9573 #
9574 cd ../12voicedata/allpole/
9575 gnuplot
9576 plot "test_s+d1000_0_5_v-2.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "" pt 6 lt 1, \
9577 "test_s+d1000_1_0_5_v-2.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t "" pt 4 lt 1,
```

```
0.7, 0.15:1
9578 set term tgif;set output "test_s+d1000-gibbs.obj";replot
9579
9580 (1)t5 <p>0.96000.153:0.072-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 CI000=TA937:FR2:SA61 PAR0.7:0.15 LAR0
.7:0:1 iCT0:0/5 midlv-2
9581 (2)t5 <p>0.96100.142:0.069-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 CI000=TA850:FR0:SA150 PAR0.7:0.15 LAR
0.7:0:1 iCT0:1/5 midlv-2
9582 (3)t5 <p>0.02100.044:0.010-0.345 LC0.002-0.998 iC1000=TR995:FA0:SR5 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0.
7:0:1 iCT1:0/5 midlv-2
9583 (4)t5 <p>0.02200.049:0.010-0.456 LC0.002-0.958 iC1000=TR994:FA0:SR6 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0.
7:0:1 iCT1:1/5 midlv-2
9584 (5)t5 <p>0.95600.163:0.062-0.990 LC0.003-0.998 iC1000=TR0:FA14:SR986 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0
.7:0:1 iCT0:2/5 midlv-2
9585
9586 (1)t5 <p>0.96000.153:0.072-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 CI000=TA937:FR1:SA62 PAR0.7:0.1 LAR0.
7:0:1 iCT0:0/5 midlv-2
9587 (2)t5 <p>0.96100.142:0.069-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 CI000=TA850:FR0:SA150 PAR0.7:0.1 LAR0
.7:0:1 iCT0:1/5 midlv-2
9588 (3)t5 <p>0.02100.044:0.010-0.345 LC0.002-0.998 iC1000=TR978:FA0:SR22 CO=TA0:FR0:SA0 PAR0.7:0.1 LAR0.
7:0:1 iCT1:0/5 midlv-2
9589 (4)t5 <p>0.02200.049:0.010-0.456 LC0.002-0.958 iC1000=TR979:FA0:SR21 CO=TA0:FR0:SA0 PAR0.7:0.1 LAR0.
7:0:1 iCT1:1/5 midlv-2
9590 (5)t5 <p>0.95600.163:0.062-0.990 LC0.003-0.998 iC1000=TR0:FA14:SR986 CO=TA0:FR0:SA0 PAR0.7:0.1 LAR0.
7:0:1 iCT0:2/5 midlv-2
9591 #####tmp/testsd.dat
9592 #####Error Rate: FP FN ER yth [%] involving void=7.
9593 6.000 2.000 5.429 -0.893 m0
9594 6.000 4.000 5.714 -0.900 m1
9595 6.000 5.000 5.857 -0.885 m2
9596 5.333 4.000 5.143 -0.900 m3
9597 6.000 3.000 5.571 -0.842 m4
9598 6.000 4.000 5.714 -0.601 m5
9599 6.000 5.000 5.714 -0.617 m6
9600 6.000 4.000 5.714 -0.617 m6
9601 #<FP>=0.0590476(+0.0038492) <FN>=0.0371429+-0.0145304 TotalUncertainty+-0.0106289(k1.65) <ERR>=0.05
59194 ns7 nd10
9602 #####tmp/testsd.dat
9603 #####Error Rate: FP FN ER yth [%] involving void=ml0.
9604 1.905 2.857 2.000 -0.815 m0
9605 1.905 4.286 2.143 -0.346 m1
9606 1.905 4.286 2.143 -0.821 m2
9607 1.905 4.286 2.143 -0.563 m3
9608 1.905 5.714 2.286 0.027 m4
9609 1.000 4.286 0.857 -0.900 m5
9610 1.905 5.714 2.286 -0.682 m6
9611 1.905 2.857 2.000 -0.650 m7
9612 1.905 4.286 2.143 -0.569 m8
9613 1.587 1.000 1.429 -0.900 m9
9614 #<FP>=0.0173016(+0.0046594) <FN>=0.0385714+-0.0221245 TotalUncertainty+-0.0159876(k1.65) <ERR>=0.01
94286 ns7 nd10
9615
9616 #Exp2: gibbs=gibbs:0; ==bayes #bayesでは分散が大きく、バラつく
9617 for iCs in 0 1; do for iCd in 0 1; do #for (1),(2),(3),(4)
9618 #for iCs in 0; do for iCd in 2; do # for (5)
9619 test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.6:1:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver:-
2
9620 #test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.7:1:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver:-
2
9621 #test=test:5:1000:$(iCs):$(iCd):5;PART=PART:0.5:0.08:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ve
r:-2
9622 echo "#$test:$PART:$LAR"
9623 cmd="speakerdigit_v $fs $fd $nSDL $pmin $ytm $PNr $void gibbs:0 $beta $sdp $IT $sdt $ver $PART $LAR
$test";
9624 echo $cmd; $cmd;
9625 echo "#Done for $test:$PART:$LAR"
9626 cmd="cp tmp/testsd_stat.dat ../12voicedata/allpole/test_s+d1000_$(iCs)_$(iCd)_5_v-2-bayes.dat"
9627 echo $cmd; $cmd;
9628 done;done
9629
9630 cd ../12voicedata/allpole/
9631 gnuplot
9632 plot "test_s+d1000_0_5_v-2-bayes.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "" pt 6 lt 1, \
9633 "test_s+d1000_1_0_5_v-2-bayes.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t "" pt 4
lt 1, 0.6 0.1:1
9634 set term tgif;set output "test_s+d1000-bayes.obj";replot
9635
9636 (1)t5 <p>0.96500.209:0.010-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 CI000=TA932:FR9:SA59 PAR0.6:0.1 LAR0.
7:0:1 iCT0:0/5 midlv-2
9637 (2)t5 <p>0.96300.212:0.010-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 CI000=TA848:FR2:SA150 PAR0.6:0.1 LAR0
.7:0:1 iCT0:1/5 midlv-2
9638 (3)t5 <p>0.01300.065:0.010-0.806 LC0.002-0.998 iC1000=TR998:FA2:SR0 CO=TA0:FR0:SA0 PAR0.6:0.1 LAR0.7
:0:1 iCT1:0/5 midlv-2
```

```
9639 (4)t5 <p>0.01200.024:0.010-0.294 LC0.002-0.858 iC1000=TR997:FA0:SR3 CO=TA0:FR0:SA0 PAR0.6:0.1 LAR0.7
:0:1 iCT0:1/5 midlv-2
9640 (5)t5 <p>0.96000.234:0.010-0.990 LC0.003-0.998 ic999=TR0:FA16:SR983 Cl=TA0:FR1:SA0 PAR0.6:0.1 LAR0.7
:0:1 iCT0:2/5 midlv-2
9641
9642 (1)t5 <p>0.96600.209:0.010-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA925:FR9:SA66 PAR0.7:0.1 LAR0.
7:0:1 iCT0:0/5 midlv-2
9643 (2)t5 <p>0.96300.212:0.010-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA844:FR2:SA156 PAR0.7:0.1 LAR0
.7:0:1 iCT0:1/5 midlv-2
9644 (3)t5 <p>0.01300.065:0.010-0.806 LC0.002-0.998 ic1000=TR998:FA1:SR1 CO=TA0:FR0:SA0 PAR0.7:0.1 LAR0.7
:0:1 iCT0:0/5 midlv-2
9645 (4)t5 <p>0.01200.024:0.010-0.294 LC0.002-0.858 ic1000=TR997:FA0:SR3 CO=TA0:FR0:SA0 PAR0.7:0.1 LAR0.7
:0:1 iCT0:1/5 midlv-2
9646 (5)t5 <p>0.96000.234:0.010-0.990 LC0.003-0.998 ic999=TR0:FA15:SR984 Cl=TA0:FR1:SA0 PAR0.7:0.1 LAR0.7
:0:1 iCT0:2/5 midlv-2
9647
9648
9649 (1)t5 <p>0.96600.209:0.010-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA932:FR9:SA59 PAR0.6:0.1 LAR0.
7:0:1 iCT0:0/5 midlv-2
9650 (2)t5 <p>0.96300.212:0.010-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA848:FR2:SA150 PAR0.6:0.1 LAR0
.7:0:1 iCT0:1/5 midlv-2
9651 (3)t5 <p>0.01300.065:0.010-0.806 LC0.002-0.998 ic1000=TR998:FA2:SR0 CO=TA0:FR0:SA0 PAR0.6:0.1 LAR0.7
:0:1 iCT0:0/5 midlv-2
9652 (4)t5 <p>0.01200.024:0.010-0.294 LC0.002-0.858 ic1000=TR997:FA0:SR3 CO=TA0:FR0:SA0 PAR0.6:0.1 LAR0.7
:0:1 iCT0:1/5 midlv-2
9653 (5)t5 <p>0.96000.234:0.010-0.990 LC0.003-0.998 ic999=TR0:FA16:SR983 Cl=TA0:FR1:SA0 PAR0.6:0.1 LAR0.7
:0:1 iCT0:2/5 midlv-2
9654
9655 #Exp3:ytm:-1 no-tuning of yth
9656 #yth=0で、pAを小さくしても、TAが大きくてきない。なぜか？FNが大きい？pGの分散も大きいはず？
9657 for iCs in 0 1: do for iCd in 0 1: do #for (1),(2),(3),(4)
9658 #for iCs in 0: do for iCd in 2: do # for (5)
9659 #test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.6:15:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver:
-2
9660 #test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ve
r:-2
9661 #test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9662 echo "$test:$PART:$LAR"
9663 cmd="speakerdigit_v $fs $fd $nsDL $pmin ytm:-1 $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LAR
$test";
9664 echo $cmd; $cmd;
9665 echo "#done for $test:$PART:$LAR"
9666 cmd="cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+di1000_$(iCs)_$(iCd)_5_v-2-yth-no-tune.dat"
9667 echo $cmd; $cmd;
9668 done;done
9669 cd ../12voicedata/allpole/
9670 gnuplot
9671 plot "test_s+di1000_0_5_v-2-yth-no-tune.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "" pt 6 l
t, 1, 0.7, 0.15
9672 "test_s+di1000_1_0_5_v-2-yth-notune.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t ""
pt 6 lt 1, 0.7, 0.15
9673 set term tgif;set output "test_s+di1000-yth-no-tune.obj";replot
9674
9675 (1)t5 <p>0.96200.158:0.185-0.990 LC0.002-0.999 ic0=TR0:FA0:SR0 C1000=TA917:FR0:SA83 PAR0.3:0.15 LAR0
.7:0:1 iCT0:0/5 midlv-2
9676 (1)t5 <p>0.96200.158:0.185-0.990 LC0.002-0.999 ic0=TR0:FA0:SR0 C1000=TA917:FR0:SA83 PAR0.4:0.15 LAR0
.7:0:1 iCT0:0/5 midlv-2
9677 (1)t5 <p>0.96200.158:0.185-0.990 LC0.002-0.999 ic0=TR0:FA0:SR0 C1000=TA914:FR0:SA86 PAR0.6:0.15 LAR0
.7:0:1 iCT0:0/5 midlv-2
9678 (2)t5 <p>0.96400.144:0.089-0.990 LC0.002-0.999 ic0=TR0:FA0:SR0 C1000=TA765:FR1:SA234 PAR0.6:0.15 LAR
0.7:0:1 iCT0:1/5 midlv-2
9679 (3)t5 <p>0.01800.075:0.010-0.888 LC0.002-0.999 ic1000=TR995:FA0:SR5 CO=TA0:FR0:SA0 PAR0.6:0.15 LAR0.
7:0:1 iCT0:0/5 midlv-2
9680 (4)t5 <p>0.01800.053:0.010-0.473 LC0.001-0.999 ic1000=TR998:FA0:SR2 CO=TA0:FR0:SA0 PAR0.6:0.15 LAR0.
7:0:1 iCT0:1/5 midlv-2
9681 (5)t5 <p>0.96100.150:0.089-0.990 LC0.002-0.999 ic1000=TR0:FA7:SR993 CO=TA0:FR0:SA0 PAR0.6:0.15 LAR0.
7:0:1 iCT0:2/5 midlv-2
9682 t5 <p>0.96100.150:0.089-0.990 LC0.002-0.999 ic1000=TR0:FA7:SR993 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0.
7:0:1 iCT0:2/5 midlv-2
9683
9684 (1)t5 <p>0.96200.158:0.185-0.990 LC0.002-0.999 ic0=TR0:FA0:SR0 C1000=TA913:FR0:SA87 PAR0.7:0.15 LAR0
.7:0:1 iCT0:0/5 midlv-2
9685 (2)t5 <p>0.96400.144:0.089-0.990 LC0.002-0.999 ic0=TR0:FA0:SR0 C1000=TA762:FR1:SA237 PAR0.7:0.15 LAR
0.7:0:1 iCT0:1/5 midlv-2
9686 (3)t5 <p>0.01800.075:0.010-0.888 LC0.002-0.999 ic1000=TR995:FA0:SR5 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0.
7:0:1 iCT0:0/5 midlv-2
9687 (4)t5 <p>0.01800.053:0.010-0.473 LC0.001-0.999 ic1000=TR998:FA0:SR2 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0.
7:0:1 iCT0:1/5 midlv-2
9688 (5)t5 <p>0.96100.150:0.089-0.990 LC0.002-0.999 ic1000=TR0:FA7:SR993 CO=TA0:FR0:SA0 PAR0.7:0.15 LAR0.
7:0:1 iCT0:2/5 midlv-2
9689
9690 ##Error Rate: FP FN Yth [%] involving void=7m.
```

```
9691 2.000 3.000 2.143 0.000 m0
9692 1.000 8.000 2.000 0.000 m1
9693 2.833 7.000 3.429 0.000 m2
9694 2.333 9.000 3.286 0.000 m3
9695 2.667 5.000 3.000 0.000 m4
9696 2.333 7.000 3.000 0.000 m5
9697 3.333 8.000 4.000 0.000 m6
9698 #<FP>=0.0235714(+0.011236) <FN>=0.0671429+0.0314482 TotalUncertainty+-0.0236139(k1.65) <ERR>=0.029
7959 ns7 nd10
9699 ##Error Rate: FP FN ER yth [%] involving void=m10.
9700 1.000 7.143 1.571 0.000 m0
9701 1.000 5.714 1.143 0.000 m1
9702 1.270 11.429 2.286 0.000 m2
9703 1.111 5.714 1.571 0.000 m3
9704 2.063 5.714 2.429 0.000 m4
9705 1.000 10.000 1.000 0.000 m5
9706 1.000 7.143 1.571 0.000 m6
9707 1.000 10.000 1.429 0.000 m7
9708 1.746 7.143 2.286 0.000 m8
9709 1.000 1.429 0.429 0.000 m9
9710 #<FP>=0.00952381(+0.00738646) <FN>=0.0714286+0.0447236 TotalUncertainty+-0.0320528(k1.65) <ERR>=0.
0157143 ns7 nd10
9711
9712 #f0ld
9721 #for iCs in 0 1: do for iCd in 0 1: do #for (1),(2),(3),(4)
9722 #for iCs in 0: do for iCd in 2: do # for (5)
9723 test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
-2
9724 #test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.5:0.008:10:LAR=LAR:0.3:0.001:1:ver=ver:-1;#best for ver
:-1
9725 echo "$test:$PART:$LAR"
9726 cmd="speakerdigit_v $fs $fd $nsDL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LAR $
test";
9727 echo $cmd; $cmd;
9728 echo "#done for $test:$PART:$LAR"
9729 cmd="cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+di1000_$(iCs)_$(iCd)_5_v-2.dat"
9730 echo $cmd; $cmd;
9731 done;done
9732
9733 ###best pART=PART:0.5:0.008:10:LAR=LAR:0.7:0.001:1:ver=ver:-2;
9734 (1) t5 <p>0.96000.153:0.072-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA947:FR0:SA53 PAR0.5:0.008 LA
R0.7:0:1 iCT0:0/5 midlv-2
9735 (2) t5 <p>0.96100.142:0.069-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA859:FR0:SA141 PAR0.5:0.008 L
AR0.7:0:1 iCT0:1/5 midlv-2
9736 (3) t5 <p>0.02100.044:0.010-0.345 LC0.002-0.998 ic1000=TR33:FA0:SR967 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.7:0:1 iCT1:0/5 midlv-2
9737 (4) t5 <p>0.02200.049:0.010-0.456 LC0.002-0.858 ic1000=TR128:FA0:SR872 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.7:0:1 iCT1:1/5 midlv-2
9738 (5) t5 <p>0.95600.163:0.062-0.990 LC0.003-0.998 ic1000=TR0:FA16:SR984 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.7:0:1 iCT0:2/5 midlv-2
9739 cd ../12voicedata/allpole/
9740 gnuplot
9741 plot "test_s+di1000_0_5_v-2.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "", \
9742 "test_s+di1000_1_0_5_v-2.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t "", 0.5, 0.00
8
9743 set term tgif;set output "test_s+di1000-gibbs.obj";replot
9744
9745 #Exp2: gibbs=gibbs:0;
9746 for iCs in 0 1: do for iCd in 0 1: do #for (1),(2),(3),(4)
9747 #for iCs in 0: do for iCd in 2: do # for (5)
9748 test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9749 #test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.5:0.008:10:LAR=LAR:0.3:0.001:1:ver=ver:-1;#best for ver
:-1
9750 echo "$test:$PART:$LAR"
9751 cmd="speakerdigit_v $fs $fd $nsDL $pmin $ytm $PNr $void gibbs:0 $beta $sdp $IT $sdt $ver $PART $LAR
$test";
9752 echo $cmd; $cmd;
9753 echo "#done for $test:$PART:$LAR"
9754 cmd="cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+di1000_$(iCs)_$(iCd)_5_v-2-bayes.dat"
9755 echo $cmd; $cmd;
9756 done;done
9757 t5 <p>0.96600.209:0.010-0.990 LC0.003-0.998 ic0=TR0:FA0:SR0 C1000=TA934:FR0:SA66 PAR0.5:0.008 LAR0.7
:0:1 iCT0:0/5 midlv-2
```

```
9758 t5 <p>0.96300.212<0.010-0.990 LC0.003-0.998 iC0=TR0:FA0:SR0 C1000=TA850:FR0:SA150 PAR0.5:0.008 LAR0.
7:0:1 iCT0:1/5 midlv-2
9759 t5 <p>0.01300.065<0.010-0.806 LC0.002-0.998 iC1000=TR33:FA2:SR965 C0=TA0:FR0:SA0 PAR0.5:0.008 LAR0.7
:0:1 iCT1:0/5 midlv-2
9760 t5 <p>0.01200.024<0.010-0.294 LC0.002-0.858 iC1000=TR128:FA0:SR872 C0=TA0:FR0:SA0 PAR0.5:0.008 LAR0.
7:0:1 iCT1:1/5 midlv-2
9761 t5 <p>0.96000.234<0.010-0.990 LC0.003-0.998 iC1000=TR0:FA16:SR984 C0=TA0:FR0:SA0 PAR0.5:0.008 LAR0.7
:0:1 iCT0:2/5 midlv-2
9762
9763 cd ../12voicedata/allpole/
9764 gnuplot
9765 plot "test_s+d1000_0_0_5_v-2-bayes.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "", \
9766 "test_s+d1000_1_0_5_v-2-bayes.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t "", 0.5
, 0.008
9767 set term tgif;set output "test_s+d1000-bayes.obj";replot
9768
9769 #Ex3:ytm:-1 no-tuning of yth
9770 for iCs in 0 1; do for iCd in 0 1; do #for (1),(2),(3),(4)
9771 #for iCs in 0; do for iCd in 2; do #for (5)
9772 test=test:5:1000:$iCs):$iCd):5;PART=PART:0.5:.008:10:LAR=LAR:0.7:0.000:1:ver=ver:-2; #best for ver
:-2
9773 #test=test:5:1000:$iCs):$iCd):5;PART=PART:0.5:.008:10:LAR=LAR:0.3:0.001:1:ver=ver:-1;#best for ver
:-1
9774 echo "$test:$PART:$LAR"
9775 cmd="speakerdigit_v $fs $fd $nsdl $pmin ytm=ytm:-1 $PNr $void $gibbs:0 $beta $sdp $IT $sdt $ver $PART
$LAR $test";
9776 echo $cmd; $cmd;
9777 echo "#Done for $test:$PART:$LAR"
9778 cmd="cp tmp/testsd_stat.dat ../12voicedata/allpole/test_s+d1000_$iCs)_$iCd)_5_v-2-yth-no-tune.dat"
9779 echo $cmd; $cmd;
9780 done;done
9781 t5 <p>0.96000.227<0.010-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA865:FR0:SA135 PAR0.5:0.008 LAR0.
7:0:1 iCT0:0/5 midlv-2
9782 t5 <p>0.96000.215<0.010-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA692:FR0:SA308 PAR0.5:0.008 LAR0.
7:0:1 iCT0:1/5 midlv-2
9783 t5 <p>0.01600.112<0.010-0.990 LC0.001-0.998 iC1000=TR102:FA3:SR895 C0=TA0:FR0:SA0 PAR0.5:0.008 LAR0.
7:0:1 iCT1:0/5 midlv-2
9784 t5 <p>0.01700.120<0.010-0.990 LC0.001-0.999 iC1000=TR320:FA3:SR677 C0=TA0:FR0:SA0 PAR0.5:0.008 LAR0.
7:0:1 iCT1:1/5 midlv-2
9785 cd ../12voicedata/allpole/
9786 gnuplot
9787 plot "test_s+d1000_0_0_5_v-2-yth-no-tune.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "", \
9788 "test_s+d1000_1_0_5_v-2-yth-no-tune.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t ""
, 0.5, 0.008
9789 set term tgif;set output "test_s+d1000-yth-no-tune.obj";replot
9790
9791 #####
9792
9793 2013/02/27
9794 #####
9795 #####
9796 PART=PART: 85:20:10:#PART:<PA>:<PR>:<T> for <PA>=accept_prob, <PR>=reject_prob, <T>=terminal time.
9797 LAR=LAR:0.9:0.001:1;
9798 #<LAR>=<LA>:<LR>:<LAN> for <LA>=accept_Likelihood, <LR>=reject_Likelihood,
# allow <LAN>=mismatching of digits (<LAN>
# (pg->C[t])<th>->PA) fprintf(fpp, "%accept");
# if (pg->C[t]<th->PR) fprintf(fpp, "%reject");
#th->T terminalTime.
#th->LA, digit accept
#th->LR, digit reject
#th->LAN
test=test:5:1000:0:4:5:#test:5:<n>:<riCs>:<t_iCd>; for <n>=number_of_samples,
#<riCs>=incorrect_speakers_rate (0 or 1)
# <t_iCd>:<tD> for number <t_iCd> of incorrect digits in <tD> digits
#<riCs>=<riC>:<riC>:<riC>; for <n>=num_of_samples, <riCs>=incorrect_speakers_r
ate, <riC>=incorrect_digits_rate.
9800 sdp=sdp:0:0:1:2:3:4:5:6:7:8:9; #sdp:<speaker>:<digit1>:<digit2>:... for prompted speaker and digits
when test_id=0
9801 sdt=sdt:0:0:1:2:3:4:5:6:7:8:9; #sdt:<speaker>:<digit1>:<digit2>:... for prompted speaker and digits
9802 lt=lt:1;
9803 #th->LA, digit reject
9804 #th->LR, digit reject
9805 #th->LAN
9806
9807 test=test:5:1000:0:4:5:#test:5:<n>:<riCs>:<t_iCd>; for <n>=number_of_samples,
#<riCs>=incorrect_speakers_rate (0 or 1)
# <t_iCd>:<tD> for number <t_iCd> of incorrect digits in <tD> digits
9808 #test=test:4:1000:0:4:5:#test:4:<n>:<riCs>:<riC>; for <n>=num_of_samples, <riCs>=incorrect_speakers_r
ate, <riC>=incorrect_digits_rate.
9809 #test=test:0;
9810 sdp=sdp:0:0:1:2:3:4:5:6:7:8:9; #sdp:<speaker>:<digit1>:<digit2>:... for prompted speaker and digits
when test_id=0
9811 sdt=sdt:0:0:1:2:3:4:5:6:7:8:9; #sdt:<speaker>:<digit1>:<digit2>:... for prompted speaker and digits
9812 lt=lt:1;
9813 #th->LA, digit reject
9814 #th->LR, digit reject
9815 #th->LAN
9816 fed=fsd:../12voicedata/allpole/obj4sd:-lN40mbas2:300:1.6:1.yfid=" #file name of y of speakerdigit
9817 fs=fs:../12voicedata/allpole/obj4s:-lN40mbas2:300:1.6:1.y; #file name of y of speaker
9818 fda=fd:../12voicedata/allpole/obj4d:-lN40mbas2:300:1.6:1.y; #file name of y of digit
9819 nsdl=nsdl:7:10:10
9820 gibbs=gibbs:1;
9821 #1 for Gibbs, 0 for Bayes
9822 beta=beta:1;
9823 #inverse temperature beta
9824 pmin=pmin:0.01;
9825 pmin=pmin:0.01;
9826 ytm=ytm:1:0.9:1000:PNr="";
9827 #ytm=ytm:1:0.9:1000:PNr="";
9828 #ytm=ytm:1:0.9:1000:PNr="";
9829 #ytm=ytm:1;
9830 void=void:0;
```

```
9825 #####
9826 4. 話者数字照合 : ver=-2で大きい値の最適化
9827 4.1 実験
9828 for iCs in 0 1; do for iCd in 0 1; do # for (1)-(4)
9829 #for iCs in 0; do for iCd in 2; do # for (5)
9830 test=test:5:1000:$iCs):$iCd):5;PART=PART:0.6:.09:10:LAR=LAR:0.3:0.005:1:ver=ver:-2;#best for ver:-
2
9831 cmd="speakerdigit_v $fsd $nsdl $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LAR $tes
t";$cmd
9832
9833 echo "#Done for $test:$PART:$LAR"
9834 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_1000_$iCs)_$iCd)_5_v-2.dat
9835 done;done
9836 #best
9837 #test=test:5:1000:$iCs):$iCd):5;PART=PART:0.6:.09:10:LAR=LAR:0.3:0.005:1:ver=ver:-2;#best for ver:-
2
9838 (1)t5 <p>0.97700.092<0.236-0.990 LC0.022-0.999 iC0=TR0:FA0:SR0 C1000=TA942:FR0:SA58 PAR0.6:0.09 LAR0
.3:0.005:1 iCT0:0/5 mid3v-2
9839 (2)t5 <p>0.94300.151<0.147-0.990 LC0.003-0.999 iC0=TR0:FA0:SR0 C1000=TA839:FR0:SA161 PAR0.6:0.09 LAR
0.3:0.005:1 iCT0:1/5 mid3v-2
9840 (3)t5 <p>0.03500.065<0.010-0.583 LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:1 iCT1:0/5 mid3v-2
9841 (4)t5 <p>0.03300.042<0.010-0.268 LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:1 iCT1:1/5 mid3v-2
9842 (5)t5 <p>0.80000.276<0.059-0.990 LC0.002-0.999 iC1000=TR3:FA39:SR958 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:1 iCT0:2/5 mid3v-2
9843 #n_A=0 許容誤り数を0にすると受理率が82.0%まで下がる
9844 #test=test:5:1000:$iCs):$iCd):5;PART=PART:0.6:.09:10:LAR=LAR:0.3:0.005:0:ver=ver:-2;#best for ver:-
2
9845 (1)t5 <p>0.97700.092<0.236-0.990 LC0.022-0.999 iC0=TR0:FA0:SR0 C1000=TA820:FR0:SA180 PAR0.6:0.09 LAR
0.3:0.005:0 iCT0:0/5 mid3v-2
9846 (2)t5 <p>0.94300.151<0.147-0.990 LC0.003-0.999 iC1000=TR32:FA25:SR943 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.3:0.005:0 iCT0:1/5 mid3v-2
9847 (3)t5 <p>0.03500.065<0.010-0.583 LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:0 iCT1:0/5 mid3v-2
9848 (4)t5 <p>0.03300.042<0.010-0.268 LC0.002-0.999 iC1000=TR1000:FA0:SR0 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:0 iCT1:1/5 mid3v-2
9849 (5)t5 <p>0.80000.276<0.059-0.990 LC0.002-0.999 iC1000=TR72:FA1:SR927 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:0 iCT0:2/5 mid3v-2
9850 #n_A=0 許容誤り数を0にする
9851 # (1)で受理率がFA82まで下がる
9852 # (2)でFA25と大きくなる
9853
9854 #nA=5: 許容誤り率を用いないで、多段話者数字認識のみ31/5でもアクセプト?PAではなく、FA
9855 test=test:5:1000:$iCs):$iCd):5;PART=PART:0.6:.09:10:LAR=LAR:0.3:0.005:5:ver=ver:-2;#best for ver:-
2
9856 (1)t5 <p>0.97700.092<0.236-0.990 LC0.022-0.999 iC0=TR0:FA0:SR0 C1000=TA993:FR0:SA7 PAR0.6:0.09 LAR0.
3:0.005:5 iCT0:0/5 mid3v-2
9857 (2)t5 <p>0.94300.151<0.147-0.990 LC0.003-0.999 iC0=TR0:FA0:SR0 C1000=TA983:FR0:SA17 PAR0.6:0.09 LAR0
.3:0.005:5 iCT0:1/5 mid3v-2
9858 (3)t5 <p>0.03500.065<0.010-0.583 LC0.002-0.999 iC1000=TR963:FA0:SR37 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:5 iCT1:0/5 mid3v-2
9859 (4)t5 <p>0.03300.042<0.010-0.268 LC0.002-0.999 iC1000=TR967:FA0:SR33 C0=TA0:FR0:SA0 PAR0.6:0.09 LAR0
.3:0.005:5 iCT1:1/5 mid3v-2
9860 (5)t5 <p>0.80000.276<0.059-0.990 LC0.002-0.999 iC0=TR0:FA0:SR0 C1000=TA882:FR1:SA117 PAR0.6:0.09 LAR
0.3:0.005:5 iCT0:2/5 mid3v-2
9861
9862 2013/02/23
9863 1.0大きい値PART と LARの最適化を試みた。
9864 (1)指定話者+指定数字列のテスト
9865 (2)指定話者+1/5非指定数字列のテスト,
9866 (3)非指定話者+指定数字列のテスト,
9867 (4)非指定話者+1/5非指定数字列のテスト,
9868 (5)指定話者+1/5非指定数字列のテスト,
以下、(1)-(4)ではFA,FRが0, (5)でFA50(5%)以下となるもののうち、(1)のTAが大きいもの。
9869 に対し、(1)-(4)の結果を得た。まとめる以下のようなようになるが、もっといいものはない?
9870 話者+数字照合 : ver=-2 → (1)C1000=TA944:FR0:SA56
9871 話者+数字照合 : ver=-1 → (1)C1000=TA954:FR0:SA46
9872 話者+数字照合 : ver=-2 → (1)C1000=TA942:FR0:SA58
9873 話者+数字照合 : ver=-1 → (1)C1000=TA909:FR0:SA91
9874
9875 2. 話者+数字照合 : ver=-2で大きい値の最適化
9876 2.1 実験
9877 for iCs in 0 1; do for iCd in 0 1; do
9878 #for iCs in 0; do for iCd in 2; do
9879 test=test:5:1000:$iCs):$iCd):5;PART=PART:0.5:.008:10:LAR=LAR:0.7:0.001:1:ver=ver:-2; #best for ver
:-2
9880 #test=test:5:1000:$iCs):$iCd):5;PART=PART:0.5:.008:10:LAR=LAR:0.3:0.001:1:ver=ver:-1;#best for ver
:-1
9881 echo "$test:$PART:$LAR"
9882 echo "$test:$PART:$LAR"
9883 cmd="speakerdigit_v $fs $fd $nsdl $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $LAR $
test";$cmd
```

```
9884 echo "#Done for $test:$PART:$LAR"
9885 cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+dl000_${ics}_${icd}_5_v-2.dat
9886 done:done
9887 (1) t5 <p>0.96000.153:0.072-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA944:FR0:SA56 PAR0.6:0.008 LA
R0.8:0.001:1 iCT0:0/5 midlv-2
9888 (2) t5 <p>0.96100.142:0.069-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA850:FR0:SA150 PAR0.6:0.008 L
AR0.8:0.001:1 iCT0:1/5 midlv-2
9889 (3) t5 <p>0.02100.044:0.010-0.345 LCO.002-0.998 iC1000=TR35:FA0:SR965 CO=TA0:FR0:SA0 PAR0.6:0.008 LA
R0.8:0.001:1 iCT1:0/5 midlv-2
9890 (4) t5 <p>0.02200.049:0.010-0.456 LCO.002-0.858 iC1000=TR137:FA0:SR863 CO=TA0:FR0:SA0 PAR0.6:0.008 L
AR0.8:0.001:1 iCT1:1/5 midlv-2
9891 (5) t5 <p>0.95600.163:0.062-0.990 LCO.003-0.998 iC1000=TR0:FA12:SR988 CO=TA0:FR0:SA0 PAR0.6:0.008 LA
R0.8:0.001:1 iCT0:2/5 midlv-2
9892
9893 (1) t5 <p>0.96000.153:0.072-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA945:FR0:SA55 PAR0.5:0.008 LA
R0.8:0.001:1 iCT0:0/5 midlv-2
9894 (2) t5 <p>0.96100.142:0.069-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA850:FR0:SA150 PAR0.5:0.008 L
AR0.8:0.001:1 iCT0:1/5 midlv-2
9895 (3) t5 <p>0.02100.044:0.010-0.345 LCO.002-0.998 iC1000=TR35:FA0:SR965 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.8:0.001:1 iCT1:0/5 midlv-2
9896 (4) t5 <p>0.02200.049:0.010-0.456 LCO.002-0.858 iC1000=TR137:FA0:SR863 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.8:0.001:1 iCT1:1/5 midlv-2
9897 (5) t5 <p>0.95600.163:0.062-0.990 LCO.003-0.998 iC1000=TR0:FA13:SR987 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.8:0.001:1 iCT0:2/5 midlv-2
9898
9899 (1) t5 <p>0.96000.153:0.072-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA946:FR0:SA54 PAR0.4:0.008 LA
R0.8:0.001:1 iCT0:0/5 midlv-2
9900 (2) t5 <p>0.96100.142:0.069-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA851:FR0:SA149 PAR0.4:0.008 L
AR0.8:0.001:1 iCT0:1/5 midlv-2
9901 (3) t5 <p>0.02100.044:0.010-0.345 LCO.002-0.998 iC1000=TR35:FA0:SR965 CO=TA0:FR0:SA0 PAR0.4:0.008 LA
R0.8:0.001:1 iCT1:0/5 midlv-2
9902 (4) t5 <p>0.02200.049:0.010-0.456 LCO.002-0.858 iC1000=TR137:FA1:SR862 CO=TA0:FR0:SA0 PAR0.4:0.008 L
AR0.8:0.001:1 iCT1:1/5 midlv-2 NG FA1
9903 (5) t5 <p>0.95600.163:0.062-0.990 LCO.003-0.998 iC1000=TR0:FA13:SR987 CO=TA0:FR0:SA0 PAR0.4:0.008 LA
R0.8:0.001:1 iCT0:2/5 midlv-2
9904
9905 ##best PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.001:1:ver=ver:-2:
9906 (1) t5 <p>0.96000.153:0.072-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA947:FR0:SA53 PAR0.5:0.008 LA
R0.7:0.001:1 iCT0:0/5 midlv-2
9907 (2) t5 <p>0.96100.142:0.069-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA859:FR0:SA141 PAR0.5:0.008 L
AR0.7:0.001:1 iCT0:1/5 midlv-2
9908 (3) t5 <p>0.02100.044:0.010-0.345 LCO.002-0.998 iC1000=TR33:FA0:SR967 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.7:0.001:1 iCT1:0/5 midlv-2
9909 (4) t5 <p>0.02200.049:0.010-0.456 LCO.002-0.858 iC1000=TR128:FA0:SR872 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.7:0.001:1 iCT1:1/5 midlv-2
9910 (5) t5 <p>0.95600.163:0.062-0.990 LCO.003-0.998 iC1000=TR0:FA16:SR984 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.7:0.001:1 iCT0:2/5 midlv-2
9911
9912 (1) t5 <p>0.96000.153:0.072-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA951:FR0:SA49 PAR0.5:0.008 LA
R0.6:0.001:1 iCT0:0/5 midlv-2
9913 (2) t5 <p>0.96100.142:0.069-0.990 LCO.003-0.998 iCO=TR0:FA0:SR0 C1000=TA865:FR0:SA135 PAR0.5:0.008 L
AR0.6:0.001:1 iCT0:1/5 midlv-2
9914 (3) t5 <p>0.02100.044:0.010-0.345 LCO.002-0.998 iC1000=TR33:FA0:SR967 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.6:0.001:1 iCT1:0/5 midlv-2
9915 (4) t5 <p>0.02200.205:0.062-0.990 LCO.001-1.000 iC1000=TR0:FA0:SR991 CO=TA0:FR0:SA0 PAR0.5:0.008 LAR
0.6:0.001:1 iCT1:1/5 midlv-2 NG FA9 for LAR0.6
9916 (5) t5 <p>0.95600.163:0.062-0.990 LCO.003-0.998 iC1000=TR0:FA20:SR980 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.6:0.001:1 iCT0:2/5 midlv-2
9917
9918
9919 2.2 検討 以下
9920 (a) PAT≧0.5 (PART:-5:0.008:10)上で誤受理は0(FA0)だが、PAT=0.4の偽話者1/5比指定数字(1CT1:1/5 midlv
-2)
9921 でFA1がでた。PAT≧0.5 とすべき! ?
9922
9923 2.3 視覚化
9924 cd ../12voicedata/allpole/
9925 gnuplot
9926 plot "test_s+dl000_0_5_v-2.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "", \
9927 "test_s+dl000_10_5_v-2.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t "", 0.2,0.008
9928
9929 3. 底音+数字照合: ver=-1でしきい値の最適化
9930 3.1 実験
9931 for iCns in 0 1: do for iCd in 0 1: do
9932 #for iCs in 0: do for iCd in 2: do
9933 #test=test:5:1000:5:ics:}${icd}:${icd}:5:PART=PART:0.5:0.008:10:LAR=LAR:0.7:0.001:1:ver=ver:-2: #best for ve
r:-2
9934 test=test:5:1000:5:ics:}${icd}:${icd}:5:PART=PART:0.5:0.008:10:LAR=LAR:0.3:0.001:1:ver=ver:-1: #best for ver:
-1
9935 echo "#$test:$PART:$LAR"
9936 cmd="speakeridn_v $fs $fd $NSDL $pmin $ytm $PnR $vold $gibbs $beta $sdp $it $sedt $ver $PART $LAR $
test";$cmd
```

```
9937 echo "#Done for $test:$PART:$LAR"
9938 cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+dl000_${ics}_${icd}_5_v-1.dat
9939 done:done
9940 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA926:FR0:SA74 PAR0.6:0.008 LA
R0.8:0.001:1 iCT0:0/5 midlv-1
9941 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA806:FR0:SA194 PAR0.6:0.008 L
AR0.8:0.001:1 iCT0:1/5 midlv-1
9942 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR47:FA0:SR953 CO=TA0:FR0:SA0 PAR0.6:0.008 LA
R0.8:0.001:1 iCT1:0/5 midlv-1
9943 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR170:FA0:SR830 CO=TA0:FR0:SA0 PAR0.6:0.008 L
AR0.8:0.001:1 iCT1:1/5 midlv-1
9944 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA7:SR993 CO=TA0:FR0:SA0 PAR0.6:0.008 LAR
0.8:0.001:1 iCT0:2/5 midlv-1
9945
9946 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA933:FR0:SA67 PAR0.5:0.008 LA
R0.8:0.001:1 iCT0:0/5 midlv-1
9947 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA817:FR0:SA183 PAR0.5:0.008 L
AR0.8:0.001:1 iCT0:1/5 midlv-1
9948 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR47:FA0:SR953 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.8:0.001:1 iCT1:0/5 midlv-1
9949 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR170:FA0:SR830 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.8:0.001:1 iCT1:1/5 midlv-1
9950 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA7:SR993 CO=TA0:FR0:SA0 PAR0.5:0.008 LAR
0.8:0.001:1 iCT0:2/5 midlv-1
9951
9952 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA934:FR0:SA66 PAR0.4:0.008 LA
R0.8:0.001:1 iCT0:0/5 midlv-1
9953 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA818:FR0:SA182 PAR0.4:0.008 L
AR0.8:0.001:1 iCT0:1/5 midlv-1
9954 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR47:FA1:SR952 CO=TA0:FR0:SA0 PAR0.4:0.008 LA
R0.8:0.001:1 iCT1:0/5 midlv-1
9955 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR170:FA1:SR829 CO=TA0:FR0:SA0 PAR0.4:0.008 L
AR0.8:0.001:1 iCT1:1/5 midlv-1 NG FA1 for PA0.4
9956 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA8:SR992 CO=TA0:FR0:SA0 PAR0.4:0.008 LAR
0.8:0.001:1 iCT0:2/5 midlv-1
9957
9958 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA946:FR0:SA54 PAR0.5:0.008 LA
R0.7:0.001:1 iCT0:0/5 midlv-1
9959 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA859:FR0:SA141 PAR0.5:0.008 L
AR0.7:0.001:1 iCT0:1/5 midlv-1
9960 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR33:FA0:SR967 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.7:0.001:1 iCT1:0/5 midlv-1
9961 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR128:FA0:SR872 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.7:0.001:1 iCT1:1/5 midlv-1
9962 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA15:SR985 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.7:0.001:1 iCT0:2/5 midlv-1
9963
9964 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA950:FR0:SA50 PAR0.5:0.008 LA
R0.6:0.001:1 iCT0:0/5 midlv-1
9965 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA865:FR0:SA135 PAR0.5:0.008 L
AR0.6:0.001:1 iCT0:1/5 midlv-1
9966 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR33:FA0:SR967 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.6:0.001:1 iCT1:0/5 midlv-1
9967 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR122:FA0:SR878 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.6:0.001:1 iCT1:1/5 midlv-1
9968 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA19:SR981 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.6:0.001:1 iCT0:2/5 midlv-1
9969
9970 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA950:FR0:SA50 PAR0.5:0.008 LA
R0.5:0.001:1 iCT0:0/5 midlv-1
9971 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA866:FR0:SA134 PAR0.5:0.008 L
AR0.5:0.001:1 iCT0:1/5 midlv-1
9972 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR33:FA0:SR967 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.5:0.001:1 iCT1:0/5 midlv-1
9973 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR121:FA0:SR879 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.5:0.001:1 iCT1:1/5 midlv-1
9974 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA22:SR978 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.5:0.001:1 iCT0:2/5 midlv-1
9975
9976 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA954:FR0:SA46 PAR0.5:0.008 LA
R0.4:0.001:1 iCT0:0/5 midlv-1
9977 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA876:FR0:SA124 PAR0.5:0.008 L
AR0.4:0.001:1 iCT0:1/5 midlv-1
9978 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iC1000=TR30:FA0:SR970 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.4:0.001:1 iCT1:0/5 midlv-1
9979 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iC1000=TR114:FA0:SR886 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.4:0.001:1 iCT1:1/5 midlv-1
9980 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA23:SR977 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.4:0.001:1 iCT0:2/5 midlv-1
9981
9982 #best PART=PART:0.5:0.008:10:LAR=LAR:0.3:0.001:1:ver=ver:-1:
9983 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FA0:SR0 C1000=TA954:FR0:SA46 PAR0.5:0.008 LA
R0.3:0.001:1 iCT0:0/5 midlv-1
```

```
9983 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA876:FR0:SA124 PAR0.5:0.008 L
AR0.3:0.001:1 iCT0:1/5 mid3v-1
9984 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iCI000=TR30:FAO:SR970 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.3:0.001:1 iCT1:0/5 mid3v-1
9985 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iCI000=TR114:FAO:SR886 CO=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.3:0.001:1 iCT1:1/5 mid3v-1
9986 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iCI000=TR0:FA23:SR977 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.3:0.001:1 iCT0:2/5 mid3v-1
9987
9988 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA973:FR0:SA27 PAR0.5:0.008 LA
R0.2:0.001:1 iCT0:0/5 mid3v-1
9989 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA969:FR0:SA31 PAR0.5:0.008 LA
R0.2:0.001:1 iCT0:1/5 mid3v-1
9990 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iCI000=TR13:FAO:SR987 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.2:0.001:1 iCT1:0/5 mid3v-1
9991 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iCI000=TR28:FAO:SR972 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.2:0.001:1 iCT1:1/5 mid3v-1
9992 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iCI000=TR0:FA860:SR140 C0=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.2:0.001:1 iCT0:2/5 mid3v-1 BIG FA860
9993
9994 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA985:FR0:SA15 PAR0.5:0.008 LA
R0.1:0.001:1 iCT0:0/5 mid3v-1
9995 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA990:FR0:SA10 PAR0.5:0.008 LA
R0.1:0.001:1 iCT0:1/5 mid3v-1
9996 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iCI000=TR0:FAO:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.1:0.001:1 iCT1:0/5 mid3v-1
9997 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iCI000=TR0:FAO:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.1:0.001:1 iCT1:1/5 mid3v-1
9998 (5) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iCI000=TR0:FA971:SR29 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.1:0.001:1 iCT0:2/5 mid3v-1 BIG FA971
9999
10000 (1) t5 <p>0.85500.160:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA985:FR0:SA15 PAR0.5:0.008 LA
R0.0:1.001:1 iCT0:0/5 mid3v-1 same for LA0.1
10001 (2) t5 <p>0.85300.154:0.163-0.915 LCO.038-0.964 iCO=TR0:FAO:SR0 CI000=TA990:FR0:SA10 PAR0.5:0.008 LA
R0.0:1.001:1 iCT0:1/5 mid3v-1
10002 (3) t5 <p>0.10500.072:0.038-0.447 LCO.024-0.963 iCI000=TR0:FAO:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.0:1.001:1 iCT1:0/5 mid3v-1
10003 (4) t5 <p>0.10800.076:0.035-0.449 LCO.024-0.837 iCI000=TR0:FAO:SR1000 CO=TA0:FR0:SA0 PAR0.5:0.008 LA
R0.0:1.001:1 iCT1:1/5 mid3v-1
10004 (5)
10005
10006 3.2 検分 以下
10007 (a) ver:=-2と同様に、PAT≧0.5 (PART:5:008:10)上で誤受理は0(FAO)だが、PAT=0.4の偽話者1/5比指定数字
(iCT1:1/5 mid3v-2)
10008 でFAIがでた。PAT≧0.5 とすべき！？
10009 3.3 補算化
10010 cd ../12voicedata/allpole/
10011 gnuplot
10012 plot "test_srd1000_0_0_5_v-1.dat" using 1:2 w l, "" using 1:2:3 w errorbars t "", \
10013 "test_sd+id000_1_0_5_v-1.dat" using ($1+0.1):2 w l, "" using ($1+0.1):2:3 w errorbars t "", 0.2,0.008
10014
10015 4. 話者数字照合:ver=-2でしきい値の最適化
10016 4.1 実数
10017 for iCs in 0 1: do for iCd in 0 1: do # for (1)-(4)
10018 #for iCs in 0: do for iCd in 2: do # for (5)
10019 test=test:5:1000:$(iCs):$(iCd):5:PART=PART:0.6:0.09:10:LAR=LAR:0.3:0.005:1:ver=ver:-2:#best for ver:-
2
10020 cmd="speakerdigit_v $fed $nSdL $pmin $ytm $PNr $void $gibbs $beta $sdp $IT $sdt $ver $PART $IAR $tes
t"/$cmd
10021 echo "Hdone for $test:$PART:$IAR"
10022 cp tmp/tested_stat.dat ../12voicedata/allpole/test_sd_1000_$(iCs)_$(iCd)_5_v-2.dat
10023 done:done
10024 #ver:-20ととき
10025 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA925:FR0:SA75 PAR0.6:0.09 LAR
0.7:0.005:1 iCT0:0/5 mid3v-2
10026 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA788:FR0:SA212 PAR0.6:0.09 LA
R0.7:0.005:1 iCT0:1/5 mid3v-2 SA212 by LA
10027 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.7:0.005:1 iCT1:0/5 mid3v-2
10028 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.7:0.005:1 iCT1:1/5 mid3v-2
10029 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FAI7:SR980 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.7:0.005:1 iCT0:2/5 mid3v-2
10030
10031 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA925:FR0:SA75 PAR0.6:0.09 LAR
0.6:0.005:1 iCT0:0/5 mid3v-2
10032 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA788:FR0:SA212 PAR0.6:0.09 LA
R0.6:0.005:1 iCT0:1/5 mid3v-2
10033 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.6:0.005:1 iCT1:0/5 mid3v-2
10034 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR3:FA41:SR956 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR0.3
0.6:0.005:1 iCT1:1/5 mid3v-2
```

```
10035 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FAI7:SR980 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.6:0.005:1 iCT0:2/5 mid3v-2
10036
10037 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA942:FR0:SA58 PAR0.6:0.09 LAR
0.5:0.005:1 iCT0:0/5 mid3v-2
10038 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA839:FR0:SA161 PAR0.6:0.09 LA
R0.5:0.005:1 iCT0:1/5 mid3v-2
10039 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.5:0.005:1 iCT1:0/5 mid3v-2
10040 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.5:0.005:1 iCT1:1/5 mid3v-2
10041 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA39:SR958 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.5:0.005:1 iCT0:2/5 mid3v-2
10042
10043 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA942:FR0:SA58 PAR0.6:0.09 LAR
0.4:0.005:1 iCT0:0/5 mid3v-2
10044 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA839:FR0:SA161 PAR0.6:0.09 LA
R0.4:0.005:1 iCT0:1/5 mid3v-2
10045 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.4:0.005:1 iCT1:0/5 mid3v-2
10046 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.4:0.005:1 iCT1:1/5 mid3v-2
10047 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA39:SR958 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.4:0.005:1 iCT0:2/5 mid3v-2
10048
10049 #selected? FA39=3.9%≦5% for 2/5比指定数字列 ver:-2
10050 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA942:FR0:SA58 PAR0.6:0.09 LAR
0.3:0.005:1 iCT0:0/5 mid3v-2
10051 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA839:FR0:SA161 PAR0.6:0.09 LA
R0.3:0.005:1 iCT0:1/5 mid3v-2
10052 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.3:0.005:1 iCT1:0/5 mid3v-2
10053 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.3:0.005:1 iCT1:1/5 mid3v-2
10054 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA39:SR958 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.3:0.005:1 iCT0:2/5 mid3v-2 FA39=3.9%≦8%
10055 #
10056 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA944:FR0:SA56 PAR0.6:0.09 LAR
0.2:0.005:1 iCT0:0/5 mid3v-2
10057 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA849:FR0:SA151 PAR0.6:0.09 LA
R0.2:0.005:1 iCT0:1/5 mid3v-2
10058 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.2:0.005:1 iCT1:0/5 mid3v-2
10059 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.2:0.005:1 iCT1:1/5 mid3v-2
10060 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA69:SR928 CO=TA0:FR0:SA0 PAR0.6:0.09 LAR
0.2:0.005:1 iCT0:2/5 mid3v-2 FA69=6.9%≦8%
10061
10062 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA942:FR0:SA58 PAR0.5:0.09 LAR
0.3:0.005:1 iCT0:0/5 mid3v-2
10063 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA839:FR0:SA161 PAR0.5:0.09 LA
R0.3:0.005:1 iCT0:1/5 mid3v-2
10064 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.5:0.09 LAR
0.3:0.005:1 iCT1:0/5 mid3v-2
10065 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.5:0.09 LAR
0.3:0.005:1 iCT1:1/5 mid3v-2
10066 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA39:SR958 CO=TA0:FR0:SA0 PAR0.5:0.09 LAR
0.3:0.005:1 iCT0:2/5 mid3v-2
10067
10068 (1) t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA943:FR0:SA57 PAR0.1:0.09 LAR
0.3:0.005:1 iCT0:0/5 mid3v-2 check PAT
10069 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA841:FR0:SA159 PAR0.1:0.09 LA
R0.3:0.005:1 iCT0:1/5 mid3v-2
10070 (3) t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.1:0.09 LAR
0.3:0.005:1 iCT1:0/5 mid3v-2
10071 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.1:0.09 LAR
0.3:0.005:1 iCT1:1/5 mid3v-2
10072 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA41:SR956 CO=TA0:FR0:SA0 PAR0.1:0.09 LAR
0.3:0.005:1 iCT0:2/5 mid3v-2
10073
10074 t5 <p>0.97700.092:0.236-0.990 LCO.022-0.999 iCO=TR0:FAO:SR0 CI000=TA943:FR0:SA57 PAR0.01:0.09 LAR0.3
0.005:1 iCT0:0/5 mid3v-2 check PAT same as above
10075 t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iCO=TR0:FAO:SR0 CI000=TA841:FR0:SA159 PAR0.01:0.09 LAR0.
3:0.005:1 iCT0:1/5 mid3v-2
10076 t5 <p>0.03500.065:0.010-0.583 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.01:0.09 LAR0.3
0.005:1 iCT1:0/5 mid3v-2
10077 t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iCI000=TR1000:FAO:SR0 CO=TA0:FR0:SA0 PAR0.01:0.09 LAR0.3
0.005:1 iCT1:1/5 mid3v-2
10078 t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iCI000=TR3:FA41:SR956 CO=TA0:FR0:SA0 PAR0.01:0.09 LAR0.3
0.005:1 iCT0:2/5 mid3v-2
10079
10080 5. 話者数字照合:ver=-1でしきい値の最適化
```



```
R0.8:0.001:1 iCT0:0/5 midl
10199 (8) t5 <p>0.10800.076:0.035-0.0.449 LCO.024-0.837 iC1000=TR170:FA0:SR830 C0=TA0:FR0:SA0 PAR0.5:0.008 L
AR0.8:0.001:1 iCT1:1/5 midl
10190 (9) t5 <p>0.84700.169:0.164-0.915 LCO.038-0.964 iC1000=TR0:FA7:SR993 C0=TA0:FR0:SA0 PAR0.5:0.008 LAR
0.8:0.001:1 iCT0:2/5 midl
10191
```

5.2.4 検討

10192 (a)誤受理は、(1)-(4)すべてで無かった (FA0)。なお (2)で1/5非指定数字であるが指定話者なので1/5以下の非数字は受理する。

10193 (a)誤受理は、(1)-(4)すべてで無かった (FR0)。

10194 (c)PAR0.6:0.008で、指定話者が全て指定数字を宛した (1)の場合、受理が92.6%(TA926)、受理保留が7.4%(SA74)。

10196 (d)PAR0.6:0.008で、指定話者が1/5非指定数字を宛した (2)の場合、受理が80.6%(TA806)、受理保留が19.4%(SA194)、1/5非指定数字なので否認。

10197 (e)PAR0.6:0.008で、非指定話者 (3)と (4)では正棄却が4.7%(TF47)と17.0%(TR170)とかなり低い、(低すぎ?)

10198 (f)セキュリティの面からは (1)誤棄却はあっても良いが誤受理は無くしたい。一方、実用面からは (ii)正解入力の場合 (1)の受理率は高くない。

10199 (g)PAR0.6:0.008で、指定話者+2/5非指定数字列の (5)の場合、誤受理が0.7%(FA7)あったが、「指定話者は数字間違いが少ない」という観点からは (1)誤棄却はあっても良いが誤受理は無くしたい。

10200 容認できる。(i)と(ii)の両面で容認できると考える。

10201 (g)ver-1で「PART:<PA>:<PR>:<T>:<PR>」の設定、LAR:<1A>:<1R>:<1A>:<1R>:<1A>の<1A>の設定は難しく、試行錯誤で行った。

10202

10203 #####

10204 2013/02/19

10205 1. 2013/02/180の「3.3 検討」と「4.3 検討」の

10206 PART=PART: 85:20:10:0#PART:<sp>:<sp>:<T> for <sp>=accept_prob <sp>=reject_prob, <T>=terminal.time.

10207 LAR=LAR:0.9:0.001:1; # LAR:<1A>:<1R>:<1A> for <1A>=accept_likelihood, <1R>=reject_likelihood,

10208 test=test:5:1000:0:4:5#test:5:<n>:<riCs>:<t_1cD>:<tb>; for <n>=number_of_samples, allow <1A>=mismatching of digits (<1A>

10209 #<riCs>=incorrect_speakers_rate (0 or 1)

10210 #test:4:1:000:0:10:0#test:4:1:<n>:<riCs>:<t_1cD> for number <t_1cD> of incorrect digits in <tb> digits

10211 atc, <riCs>=inCorrect_digits_rate.

10212 #test:0:1:000:0:1:2:3:4:5:6:7:8:9 #sdp:<speaker>:<digit1>:<digit2>:... for prompted speaker and digits

10213 when test_id=0

10214 sdt=sdt:0:0:1:2:3:4:5:6:7:8:9 #sdt:<speaker>:<digit1>:<digit2>:... for testing speaker and digits

10215 lT=lT:1; #lT<1> for testing data of <1>-th date

10216 fcd=fcd:..12voicedata/allpole/coh4sd:-1N40mbas2:300:1.6:1.y:fcd="" #file name of y of speakerdigit

10217 f8=f8:..12voicedata/allpole/coh4s:-1N40mbas2:300:1.6:1.y: #file name of y of speaker

10218 f8=f8:..12voicedata/allpole/coh4d:-1N40mbas2:300:1.6:1.y: #file name of y of digit

10219 nSDL=nSDL:7:10:10 #nSDL:<nS>:<nD>:<nL> for number of speakers, digits and dates

10220 gibbs=gibbs:1; #1 for Gibbs, 0 for Bayes

10221 beta=beta:0.01; #inverse temperature beta

10222 pmin=pmin:0.01; #threshold of probability p for pmin<p<1-pmin

10223 ytm=ytm:1:0.9:1:000:Pnr=""; #ytm:1:cas-<n> for method to get <n> samples for -a < yth <-a

10224 #ytm=ytm:0:Pnr=Pnr:0.9; #ytm:0 for method to determine yth using Pnr:0.9 (see ICONIP2012)

10225 void=void:0; #void:1 for use void (see ICONIP2012) not available now

3. 話者数字列照合 (備考) :

10237 3.1 実行

10238 (1)指定話者+指定数字列のテスト

10239 (2)指定話者+1/5非指定数字列のテスト

10240 (3)非指定話者+指定数字列のテスト

```
10256 (2) t5 <p>0.94300.151:0.147-0.990 LCO.003-0.999 iC0=TR0:FA0:SR0 C1000=TA765:FR0:SA235 PAR0.85:0.09 L
AR0.91:0.001:1 iCT0:1/5 mid3
10257 (3) <p>0.03500.065:0.010-0.583 LCO.002-0.999 iC1000=FR1000:FA0:SR0 C0=TA0:FR0:SA0 PAR0.85:0.09 LA
R0.91:0.001:1 iCT1:1/0/5 mid3
10258 (4) t5 <p>0.03300.042:0.010-0.268 LCO.002-0.999 iC1000=FR1000:FA0:SR0 C0=TA0:FR0:SA0 PAR0.85:0.09 LA
R0.91:0.001:1 iCT1:1/5 mid3
10259 (5) t5 <p>0.80000.276:0.059-0.990 LCO.002-0.999 iC1000=TR0:FA6:SR994 C0=TA0:FR0:SA0 PAR0.85:0.09 LAR
0.91:0.001:1 iCT0:2/5 mid3
10260
```

3.3 検討

10261 (a)誤受理は、(1)-(4)すべてで無かった (FA0)。(2)で1/5非指定数字であるが指定話者なので1/5以下の非数字は受理する。

10262 (b)誤棄却は、(1)-(4)すべてで無かった (FR0)。

10264 (c)指定話者が全て指定数字を宛した (1)の場合、受理が90.2%(TA902)、受理保留が9.8%(SA98)。

10265 (d)指定話者が1/5非指定数字を宛した (2)の場合、受理が76.5%(TA765)、受理保留が23.5%(SA235)。1/5非指定数字なので否認。

10266 (e)非指定話者 (3)と (4)では正棄却が100%(TR=1000)。

10267 (f)セキュリティの面からは (1)誤棄却はあっても良いが誤受理は無くしたい。一方、実用面からは (ii)正解入力の場合 (1)の受理率は高くない。

10268 (g)指定話者+2/5非指定数字列の (5)の場合、誤受理が0.6%(FA6)あったが、「指定話者は数字間違いが少ない」という観点からは (1)と(ii)の両面で容認できると考える。

10269 容認できる。(i)と(ii)の両面で容認できると考える。

10270 (g)尤度による数字列判定は未解析だが、解析必須。

10271

10272 4. 話者+数字 (植木) :

10273 4.1 実行

10274 (1)指定話者+指定数字列のテスト

10275 (2)指定話者+1/5非指定数字列のテスト

10276 (3)非指定話者+指定数字列のテスト

10277 (4)非指定話者+1/5指定数字列のテスト

10278 (5)指定話者+2/5非指定数字列のテスト

10279 ## 以下をコピーして実行する

10280 for iCs in 0 1; do for iCd in 0 1; do #for (1)-(4)

10281 #for iCs in 0; do for iCd in 2; do # for (5)

10282 test=test:5:1000:\$iCs:\$iCd:5:PART=PART:.8: 05:10:LAR=LAR:0.91:0.001:1;

10283 echo "4#test:\$PART:\$LAR"

10284 cmd="speakerdigit_v \$fs \$fd \$nSDL \$pmin \$ytm \$Pnr \$void \$gibbs \$beta \$sdp \$lT \$sdt \$ver \$PART \$LAR \$t";\$cmd

10285 echo "#Done for \$test:\$PART:\$LAR"

10286 cp tmp/tested_stat.dat ../12voicedata/allpole/test_s+dl000_\$(iCs)_\$(iCd)_5.dat

10287 done;done

10288 ## 以上をコピーして実行する。

10289 4.2 結果

10290 (1) t5 <p>0.96000.153:0.072-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA864:FR0:SA136 PAR0.8:0.05 LA

10291 R0.91:0.001:1 iCT0:0/5 midl

10292 (2) t5 <p>0.96100.142:0.069-0.990 LCO.003-0.998 iC0=TR0:FA0:SR0 C1000=TA665:FR0:SA335 PAR0.8:0.05 LA

10293 R0.91:0.001:1 iCT0:1/5 midl

10294 (3) t5 <p>0.02100.044:0.010-0.345 LCO.002-0.998 iC1000=TR971:FA0:SR29 C0=TA0:FR0:SA0 PAR0.8:0.05 LAR

10295 (4) t5 <p>0.02200.049:0.010-0.456 LCO.002-0.858 iC1000=TR980:FA0:SR20 C0=TA0:FR0:SA0 PAR0.8:0.05 LAR

10296 (5) t5 <p>0.95600.163:0.062-0.990 LCO.003-0.998 iC1000=TR0:FA2:SR998 C0=TA0:FR0:SA0 PAR0.8:0.05 LAR0

10295 91:0.001:1 iCT0:2/5 midl

4.3 検討

10297 (a)誤受理は、(1)-(4)すべてで無かった (FA0)。なお (2)で1/5非指定数字であるが指定話者なので1/5以下の非数字は受理する。

10298 (b)誤棄却は、(1)-(4)すべてで無かった (FR0)。

10299 (c)指定話者が全て指定数字を宛した (1)の場合、受理が86.4%(TA864)、受理保留が13.6%(SA136)。

10300 (d)指定話者が1/5非指定数字を宛した (2)の場合、受理が66.5%(TA665)、受理保留が33.5%(SA335)。1/5非指定数字なので否認。

10301 (e)非指定話者 (3)と (4)では正棄却が97.1%(TR971)と98.0%(TR980)である。

10302 (f)セキュリティの面からは (1)誤棄却はあっても良いが誤受理は無くしたい。一方、実用面からは (ii)正解入力の場合 (1)の受理率は高くない。

10303 指定話者+2/5非指定数字列の (5)の場合、誤受理が0.2%(FA2)あったが、「指定話者は数字間違いが少ない」という観点からは (1)と(ii)の両面で容認できると考える。

10304 容認できる。(i)と(ii)の両面で容認できると考える。

10305 (g)尤度による数字列判定は未解析だが、解析必須。

10306

10307 5. 尤度による数字列判定について

10308 5.1 ver-2で尤度を使った結果 (上)は、ver-1で事後分布を使った結果とほぼ同じになった?

10309 (if {version==1}) (このところ参照:version)は尤度の計算を指定CAN2のみの結果を使うもの)

10310 ver-1で事後分布が使えなため、オプション「LAR:<1A>:<1R>:<1A>:<1R>」の<1A>は27ラズ分類器CAN2のTPの確率より少し小さく値

10311 <LR>はFPRより少し小さめに設定すればよいと考えられる。

10312

10313 5.2.1 PART: 85:09:10:LAR:0.8:0.005:1:1として話者数字

10314 for iCs in 0 1; do for iCd in 0 1; do

10315 #for iCs in 0; do for iCd in 2; do

10316 test=test:5:1000:\$iCs:\$iCd:5:PART=PART:.85: 09:10:LAR=LAR:0.8:0.005:1:1:ver=1;

10317 cmd="speakerdigit_v \$fd \$nSDL \$pmin \$ytm \$Pnr \$void \$gibbs \$beta \$sdp \$lT \$sdt \$ver \$PART \$LAR \$tes

10318 t";\$cmd


```
10956 0.8571 0.9935 0.00635 0.11429 1.72336e-04 700 7 #TP, TN, FP, FN, ERR, n, t, xm7
10957 0.91429 0.98571 0.01429 0.08571 0.42857e-04 700 8 #TP, TN, FP, FN, ERR, n, t, xm8
10958 0.98571 0.99365 0.00635 0.01429 2.94785e-05 700 9 #TP, TN, FP, FN, ERR, n, t, xm9
10959 #result in './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.y' and './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.ystat'.
10960
10961 #oob4speakeridgit+ sp:fhs:fms:mkk:mko:mnt:mmh:myu tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx
1:10 k:36 mbas:2:300:1.6:1.dir:../12voicedata/allpole sd:-1 N:50
10962 1.00000 0.99275 0.00725 0.00000 1.03520e-05 700 0 #TP, TN, FP, FN, ERR, n, sm0 t, xm0
10963 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 1 #TP, TN, FP, FN, ERR, n, sm0 t, xm1
10964 1.00000 1.00000 0.00000 0.10000 1.42857e-04 700 2 #TP, TN, FP, FN, ERR, n, sm0 t, xm2
10965 1.00000 0.99565 0.00435 0.00000 6.21118e-06 700 3 #TP, TN, FP, FN, ERR, n, sm0 t, xm3
10966 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 4 #TP, TN, FP, FN, ERR, n, sm0 t, xm4
10967 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 5 #TP, TN, FP, FN, ERR, n, sm0 t, xm5
10968 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 6 #TP, TN, FP, FN, ERR, n, sm0 t, xm6
10969 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 7 #TP, TN, FP, FN, ERR, n, sm0 t, xm7
10970 1.00000 0.99565 0.00435 0.00000 6.21118e-06 700 8 #TP, TN, FP, FN, ERR, n, sm0 t, xm8
10971 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 9 #TP, TN, FP, FN, ERR, n, sm0 t, xm9
10972 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 1 #TP, TN, FP, FN, ERR, n, sm0 t, xm0
10973 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm0
10974 1.00000 0.99855 0.00145 0.00000 0.50000 1.74286e-04 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10975 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10976 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10977 1.00000 0.99855 0.00145 0.00000 2.87785e-04 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10978 1.00000 0.99855 0.00145 0.00000 2.87785e-04 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10979 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10980 1.00000 0.99565 0.00435 0.00000 5.77640e-04 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10981 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 1 #TP, TN, FP, FN, ERR, n, sm1 t, xm1
10982 1.00000 0.99710 0.00290 0.00000 2.89855e-04 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm0
10983 1.00000 0.99710 0.00290 0.00000 1.53209e-04 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm1
10984 1.00000 0.98841 0.01159 0.00000 7.30849e-04 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10985 1.00000 0.99565 0.00435 0.00000 6.21118e-06 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10986 1.00000 0.99565 0.00435 0.00000 6.21118e-06 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10987 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10988 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10989 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10990 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10991 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
10992 1.00000 0.98986 0.00145 0.00000 1.44928e-05 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm3
10993 1.00000 0.99275 0.00725 0.00000 1.03520e-05 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm1
10994 1.00000 0.99275 0.00725 0.00000 1.53209e-04 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm2
10995 1.00000 1.00000 0.00000 0.20000 2.85714e-06 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
10996 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
10997 1.00000 1.00000 0.00000 0.20000 2.85714e-06 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
10998 1.00000 0.99855 0.00145 0.00000 2.85714e-04 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
10999 1.00000 1.00000 0.00000 0.10000 5.71429e-04 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
11000 1.00000 1.00000 0.00000 0.10000 1.42857e-04 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
11001 1.00000 1.00000 0.00000 0.10000 1.42857e-04 700 3 #TP, TN, FP, FN, ERR, n, sm3 t, xm3
11002 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm0
11003 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm1
11004 1.00000 0.98406 0.01594 0.00000 4.1346e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm2
11005 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm3
11006 1.00000 0.99275 0.00725 0.00000 1.53209e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm4
11007 1.00000 0.99420 0.00580 0.00000 2.93996e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm5
11008 1.00000 0.99565 0.00435 0.00000 4.34783e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm6
11009 1.00000 0.99855 0.00435 0.00000 1.46998e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm7
11010 1.00000 0.99710 0.00290 0.00000 1.46998e-04 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm8
11011 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 4 #TP, TN, FP, FN, ERR, n, sm4 t, xm9
11012 1.00000 0.99855 0.00145 0.00000 2.87785e-04 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm0
11013 1.00000 0.99565 0.00435 0.00000 6.21118e-06 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm1
11014 1.00000 0.99420 0.00580 0.00000 2.93996e-04 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm2
11015 1.00000 0.99565 0.00435 0.00000 6.21118e-06 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm3
11016 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm4
11017 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm5
11018 1.00000 1.00000 0.00000 0.00000 0.00000e+00 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm6
11019 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm7
11020 1.00000 0.99710 0.00290 0.00000 1.46998e-04 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm8
11021 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 5 #TP, TN, FP, FN, ERR, n, sm5 t, xm9
11022 1.00000 0.99565 0.00435 0.00000 2.91928e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm0
11023 1.00000 0.99130 0.00870 0.00000 1.55280e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm1
11024 1.00000 0.99710 0.00290 0.00000 1.46998e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm2
11025 1.00000 0.99710 0.00290 0.00000 1.46998e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm3
11026 1.00000 1.00000 0.00000 0.10000 1.42857e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm4
11027 1.00000 0.99855 0.00145 0.00000 2.07039e-06 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm5
11028 1.00000 0.99710 0.00290 0.00000 2.89855e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm6
11029 1.00000 0.99710 0.00290 0.00000 4.14079e-06 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm7
11030 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm8
11031 1.00000 0.99855 0.00145 0.00000 1.44928e-04 700 6 #TP, TN, FP, FN, ERR, n, sm6 t, xm9
11032 #result in './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.y' and './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.ystat'.
11033
11034 #参考 #oob4speakeridgit+ sp:fhs:fms:mkk:mko:mnt:mmh:myu tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx
```

```
u ntx:1:10 k:36 mbas:2:300:1.6:1.dir:../12voicedata/allpole sd:1:2 N:30
11035 参考 #0.70000 0.99855 0.00145 0.30000 4.30642e-04 700 1 2 #TP, TN, FP, FN, ERR, n, sm1 t, xm2
11036 参考 #0.#result in './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.y' and './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.ystat'.
11037 参考 #
11038 参考 #oob4speakeridgit+ sp:fhs:fms:mkk:mko:mnt:mmh:myu tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx:1:10 k:36 mbas:2:300:1.6:1.dir:../12voicedata/allpole sd:2:2 N:30
11039 参考 #0.70000 0.99896 0.01304 0.30000 4.47205e-04 700 2 #TP, TN, FP, FN, ERR, n, sm2 t, xm2
11040 参考 #result in './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.y' and './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.ystat'.
11041 参考 #oob4speakeridgit+ sp:fhs:fms:mkk:mko:mnt:mmh:myu tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx:1:10 k:36 mbas:2:300:1.6:1.dir:../12voicedata/allpole sd:1:8 N:30
11042 参考 #0.70000 1.00000 0.00000 0.30000 4.28571e-04 700 1 8 #TP, TN, FP, FN, ERR, n, sm1 t, xm8
11043 参考 #result in './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.y' and './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.ystat'.
11044 参考 #
11045 参考 #oob4speakeridgit+ sp:fhs:fms:mkk:mko:mnt:mmh:myu tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx:1:10 k:36 mbas:2:300:1.6:1.dir:../12voicedata/allpole sd:3:7 N:40
11046 参考 #0.80000 0.99855 0.00145 0.20000 2.87785e-04 700 3 7 #TP, TN, FP, FN, ERR, n, sm3 t, xm7
11047 参考 #result in './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.y' and './12voicedata/allpole/oo4sd:-1N50mbas2:300:1.6:1.ystat'.
11048 参考 #
11049 参考 #sd=../12voicedata/allpole
11050 参考 #cp $d/oo4sd:-1N50mbas2:300:1.6:1.y $d/allpole/oo4sd.y
11051 参考 #cat oob4sd:-1N50mbas2:300:1.6:1.y >> $d/allpole/oo4sd.y
11052 参考 #cat oob4sd:-1N50mbas2:300:1.6:1.y >> $d/allpole/oo4sd.y
11053 参考 #cat oob4sd:-1N50mbas2:300:1.6:1.y >> $d/allpole/oo4sd.y
11054
11055
11056
3. 数字列指定 形態語着照合の 評価実験
3.1-1 話者着照合による話者指定
3.1-1-1 話者着照合による話者指定 数字列をテスト 新手法 ytm:1:0.9:1000
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:0:0 ; grep selected tmp/testsd.dat
11060 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_s_ric0_OytmL_0.9.dat
11061 #10 0.9784262 0.0924571 #t <p> uncertainty_p(k2) <-- Accept
11062 #selected n337 <FP>0.034-0 <FN>0.064+0.0282135 TotalUncertainty0.0142409(k2)
11063
11064
11065
3.1-2 話者着照合 非指定話者+指定数字列をテスト 新手法 ytm:1:0.9:1000
speakeridgit_v fs:../12voicedata/allpole/oo4s:-1N50mbas2:300:1.6:1.y nSDL:7:10:10 pmin:0.01 pPart:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:0:1 ; grep selected tmp/testsd.dat
11071 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_s_ric0_LytmL_0.9.dat
11072 #10 0.976367 0.112299 #t <p> uncertainty_p(k2) <-- Accept
11073
11074
3.1-3 話者着照合 指定話者+非指定数字列をテスト 新手法 ytm:1:0.9:1000
speakeridgit_v fs:../12voicedata/allpole/oo4s:-1N50mbas2:300:1.6:1.y nSDL:7:10:10 pmin:0.01 pPart:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:0:1 ; grep selected tmp/testsd.dat
11071 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_s_ric0_LytmL_0.9.dat
11072 #10 0.976367 0.112299 #t <p> uncertainty_p(k2) <-- Accept
11073
11074
3.1-4 話者着照合 非指定話者+非指定数字列をテスト 新手法 ytm:1:0.9:1000
speakeridgit_v fs:../12voicedata/allpole/oo4s:-1N50mbas2:300:1.6:1.y nSDL:7:10:10 pmin:0.01 pPart:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:1:1 ; grep selected tmp/testsd.dat
11076 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_s_ricL_LytmL_0.9.dat
11077 #10 0.0178423 0.0450369 #t <p> uncertainty_p(k2) <-- Reject
11078
11079
3.1-5 話者着照合 指定話者+90%非指定数字列をテスト 新手法 ytm:1:0.9:1000
speakeridgit_v fs:../12voicedata/allpole/oo4s:-1N50mbas2:300:1.6:1.y nSDL:7:10:10 pmin:0.01 pPart:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:0:0.9 ; grep selected tmp/testsd.dat
11081 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_s_ric0_0.9ytmL_0.9.dat
11082 #10 0.9783 0.0872684 #t <p> uncertainty_p(k2) <-- Accept
11083
11084
3.2 数字列CAN2による数字列照合
3.2-1 数字列照合 指定話者+指定数字列をテスト 新手法 ytm:1:0.9:1000
speakeridgit_v fd:../12voicedata/allpole/oo4d:-1N50mbas2:300:1.6:1.y nSDL:7:10:10 pmin:0.01 pPart:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:0:0 ; grep selected tmp/testsd.dat
11087 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_d_ric0_OytmL_0.9.dat
11088 #10 0.985457 0.0353956 #t <p> uncertainty_p(k2) <-- Accept
11089 #selected n266 <FP>0.0142857+6.93889e-18 <FN>0.0605042-0.0367064 TotalUncertainty0.0197034(k2)
11090
11091
3.2-2 数字列照合 非指定話者+指定数字列をテスト 新手法 ytm:1:0.9:1000
speakeridgit_v fd:../12voicedata/allpole/oo4d:-1N50mbas2:300:1.6:1.y nSDL:7:10:10 pmin:0.01 pPart:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 LT:1 sdt:0:0:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1000:1:0 ; grep selected tmp/testsd.dat
11093 cp tmp/testsd_stat.dat ./12voicedata/allpole/test_d_ricL_OytmL_0.9.dat
11094 #10 0.984677 0.0446509 #t <p> uncertainty_p(k2) <-- Accept
11095
```

```
11095 3.2-3 数字行列照合:指定話者+非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11096 speakerdigit_v fdt:../12voicedata/allpole/ooB4d:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART: 5
5:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1:000:0:1 ; grep selected tmp/testsd.dat
11098 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_d_ric0_lytm1_0.9.dat
11099 #10 0.0112802 0.00916423 #t <p> uncertainty_p(k2) <-- Reject!
11100
11101 3.2-4 数字行列照合:非指定話者+非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11102 speakerdigit_v fdt:../12voicedata/allpole/ooB4d:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART: 5
5:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1:000:0:1 ; grep selected tmp/testsd.dat
11103 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_d_ric1_lytm1_0.9.dat
11104 #10 0.0114425 0.00955936 #t <p> uncertainty_p(k2) <-- Reject!
11105
11106 3.2-5 数字行列照合:指定話者+90%非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11107 speakerdigit_v fdt:../12voicedata/allpole/ooB4d:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART: 5
5:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7:8
9 ver:-2 test:4:1:000:0:0.9 ; grep selected tmp/testsd.dat
11108 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_d_ric0_0.9ytm1_0.9.dat
11109 #10 0.0426942 0.132212 #t <p> uncertainty_p(k2) <-- Reject!
11110
11111 3.3 結果の視覚化と考察
11112 cd ../12voicedata/allpole/
11113 gnuplot
11114 plot "test_s_ric0_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11115 "test_s_ric1_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11116 "test_s_ric0_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11117 "test_s_ric1_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11118 "test_s_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11119 "test_s_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11120
11121 plot "test_d_ric0_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11122 "test_d_ric1_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11123 "test_d_ric0_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11124 "test_d_ric1_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11125 "test_d_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11126
11127 3.3-2 考察
11128 1話者照合のみでは第2数字目から、受理すべき事後確率と棄却すべき事後確率の95%誤差範囲が
11129 重ならない。受理のしきい値はpA=0.4、棄却のしきい値pR=0.2程度とすれば良い。
11130 2数字照合では第3ステップから、受理すべき事後確率と棄却すべき事後確率の95%誤差範囲が重
11131 ならない。受理のしきい値はpA=0.69、棄却のしきい値pR=0.46程度とすれば良い。
11132 3数字～9までをランダムに拒否する1/10の割合で正解、あるいは0.90の確率で不正解に
11133 なると期待できるでの最後のric0_0.90の例はこの場合を示す。話者照合では受理となるが、数字
11134 照合で棄却になるので、結果として棄却とする。判定数字数は3以上であれば良い。実用的でもある。
11135
11136 3.4 話者数字CAN2による数字列照合
11137 3.4-1 話者数字行列照合:指定話者+指定数字列をテスト 新手法 ytm1:1:0.9:1000
11138 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:0 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:0:0 ; grep selected tmp/testsd.dat
11139 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric0_Oytm1_0.9.dat
11140 #10 0.985792 0.0307949 #t <p> uncertainty_p(k2) <-- Accept!
11141 #selected n0 <FP>0.00135046+-0.00401117 <FPN>0.254545+-0.260958 TotalUncertainty0.065355(k2)
11142
11143 3.4-2 話者数字行列照合:非指定話者+指定数字列をテスト 新手法 ytm1:1:0.9:1000
11144 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:1:0 ; grep selected tmp/testsd.dat
11145 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric1_Oytm1_0.9.dat
11146 #10 0.0481863 0.0765256 #t <p> uncertainty_p(k2) <-- Reject!
11147
11148 3.4-3 話者数字行列照合:指定話者+非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11149 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:0:1 ; grep selected tmp/testsd.dat
11150 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric0_lytm1_0.9.dat
11151 #10 0.0475519 0.066702 #t <p> uncertainty_p(k2) <-- Reject!
11152
11153 3.4-4 話者数字行列照合:非指定話者+非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11154 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:1:1 ; grep selected tmp/testsd.dat
11155 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric1_lytm1_0.9.dat
11156 #10 0.0457095 0.0539679 #t <p> uncertainty_p(k2) <-- Reject!
11157
11158 3.4-5 話者数字行列照合:指定話者+90%非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11159 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:0:0.9 ; grep selected tmp/testsd.dat
11160 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric0_0.9ytm1_0.9.dat
```

```
11161 #10 0.122674 0.243889 #t <p> uncertainty_p(k2) <-- Reject!
11162
11163 3.5 結果の視覚化と考察
11164 cd ../12voicedata/allpole/
11165 gnuplot
11166 plot "test_sd_ric0_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11167 "test_sd_ric1_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11168 "test_sd_ric0_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11169 "test_sd_ric1_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11170 "test_sd_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11171 "test_sd_ric1_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11172 "test_sd_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11173
11174 plot "test_s_ric0_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11175 "test_s_ric1_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11176 "test_s_ric0_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11177 "test_s_ric1_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11178 "test_s_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11179
11180 plot "test_sd_ric0_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11181 "test_sd_ric1_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11182 "test_sd_ric0_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11183 "test_sd_ric1_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11184
11185 plot "test_s_ric0_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11186 "test_s_ric1_Oytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11187 "test_s_ric0_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11188 "test_s_ric1_lytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11189 "test_s_ric0_0.9ytm1_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11190
11191 3.5-2 考察
11192 (1) (1)は指定話者と指定数字列の場合 (ric0_0)のみ受理され、受理と棄却は第2数字目からしきい値
で分けることができることを示す。
11193 (2) (3)と(4)はそれぞれテキスト依存とはテキスト独立の話者照合を表し、テキスト依存は
第1数字からしきい値による受理と棄却が可能であるが、テキスト独立は第2数字から可能となる。
11194 (3)底層数字CAN2を使う場合、と話者CAN2と数字CAN2を使う場合との比較は、
(4)前者は学習に時間がかかるが、後者は学習が少なくて済む。
11195 前者は、棄却のとき話者が不正解か数字列が不正解か分からないが、後者は分かる。
11196
11197
11198
11199
11200 3.6 Bayes法との比較
11201 3.6-1 話者数字行列照合:指定話者+指定数字列をテスト 新手法 ytm1:1:0.9:1000
11202 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:0 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:0:0 ; grep selected tmp/testsd.dat
11203 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric0_Oytm1_0.9_bayes.dat
11204 10 0.986879 0.0491611 #t <p> uncertainty_p(k2) <-- Accept!
11205
11206 3.6-2 話者数字行列照合:指定話者+90%非指定数字列をテスト 新手法 ytm1:1:0.9:1000
11207 speakerdigit_v fdt:../12voicedata/allpole/ooB4sd:-lN50mbas2:300:1.6:1.1 y NSDL:7:10:10 pmin:0.01 pART:
55:0.25:4 ytm1:1:0.9:1000 PNR:0.9 void:0 gibbs:0 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdt:0:0:1:1:2:3:4:5:6:7
8:9 ver:-2 test:4:1:000:0:0.9 ; grep selected tmp/testsd.dat
11208 cp tmp/testsd_stat.dat ../12voicedata/allpole/test_sd_ric0_0.9ytm1_0.9_bayes.dat
11209 10 0.133885 0.567313 #t <p> uncertainty_p(k2) <-- Reject!
11210
11211 3.6-3 視覚化と考察
11212 cd ../12voicedata/allpole/
11213 gnuplot
11214 plot "test_sd_ric0_Oytm1_0.9_bayes.dat" using 1:2 w l, "" using 1:2:3 w errorbars, \
11215 "test_sd_ric1_Oytm1_0.9_bayes.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11216 (1)Bayes法では棄却域がかなり大きく、受理域と棄却域との数字数の増加とともに変動する。
11217 (2)Gibbsの受理域と棄却域は数字数の増加とともに減少し、受理・棄却はより正確になる？
11218
11219 3.7 今後の実験と考察
11220 (1)実験にしない値を設定したときの受理と棄却の確率を求めること
(2)未登録話者が入力するとうなるか
-----
2013/02/07
(1) speakerdigit_v.cのしきい値_ythの選択法を新しくした。
オプション ytm:<methods><sythas><nthy>
<methods>=0 従来のようにy0の正例の平均ymeanp[m]と負例の平均ymeanN[m]の pnr で内分する点をyth
が小さくなるyth
本バージョンでは、p_{FP}とp_{FN}の分散は、FPとFNの各データに対する分散として求めた！
NEW: v_{FP}=(\sum_m ( p_{FN}[m]_{FP} )-> <p> n^{\sum_m p_{FN}[m]_{FP}} )/(\sum_m n^{\sum_m p_{FN}[m]_{FP}} )
なおp_{FP}とp_{FN}の分散を、次の式
Ond_v=(\sum_m p_{FN}[m]_{FP})-<p> n^{\sum_m p_{FN}[m]_{FP}} )> / M (MはCAN2*nmの個数)
のように各mに対して求めるべき！の方が直感的にすぐに思い付く。下の #OndP2013/02/07/ のところはこ
の結果を示している。しかし、上のNEWの方法の結果の方が良かったので以下では検討しない。またこの
機能は
```



```
.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9
ver:-2 test:4:1000:0:0; grep selected tmp/tested.dat #correct speaker and digit
11349 cp tmp/tested_stat.dat ../12voicedata/allpole/ooB4d:-lN5ombas2:300:1.0:1:1.y
11350 #selected n349 <FP>0.0349206+1.38778e-17 <PN>0.1192181-0.0651669 TotalUncertainty0.0377743(k2)
11352
11353 (2-3-2) 数字列照合: 指定話者+非指定数字列をテスト 新手法 ytm:1:0.9:1000
11354 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9
ver:-2 test:4:1000:0:1; grep selected tmp/tested.dat #incorrect speaker and digit
11355 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_lytm0.9.dat
11356 #10 0.0360632 0.0445704 #t <p> uncertainty_p(k2) <-- Reject!
11357
11358 (2-3-2) 数字列照合: 非指定話者+指定数字列をテスト 新手法 ytm:1:0.9:1000
11359 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9
ver:-2 test:4:1000:1:0; grep selected tmp/tested.dat #incorrect speaker and digit
11360 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_lytm0.9.dat
11361 #10 0.943795 0.183105 #t <p> uncertainty_P(k2) <-- Accept!
11362
11363 (2-3-3) 数字列照合: 非指定話者+非指定数字列をテスト 新手法 ytm:1:0.9:1000
11364 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9
ver:-2 test:4:1000:1:1; grep selected tmp/tested.dat #incorrect speaker and digit
11365 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_lytm0.9.dat
11366 #10 0.0339631 0.0379863 #t <p> uncertainty_P(k2) <-- Reject!
11367
11368 (2-3-4) 数字列照合: 指定話者+指定数字列をテスト 従来法 ytm:0 PNR:0.9
11369 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:0 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:0:0; grep selected tmp/tested.dat #correct speaker and digit
11370 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_Oytm0.dat
11371 #10 0.937052 0.203156 #t <p> uncertainty_P(k2) <-- Accept! uncertainty worse than (2-3-1)
11372
11373 (2-3-5) 数字列照合: 指定話者+非指定数字列をテスト 従来法 ytm:0 PNR:0.9
11374 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:0 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:0:1; grep selected tmp/tested.dat #correct speaker and digit
11375 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_lytm0.dat
11376 #10 0.0574392 0.074655 #t <p> uncertainty_P(k2) <-- Reject! uncertainty worse than (2-3-2)
11377
11378 (2-3-4) 数字列照合: 指定話者+非指定数字列をテスト 従来法 ytm:0 PNR:0.9
11379 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:0 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:1:0; grep selected tmp/tested.dat #correct speaker and digit
11380 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_Oytm0.dat
11381 #10 0.934863 0.204651 #t <p> uncertainty_P(k2) <-- Accept!
11382
11383 (2-3-5) 数字列照合: 非指定話者+非指定数字列をテスト 従来法 ytm:0 PNR:0.9
11384 speakerdig_v fd:../12voicedata/allpole/ooB4dN5ombas2:100:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:55:0
.25:4 ytm:0 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:1:1; grep selected tmp/tested.dat #correct speaker and digit
11385 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_lytm0.dat
11386 #10 0.0545729 0.0706459 #t <p> uncertainty_P(k2) <-- Reject! uncertainty worse than (2-3-3)
11387
11388 (2-3-6) 結果を視覚的にチェック
11389 cd ../12voicedata/allpole/
11390 gnuplot
11391 plot "tested_stat_d_ric0_Oytm0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_r
ic0_lytm0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_lytm0.9.dat" using 1:2 w
l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_lytm0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11392 plot "tested_stat_d_ric0_Oytm0.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_l
ytm0.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_Oytm0.dat" using 1:2 w l, "" using
1:2:3 w errorbars, "tested_stat_d_ric0_lytm0.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11393 #見た目にはあまり変わらないが、上の数字のuncertaintyは新手法の方が良いことを示している。
11394 両手法とも2数字目から受理と棄却の判断をして良いと考えられる。
11395 数字列指定話者認識を(2-2)で行う方法(塚崎)と(2-1)と(2-3)で行う方法(植木)を比べてみる
11396
11397 (2-4) 数字列照合: 指定話者+x8非指定数字列をテスト 新手法 ytm:1:0.9:1000
11398 (2-4-0) 学習を行う
11399 oob4speakerdig+ sp: f5ms:mkk:mko:mmt:mmh:myw tx: zero:ichi:ni:sanyon:go:roku:nana:hachi:kyu ntxi
:k: k36 n2:300:1:0:1 dir:../12voicedata/allpole/ooB4d:-lN5ombas2:300:1.0:1:1.ysetat
11400 #cat ../12voicedata/allpole/ooB4d:-lN5ombas2:300:1.0:1:1.ysetat
11401 #0.87143 0.98899 0.01111 0.12857 1.99546e-04 700 0 #TP_TN_FP_FNR,n,txm0
11402 #0.94286 0.99206 0.00794 9.29705e-05 700 1 #TP_TN_FP_FNR,n,txm1
11403 #0.92857 0.99048 0.00952 0.07143 1.15646e-04 700 2 #TP_TN_FP_FNR,n,txm2
11404 #0.82857 0.97937 0.02063 0.17143 7.74376e-04 700 3 #TP_TN_FP_FNR,n,txm3
11405 #0.85714 0.97619 0.02081 0.14286 2.38095e-04 700 4 #TP_TN_FP_FNR,n,txm4
11406 #0.85714 0.96000 0.03000 0.14286 2.04082e-05 700 5 #TP_TN_FP_FNR,n,txm5
11407 #0.87143 0.96825 0.03175 0.12857 2.29025e-04 700 6 #TP_TN_FP_FNR,n,txm6
11408 #0.86571 0.96825 0.03175 0.14286 2.29025e-04 700 7 #TP_TN_FP_FNR,n,txm7
11409 #0.94286 0.98254 0.01746 0.05714 1.06576e-04 700 8 #TP_TN_FP_FNR,n,txm8
```

```
11410 0.88571 1.00000 0.00000 0.11429 1.63265e-04 700 9 #TP_TN_FP_FNR,n,txm9
11411 #saved in ../12voicedata/allpole/ooB4d:-lN5ombas2:300:1.0:1:1.y
11412
11413 (2-4-1) 数字列照合: 指定話者+0%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11414 speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8
:9 ver:-2 test:4:1000:0:0; grep selected tmp/tested.dat #incorrect speaker and digit
11415 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_Oytm0.9.new.dat
11416 #10 0.953373 0.162134 #t <p> uncertainty_P(k2) <-- Accept!
11417 #selected n0 <FP>0.00479709+0.00680731 <FN>0.324+-0.106666 TotalUncertainty0.0358999(k2)
11418
11419 (2-4-2) 数字列照合: 指定話者+90%非指定数字列をテスト 新手法 ytm:1:0.9:1000 ランダムに落ちると9/nd=0
9=90%間違え
11420 speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8
:9 ver:-2 test:4:1000:0:0:9; grep selected tmp/tested.dat #incorrect speaker and digit
11421 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_Oytm0.9.new.dat
11422 #10 0.108436 0.186707 #t <p> uncertainty_P(k2) <-- Reject!
11423
11424 (2-4-3) 数字列照合: 指定話者+100%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11425 speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01 pPRT:5
5:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8
:9 ver:-2 test:4:1000:0:1; grep selected tmp/tested.dat #incorrect speaker and digit
11426 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_lytm0.9.new.dat
11427 #10 0.0556793 0.0865766 #t <p> uncertainty_P(k2) <-- Reject!
11428
11429 (2-4-4) 結果を視覚的にチェック
11430 cd ../12voicedata/allpole/
11431 gnuplot
11432 plot "tested_stat_d_ric0_Oytm0.9.new.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat
_d_ric0_lytm0.9.new.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11433 #指定話者があらかじめ観覧した数字列を用いる場合、指定数字列との違いの割合の期待値は90%であり、これを
実験したのが上の結果である。これはこのケースを除外できることを示す。
11434
11435 (2-4-3) 数字列照合: 指定話者+20%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11436 #Trial# (2-4-3) 数字列照合: 指定話者+20%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11437 #Trial#speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01
pPRT:55:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:
5:6:7:8:9 ver:-2 test:4:1000:0:0:2; grep selected tmp/tested.dat #incorrect speaker and digit
11438 #Trial#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_0.2ytm0.9.new.dat
11439 #Trial##10 0.865368 0.296352 #t <p> uncertainty_P(k2) <-- Accept!
11440 #Trial#
11441 #Trial# (2-4-4) 数字列照合: 指定話者+50%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11442 #Trial#speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01
pPRT:55:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:
5:6:7:8:9 ver:-2 test:4:1000:0:0:5; grep selected tmp/tested.dat #incorrect speaker and digit
11443 #Trial#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_0.5ytm0.9.new.dat
11444 #Trial#10 0.565011 0.4961 #t <p> uncertainty_P(k2) <-- Accept!
11445 #Trial#
11446 #Trial# (2-4-5) 数字列照合: 指定話者+50%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11447 #Trial#speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01
pPRT:55:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:
5:6:7:8:9 ver:-2 test:4:1000:0:0:55; grep selected tmp/tested.dat #incorrect speaker and digit
11448 #Trial#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_0.55ytm0.9.new.dat
11449 #Trial#10 0.501704 0.49024 #t <p> uncertainty_P(k2)
11450 #Trial#
11451 #Trial# (2-4-6) 数字列照合: 指定話者+60%非指定数字列をテスト 新手法 ytm:1:0.9:1000
11452 #Trial#speakerdig_v fd:../12voicedata/allpole/ooB4d:-lN5ombas2:300:0:7:1:Y nSDL:7:10:10 pmin:0.01
pPRT:55:0.25:4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:
5:6:7:8:9 ver:-2 test:4:1000:0:0:6; grep selected tmp/tested.dat #incorrect speaker and digit
11453 #Trial#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_d_ric0_0.6ytm0.9.new.dat
11454 #Trial#10 0.431168 0.489644 #t <p> uncertainty_P(k2)
11455 #Trial#
11456 #Trial#
11457 #Trial# void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4
:1000:0:0:1; grep selected tmp/tested.dat #incorrect speaker and digit
11458 #Trial#
11459 #Trial#
11460 #Trial#
11461 #Trial#
11462 #Trial# void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4
:1000:0:0:2; grep selected tmp/tested.dat #incorrect speaker and digit
11463 #Trial#
11464 #Trial#
11465 #Trial#
11466 #Trial#
11467 #Trial# void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4
:1000:0:0:3; grep selected tmp/tested.dat #incorrect speaker and digit
11468 #Trial#
11469 #Trial#
11470 #Trial#
11471 #Trial# void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 ltr:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4
```

```
:1000:0:0.4; grep selected tmp/tested.dat #incorrect speaker and digit
11472 #trial#
11473 #trial#
11474 #trial#
11475 #trial#
11476 #trial# void:0 gibbs:1 beta:1 sdP:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdT:0:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4
:1000:0:0.5; grep selected tmp/tested.dat #incorrect speaker and digit
11477 #trial#
11478 #trial#
11479 #trial# void:0 gibbs:1 beta:1 sdP:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdT:0:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4
:1000:0:0.6; grep selected tmp/tested.dat #incorrect speaker and digit
11480 #trial#
11481 #trial#
11482 #trial#
11483 #trial#
11484 #trial#
11485 #trial#
11486 #trial#2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_lytml_0.9.dat" using 1:2 w l, "" using
1:2:3 w errorbars
11487 #trial#
11488 #trial#2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_lytml_0.9.dat" using 1:2 w l, "" using
1:2:3 w errorbars
11489 #trial#
11490 #trial#1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_0.3ytml_0.9.dat" using 1:2 w l, "" u
sing 1:2:3 w errorbars, "tested_stat_d_ric0_0.2ytml_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tes
td_stat_d_ric0_0.lytml_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_0ytml_0.9.da
t" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_lytml_0.9.dat" using 1:2 w l, "" using 1:2
:3 w errorbars
11491 #trial#
11492 #trial#
11493 #trial#
11494 #trial#9 void:0 gibbs:1 beta:1 sdP:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdT:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:
4:1000:0:0.5; grep selected tmp/tested.dat #incorrect speaker and incorrect digit
11495 #trial#
11496 #trial#
11497 #trial#
11498 #trial#9 void:0 gibbs:1 beta:1 sdP:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdT:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test
4:1000:1:0.5; grep selected tmp/tested.dat #incorrect speaker and incorrect digit
11499 #trial#
11500 #trial#
11501 #trial#
11502 #trial#
11503 #trial#
11504 #trial#9 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_sd_ric0_0ytml_0.9.dat" using 1:2 w l, ""
using 1:2:3 w errorbars, "tested_stat_sd_ric0_lytml_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11505 #trial#
11506 #trial#1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_sd_ric0_lytml_0.9.dat" using 1:2 w l, "" us
ing 1:2:3 w errorbars
11507
11508
11509
11510 #OLD#2013/02/07
11511 #OLD#(1) speakerdigit_v.cのい きい 値 ythの選択の ymeanP(m)と ymeanN(m)をいくつかの手法で求めた。
11512 #OLD#オプシヨ ytm:<method>:sytna>
11513 #OLD#<method>=0 従来のようにyの正例の平均ymeanP(m)と負例の平均ymeanN(m)のPNRの内点
11514 #OLD#<method>=1 <ytna>=0: ymeanN(m)からymeanP(m)までを100等分し、その内、FNとFPの分散が小さく
なるyth
11515 #OLD#<method>=1 <ytna>>0: -ytmaからytmaまでを100等分し、その内、FNとFPの分散が小さくなるyth
11516 #OLD#(2)使用例
11517 #OLD#ytm:1:0.9:1000 の方がよいように見える?
11518 #OLD#
11519 #OLD#speakerdigit_v fs:../12voicedata/allpole/ob4sN5ombas2:100:0:7:1.y nSDp:7:10:10 pmin:0.01 pART:
55:0:25.4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdP:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdT:0:0:1:2:3:4:5:6:7
:8:9 ver:-2 test:4:1000:0:0 ; grep selected tmp/tested.dat #correct speaker and digit
11520 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytml_0.dat
11521 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_s_ric0_0ytml_0.95.dat
11522 #OLD#
11523 #OLD#ytm:1:0:1000 #selected n84 <FP>+0.14024+-0.0246995 <FN>0.11+-0.0693084 TotalUncertainty0.0520275(
k2) 従来手法 <--uncertainty 以下の ytm:1:0:1000より悪い
11524 #OLD#10 0.85185 0.293764 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11525 #OLD#10 0.0956575 0.134748 #t <p> uncertainty_p(k2) <-- Reject!<--test:4:1000:1:0
11526 #OLD#
11527 #OLD#ytm:1:0:1000 #selected n813 <FP>0.136015+-0.0197726 <FN>0.11+-0.0691185 TotalUncertainty0.0508
346(k2) OK?
11528 #OLD#10 0.85417 0.291632 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11529 #OLD#10 0.0935893 0.129523 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11530 #OLD#
11531 #OLD#ytm:1:0:200 #selected n164 <FP>0.1371+-0.0213569 <FN>0.11+-0.06934 TotalUncertainty0.0513038(k
2) <--ytm:1:0:1000より悪い
11532 #OLD#10 0.853244 0.2919 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11533 #OLD#10 0.0946697 0.133266 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11534 #OLD#
```

```
11535 #OLD#ytm:1:0:500 selected n407 <FP>0.13617+-0.0196653 <FN>0.11+-0.0691185 TotalUncertainty0.0508723
(k2) <--ytm:1:0:1000と違っていい
11536 #OLD#10 0.854434 0.29179 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 <--ytm:1:0:100
0より悪い
11537 #OLD#10 0.0932819 0.12936 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0 <--ytm:1:0:100
0より悪い
11538 #OLD#
11539 #OLD#ytm:1:0:5000 #selected n4062 <FP>0.135922+-0.019678 <FN>0.11+-0.0690915 TotalUncertainty0.05079
79(k2) <--ytm:1:0:1000と変わらない→1000で取束
11540 #OLD#10 0.85417 0.291632 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11541 #OLD#10 0.0935893 0.129523 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11542 #OLD#
11543 #OLD#ytm:1:0.9 #selected n77 <FP>0.13205+-0.0243105 <FN>0.115+-0.0709317 TotalUncertainty0.0530203(
k2)
11544 #OLD#10 0.850963 0.290294 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11545 #OLD#10 0.0966184 0.133168 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11546 #OLD#
11547 #OLD#ytm:1:0.95 #selected n89 <FP>0.182817+-0.0261076 <FN>0.0916674+-0.0552135 TotalUncertainty0.04
31864(k2)
11548 #OLD#10 0.837014 0.278789 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11549 #OLD#10 0.110728 0.141891 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11550 #OLD#
11551 #OLD#ytm:1:0.5 #selected n87 <FP>0.0825+-0.0352711 <FN>0.145+-0.081162 TotalUncertainty0.0625455(k
2)
11552 #OLD#10 0.89648 0.275814 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0
11553 #OLD#10 0.0712347 0.126106 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11554 #OLD#
11555 #OLD#NG ytm:1:1 #selected n99 <FP>0.99033+-0.0199333 <FN>7.01634e-33+-1.40327e-32 TotalUncertainty
0.014095(k2)
11556 #OLD#10 0.387102 1.34337e-14 #t <p> uncertainty_p(k2) <--test:4:1000:0:0
11557 #OLD#10 0.387102 1.34337e-14 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0
11558 #OLD#
11559 #OLD#speakerdigit_v fs:../12voicedata/allpole/ob4sN5ombas2:100:0:7:1.y nSDp:7:10:10 pmin:0.01 pAR
7:55:0:25.4 ytm:1:0.9:1000 PNR:0.9 void:0 gibbs:1 beta:1 sdP:0:0:1:2:3:4:5:6:7:8:9 lT:1 sdT:0:0:1:2:3:4:5:6
:7:8:9 ver:-2 test:4:1000:0:0; grep selected tmp/tested.dat #correct speaker and correct digit
11560 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytml_0.dat
11561 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytml_0.dat
11562 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_lytml_0.9.dat
11563 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_lytml_0.95.dat
11564 #OLD#cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytml_0.95.dat
11565 #OLD#
11566 #OLD#ytm:1:0.95:1000 #selected n0 <FP>0+-0 <FN>0.118841+-0 TotalUncertainty0(k2)
11567 #OLD#10 0.94755 0.139864 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.95:1000
11568 #OLD#10 0.949331 0.136441 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.9:1000
11569 #OLD#10 0.948531 0.141483 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.8:1000
11570 #OLD#10 0.951637 0.138543 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0:1000
11571 #OLD#
11572 #OLD#
11573 #OLD#ytm:1:0.95:1000 #selected n611 <FP>0.0805812+-0.00424036 <FN>0.118841+-0.239002 TotalUncertain
ty0.169026(k2)!!!?
11574 #OLD#ytm:1:0.95:100 #selected n79 <FP>0.104188+-0.0194817 <FN>0.118841+-0.239002 TotalUncertainty0
.16956(k2)
11575 #OLD#10 0.91332 0.166299 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.95:5000
11576 #OLD#10 0.912645 0.166307 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.95:1000 !
!/?
11577 #OLD#10 0.911992 0.166701 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.95:500
11578 #OLD#10 0.900145 0.169229 #t <p> uncertainty_p(k2) <-- Accept!<--test:4:1000:0:0 ytm:1:0.95:100
11579 #OLD#10 0.201438 0.239999 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0ytm:1:0.95:100
11580 #OLD#
11581 #OLD#ytm:1:0.9:1000 #selected n555 <FP>0.0297609+-0.012156 <FN>0.143478+-0.281847 TotalUncertainty0
.199481(k2)
11582 #OLD#10 0.940723 0.163286 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.95:1000
11583 #OLD#10 0.940846 0.163309 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0 ytm:1:0.95:100
11584 #OLD#
11585 #OLD#
11586 #OLD#ytm:1:0.9 #selected n56 <FP>0.030029+-0.0126081 <FN>0.143478+-0.281847 TotalUncertainty0.19949
5(k2)
11587 #OLD#10 0.940846 0.163309 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0;
11588 #OLD#10 0.113298 0.195809 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0;
11589 #OLD#
11590 #OLD#ytm:1:0 #selected n71 <FP>0.174928+-0.0372717 <FN>0.095652+-0.19706 TotalUncertainty0.141813(
k2)
11591 #OLD#10 0.870785 0.184705 #t <p> uncertainty_p(k2) <-- Accept! <--test:4:1000:0:0;
11592 #OLD#10 0.22628 0.244544 #t <p> uncertainty_p(k2) <-- Reject! <--test:4:1000:1:0;
11593 #OLD#cp ../12voicedata/allpole/
11594 #OLD#gnplot
11595 #OLD#gnplot "tested_stat_sd_ric0_0ytml_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_sta
t_sd_ric0_lytml_0.9.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11596 #OLD#gnplot "tested_stat_sd_ric0_lytml_0.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_
sd_ric0_lytml_0.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11597
11598
```

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11599 2013/02/06
11600 (1) speakerdigit_v.c
11601 ・オプシヨンの修正 test <id><n><?xmlCs><riCd>
11602 <id>1=0 かつ riCd >=0のとき:話者誤り率riCs、数字誤り率riCdで生成する。
11603 <id>=0のとき:これまでと同じ
11604 <id>1=0で?<riCd>を指定しないとき:これまでと同じ
11605 ・テキスト指定形話者識別のテストとしては
11606 正解例 test:4:1000:1:0 (指定話者が指定数字列を正しくテキスト入力)を受理し、
11607 不正解例 test:4:1000:1:0 (指定話者が指定数字列をテキスト入力)を棄却する
11608 ため、のしきい値を求めるのが自然?
11609 ・使用例は下の(3)。また、新しい学習結果(次の(2))を結合したファイルを読み込む
11610 ように修正した(下の(4-4))以下に結合の方法と実行結果)
11611
11612 (2) oob4speakerdigit_v.c
11613 ・oob4speaker, oob4digit, oob4speakerdigit+ c
11614 ・オプシヨンは
11615 sd<:sm>:<dm>
11616 d:<dm>
11617 のいずれかを使う。<sm>:<dm>は学習するマシンの番号。使用例は下の(4)
11618
11619 (3) (1)の使用例
11620
11621 (3-1) 話者照合 (fs): 指定話者+指定数字列をテストとして使う
11622 speakerdigit_v fs:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55:0.
25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:0:0 #correct speaker and digit
11624 #10 0.85185 0.293764 #t <p> 2(std_pg) <-- OK because speaker verification
11625 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytm1.dat
11626
11627 (3-2) 話者照合 (fs): 非指定話者+指定数字列をテストとして使う
11628 speakerdigit_v fs:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55:0.
25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:1:0 #incorrect speaker and correct digits
11629 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric1_0ytm1.dat
11630
11631 (3-3) 話者照合 (fs): 指定話者+非指定数字列をテストとして使う
11632 speakerdigit_v fs:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55:0.
25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:0:1 #incorrect digits
11634 #10 0.83815 0.299306 #t <p> 2(std_pg) <-- OK because speaker verification
11635 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytm1.dat
11636
11637 (3-4) 数字列照合 (fd): 指定話者+指定数字列をテストとして使う
11638 speakerdigit_v fd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55:0.
25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:0:0 #correct speaker and digit
11639 #10 0.913209 0.224742 #t <p> 2(std_pg) <-- OK because digit verification
11640 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytm1.dat
11641
11642 (3-5) 数字列照合 (fd): 非指定話者+指定数字列をテストとして使う
11643 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd0ytm1.dat
11644 speakerdigit_v fd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55:0.
25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:1:0 #incorrect speaker and correct digit
11645 #10 0.9128 0.213219 #t <p> 2(std_pg) <-- OK because digit verification
11646 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric1_0ytm1.dat
11647
11648 (3-6) 数字列照合 (fd): 指定話者+非指定数字列をテストとして使う
11649 speakerdigit_v fd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55:0.
25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 te
st:4:1000:0:1 #incorrect digits
11650 #10 0.839204 0.0659362 #t <p> 2(std_pg) <-- OK because digit verification
11651 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytm1.dat
11652
11653 (3-7) 話者数字列照合 (fsd): 指定話者+指定数字列をテストとして使う
11654 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:0:0 #correct
11655 #10 0.870785 0.180705 #t <p> 2(std_pg) <-- OK because speakerdigit verification
11656 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytm1.dat
11657
11658 (3-8) 話者数字列照合 (fsd): 非指定話者+指定数字列をテストとして使う
11659 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:1:0 #incorrect speaker and correct digit
11660 #10 0.22628 0.244944 #t <p> 2(std_pg) <-- OK because speakerdigit verification
11661 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric1_0ytm1.dat
11662
11663 (3-9) 話者数字列照合 (fsd): 指定話者+非指定数字列をテストとして使う
11664 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
```

```
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:0:1 #incorrect digit
11665 #10 0.214459 0.194148 #t <p> 2(std_pg) <-- OK because speakerdigit verification
11666
11667 (3-10) 話者数字列照合 (fsd): 非指定話者+非指定数字列をテストとして使う
11668 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:1:1 #incorrect speaker and incorrect digit
11669 #10 0.202794 0.181141 #t <p> 2(std_pg) <-- OK because speakerdigit verification
11670
11671 (3-11) 話者数字列照合 (fsd): 非指定話者+50%非指定数字列をテストとして使う
11672 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:1:0.5 #incorrect speaker and 50%incorrect digit
11673 #10 0.219417 0.199372 #t <p> 2(std_pg)
11674
11675 (3-12) ベイズ推定 (gibbs:0)+話者数字列照合 (fsd): 指定話者+指定数字列をテストとして使う
11676 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:0 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:0:0 #correct
11677 #10 0.817913 0.716401 #t <p> uncertainty_P(k2) <-- NG because big uncertainty(不確実性 0.716401は変動
が大すぎる;予想ではpgが無限に単調増加)
11678 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric0_0ytm1_b.dat
11679
11680 (3-13) ベイズ推定 (gibbs:0)+話者数字列照合 (fsd): 非指定話者+指定数字列をテストとして使う
11681 speakerdigit_v fsd:../12voicedata/allpole/oob4sdn5ombas2:100:0.7:1:Y nSDL:7:10:10 pmin:0.01 pPart:.55
0.25:4 ytm:1 pNr:0.9 void:0 gibbs:0 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2
test:4:1000:1:0 #
11682 #10 0.112947 0.440701 #t <p> uncertainty_P(k2) <-- NG because big uncertainty(これも不確実性 0.440701は
変動が大きすぎる)
11683 cp tmp/tested_stat.dat ../12voicedata/allpole/tested_stat_sd_ric1_0ytm1_b.dat
11684
11685 (3-15) gnuplotによる視覚化
11686 cd ../12voicedata/allpole/
11687 gnuplot
11688 plot "tested_stat_sd_ric0_0ytm1.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_sd_ric1_0
ytm1.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11689 plot "tested_stat_d_ric0_0ytm1.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric1_0
ytm1.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_d_ric0_0ytm1.dat" using 1:2 w l, ""
using 1:2:3 w errorbars
11690 ing 1:2 w l, "" using 1:2:3 w errorbars
11691 plot "tested_stat_sd_ric0_0ytm1_b.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_sd_ric
1_0ytm1_b.dat" using 1:2 w l, "" using 1:2:3 w errorbars
11692
11693 (4) (2)の使用例
11694 (4-1)まず、下の2013_01.24のoob4speaker.cと同じことを行った。
11695 time oob4speakerdigit+ sp:fs:fmk:mkt:mmh:mytm tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu
ntxi:10 k:36 dir:../12voicedata/allpole/N:50 mbas:2:100:0.7:1 s:-1 N50 #learn speaker with all speaker (s:-
1)
11696 #real6m30.028s, user5m3.183s, sys0m21.873s
11697 cat ../12voicedata/allpole/oob4s:-1N50mbas2:100:0.7:1:Y:stat
11698 #oob4speakerdigit+ sp:fs:fmk:mkt:mkt:mmh:mytm tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx
4:10 k:36 dir:../12voicedata/allpole/N:50 mbas:2:100:0.7:1 s:-1 N50
11699 0.90000 0.97000 0.03000 0.10000 1.85714e-04 700 0 #TP,TN,FP,FN,ERR,n,sm0
11700 0.84000 0.97500 0.02500 0.16000 2.64286e-04 700 1 #TP,TN,FP,FN,ERR,n,sm1
11701 0.79000 0.96167 0.03833 0.21000 3.54762e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
11702 0.82000 0.94833 0.05167 0.18000 3.50952e-04 700 3 #TP,TN,FP,FN,ERR,n,sm3
11703 0.81000 0.98333 0.01667 0.19000 2.95238e-04 700 4 #TP,TN,FP,FN,ERR,n,sm4
11704 0.80000 0.96000 0.04000 0.20000 3.42857e-04 700 5 #TP,TN,FP,FN,ERR,n,sm5
11705 0.79000 0.96000 0.04000 0.21000 3.57143e-04 700 6 #TP,TN,FP,FN,ERR,n,sm6
11706
11707 (4-2) 上のsm2の結果が悪いので、Nを変えて学習してみた、N=100で次の結果
11708 #oob4speakerdigit+ sp:fs:fmk:mkt:mmh:mytm tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu nl:1
0 k:36 mbas:2:100:0.7:1 dir:../12voicedata/allpole s:2 N:100
11709 cat ../12voicedata/allpole/oob4s:2N100mbas2:100:0.7:1:Y:stat
11710 #oob4speakerdigit+ sp:fs:fmk:mkt:mkt:mmh:mytm tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu nl:
10 k:36 mbas:2:100:0.7:1 dir:../12voicedata/allpole s:2 N:100
11711 #0.84000 0.96500 0.03500 0.16000 2.78571e-04 700 2 #TP,TN,FP,FN,ERR,n,sm2
11712 #良くなった
11713
11714 (4-3) 上のsm6の結果も悪いので、Nを変えて学習してみた、N=40で次の結果
11715 cat ../12voicedata/allpole/oob4s:6N40mbas2:100:0.7:1:Y:stat
11716 #oob4speakerdigit+ sp:fs:fmk:mkt:mkt:mmh:mytm tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu nl:
10 k:36 mbas:2:100:0.7:1 dir:../12voicedata/allpole s:6 N:40
11717 0.83000 0.95833 0.04167 0.17000 3.02381e-04 700 6 #TP,TN,FP,FN,ERR,n,sm6
11718 #良くなった
11719
11720 (4-4) 上の3つの結果のグラフを結合したものを作る。
11721 cp ../12voicedata/allpole/oob4s:-1N50mbas2:100:0.7:1:Y >> ../12voicedata/allpole/oob4s.y
11722 cat ../12voicedata/allpole/oob4s:-1N100mbas2:100:0.7:1:Y >> ../12voicedata/allpole/oob4s.y
11723 cat ../12voicedata/allpole/oob4s:6N40mbas2:100:0.7:1:Y >> ../12voicedata/allpole/oob4s.y
```

11724 (4-5) 作ったもので認識

11726 speakerdigit_v fsd:../12voicedata/allpole/ooB4s.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:0:0 #correct speaker and digit

11727 #10 0.886566 0.271762 #t <p> uncertainty_p(k2)

11728 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_s_ricL_0ytm_new.dat

11729 speakerdigit_v fsd:../12voicedata/allpole/ooB4s.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:1:0 #correct speaker and digit

11731 #10 0.077655 0.119994 #t <p> uncertainty_p(k2)

11732 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_s_ricL_0ytm_new.dat

11733 (4-5) 数字列で確認

11734 cd ../12voicedata/allpole/

11735 gnuplot

11737 plot "tested_stat_s_ricL_0ytm_new.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_s_ricL_0ytm_new.dat" using 1:2 w l, "" using 1:2:3 w errorbars

11738 plot "tested_stat_s_ricL_0ytm_new.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_s_ricL_0ytm_new.dat" using 1:2 w l, "" using 1:2:3 w errorbars

11739 #newの方が良いように見える。差は僅か?

11740

11741 (4-6) 話者数字列でも行う。

11742 (4-6-1) sm5 txm4が悪いので良いパラメタを探索 (結果的にb=300が良かった)

11743 ob4speakerdigit_v sp:fh5:fm5:mkk:mko:mnt:mmh:my:m tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx:1:0 k:36 mbas:2:300:0:7:1 dir:../12voicedata/allpole sd:5:4 N:50

11744 0.4000 0.99710 0.00290 0.60000 8.61284e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N30

11745 0.5000 0.99710 0.00580 0.50000 7.22567e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N40

11746 0.3000 0.99710 0.00290 0.70000 1.00414e-03 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N50

11747 0.4000 0.99855 0.00145 0.60000 8.59213e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N60

11748 0.4000 0.99275 0.00725 0.60000 8.67495e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N80

11749 0.4000 0.99710 0.00290 0.60000 8.61284e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N100

11750 0.3000 0.99710 0.00290 0.70000 1.00414e-03 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N150

11751 0.5000 0.98841 0.01159 0.50000 7.30849e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N50 mbas:

2:60:0:7:1

11752 0.7000 0.97681 0.02319 0.30000 4.61698e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N50 mbas:

2:400:0:7:1

11753 0.9000 0.99710 0.00290 0.10000 1.46998e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N50 mbas:

2:300:0:7:1

11754 0.8000 0.99420 0.00580 0.20000 2.93996e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N50 mbas:

2:400:0:7:1

11755 0.5000 0.98841 0.01159 0.50000 7.30849e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N40 mbas:

2:200:0:7:1

11756 0.9000 0.99130 0.00870 0.10000 1.55280e-04 700 5 4 #TP, TN, FP, FN, ERR.n, sm5 txm4 for check. N40 mbas:

2:300:0:7:1

11759 (4-6-2) yファイルを紹介

11760 cp ../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y ../12voicedata/allpole/ooB4sd.y

11761 cat ../12voicedata/allpole/ooB4sd:5:4N5ombas2:300:0:7:1.y >> ../12voicedata/allpole/ooB4sd.y

11762

11763 (4-6-3) 話者数字列照合:正解話者+正解数字列

11765 speakerdigit_v fsd:../12voicedata/allpole/ooB4sd.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:0:0 #correct speaker and digit

11766 #10 0.88709 0.170965 #t <p> uncertainty_p(k2)

11767 (4-6-4) 話者数字列照合:不正解話者+正解数字列

11768 speakerdigit_v fsd:../12voicedata/allpole/ooB4sd.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:1:0 #correct speaker and digit

11769 #10 0.219039 0.242057 #t <p> uncertainty_p(k2)

11770 (4-6-5) 以前と比較:以前(次)よりuncertainty_pが僅かに小さくなった?

11772 speakerdigit_v fsd:../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:0:0 #correct speaker and digit

11773 #10 0.870785 0.180705 #t <p> uncertainty_p(k2)

11774 speakerdigit_v fsd:../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:1:0 #incorrect speaker and digit

11775 #10 0.22628 0.244544 #t <p> uncertainty_p(k2)

11776 (4-6-6) sm4 txm7でもNを探索

11778 ob4speakerdigit_v sp:fh5:fm5:mkk:mko:mnt:mmh:my:m tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx:1:0 k:36 mbas:2:300:0:7:1 dir:../12voicedata/allpole sd:4:7 N:50

11779 cat ../12voicedata/allpole/ooB4sd:4:7N5ombas2:300:0:7:1.y>> ../12voicedata/allpole/ooB4sd.y

11780 #ob4speakerdigit_v sp:fh5:fm5:mkk:mko:mnt:mmh:my:m tx:zero:ichi:ni:san:yon:go:roku:nana:hachi:kyu ntx:1:0 k:36 mbas:2:300:0:7:1 dir:../12voicedata/allpole sd:4:7 N:50

11781 0.7000 0.99130 0.00870 0.30000 4.40994e-04 700 4 7 #TP, TN, FP, FN, ERR.n, sm4 txm7

11782

11783 (4-6-7) yファイルを紹介

11784 cp ../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y ../12voicedata/allpole/ooB4sd.y

11785 cat ../12voicedata/allpole/ooB4sd:5:4N5ombas2:300:0:7:1.y >> ../12voicedata/allpole/ooB4sd.y

11786 cat ../12voicedata/allpole/ooB4sd:4:7N5ombas2:300:0:7:1.y >> ../12voicedata/allpole/ooB4sd.y

11787

11788 (4-6-8) 話者数字列照合:不正解話者+正解数字列

11789 speakerdigit_v fsd:../12voicedata/allpole/ooB4sd.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:1:0 #correct speaker and digit

11790 #10 0.873486 0.177889 #t <p> uncertainty_p(k2)

11791 (4-6-9) 話者数字列照合:不正解話者+正解数字列

11792 speakerdigit_v fsd:../12voicedata/allpole/ooB4sd.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:4:1000:1:0 #correct speaker and digit

11793 #10 0.208707 0.239441 #t <p> uncertainty_p(k2)

11794 ## さらによくなった:(4-6-4)よりuncertainty_pが小さくなった。

11795 #####

11796 #####

11797 2013/02/05 夕方

11798 (1) テンプレを生成しテストするプログラムを作成した。

11799 オプション test:<id>:<n>:<ric> 指定話者数字列 sdp:<sP>:<dPl>:<dp2>:... に対し、テスト話者数字列 sd

11800 t:<st>:<dTr>:...のテスト。 <id>=1,2,3のとき<n>個の指定話者数字列をランダムに生成し、テスト話者数字列を<ric>の誤り率で

11801 生成し、テスト。 <id>=1のとき speaker が ric の割合で正しくない, ric=0のとき正しい。

11802 <id>=2のとき digit が ric の割合で正しくない, ric=0のとき正しい。

11803 <id>=3のとき speaker と digit、それぞれが、ric の割合で正しくない, ric=0のとき正しい。

11804 結果は tmp/testsd_stat.dat と tmp/testsd_stat.dat に書き出す。

11806 tmp/testsd_stat.datの第3要素はカプレジックタキ2(約95%カパー)の拡張不備さ(計測工学参照)

11807 #try from here

11808 speakerdigit_v fsd:../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:3:1000:0 #correct

11809 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_sd0ytmL.dat

11810 speakerdigit_v fsd:../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:3:1000:0.8 #incorrect

11812 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_sd0.8ytmL.dat

11813 cd ../12voicedata/allpole

11814 gnuplot

11815 plot "tested_stat_sd0ytmL.dat" using 1:2 w l, "" using 1:2:3 w errorbars, "tested_stat_sd0.8ytmL.dat" using 1:2 w l, "" using 1:2:3 w errorbars

11816 #try to here

11817 ###

11818 #mytm:0の方がいかも?そうでもないかな?

11819 speakerdigit_v fsd:../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:3:1000:0 #correct

11820 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_sd0ytm0.dat

11821 speakerdigit_v fsd:../12voicedata/allpole/ooB4sdn5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:3:1000:0.8 #incorrect

11823 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_sd0.8ytm0.dat

11824 cd ../12voicedata/allpole

11825 gnuplot

11826 plot "tested_stat_sd0ytm0.dat" using 1:2 w l, "tested_stat_sd0ytm0.dat" using 1:2:3 w errorbars, "tested_stat_sd0.8ytm0.dat" using 1:2 w l, "tested_stat_sd0.8ytm0.dat" using 1:2:3 w errorbars

11827 ##

11828 speakerdigit_v fs:../12voicedata/allpole/ooB4sN5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:1:1000:0.8 #incorrect

11830 speakerdigit_v fs:../12voicedata/allpole/ooB4sN5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:1:1000:0.8 #incorrect

11831 speakerdigit_v fsd:../12voicedata/allpole/ooB4sN5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:2:1000:0 #correct

11833 speakerdigit_v fsd:../12voicedata/allpole/ooB4sN5ombas2:100:0:7:1.y nSDL:7:10:10 pmin:0.01 pART: .55:0.25:4 ytm:1 pNR:0.9 void:0 gibbs:1 beta:1 sdp:0:0:1:2:3:4:5:6:7:8:9 lt:1 sdt:0:0:1:2:3:4:5:6:7:8:9 ver:-2 test:3:1000:0 #correct

11836 cp tmp/testsd_stat.dat ../12voicedata/allpole/testsd_stat_sd0.dat

11837

11838


```
12602 f=. ./mineishi/text-indepdata.dat;loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 beta:0.5 pth: .51
ith:4 ts:4:0:3:1:2 tdisp:3 fnt:$.3f:1 PNr: .8: .8: .99 void:1 gibbs:1 mex:1 #use loo4gp.dat for table.
12603 #f=. ./mineishi/text-depdata2.dat
12604 #####Original Verification Error Rate:0.024(6/250)0.024(6/250)0.056(14/250)0.056(14/250)0.072(18/250)
12605 #vimex1 response time steps=5.56=(4.00+4.00+6.00+9.20+)/5, (fp+FP)/All=(0+0)/25 Err: none
12606 #vimex2 response time steps=6.16=(4.60+4.40+5.60+7.20+9.40+)/5, (fp+FP)/All=(0+0)/25 Err: none
12607 #vimex3 response time steps=6.2=(4.60+4.40+5.60+9.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12608 #vimex4 response time steps=6.16=(4.60+4.20+6.00+6.80+9.20+)/5, (fp+FP)/All=(0+0)/25 Err: none
12609 #vimex1 response time steps=4.84=(4.00+4.00+5.60+5.60+)/5, (fp+FP)/All=(0+0)/25 Err: none gibbs
:0 bytes
12610 #vimex1 response time steps=5.24=(4.00+4.00+6.40+5.80+6.00+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:0.5 pth:.51
12610 #vimex-1 response time steps=5.16=(4.00+4.00+6.40+5.60+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:1.0 pth:.78
12611
12612 #vimex0 response time steps=5.2=(4.00+4.00+6.20+6.00+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none gibbs:
0
12612 #vimex0 response time steps=5.2=(4.00+4.00+6.20+6.00+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12613 #vimex1 response time steps=5.28=(4.00+4.00+6.60+6.00+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12614 #vimex2 response time steps=5.28=(4.00+4.00+6.40+6.20+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12615 #vimex3 response time steps=4.92=(4.00+4.00+6.40+6.00+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12616 #vimex4 response time steps=4.2=(4.00+4.00+6.40+6.00+5.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12617 print (5.2+5.28+2+4.92+4.2)/5,"=4.976"
12618 #vimex0 response time steps=6.28=(5.20+5.20+7.40+7.00+6.60+)/5, (fp+FP)/All=(0+0)/25 Err: none gibbs:
1
12618 #vimex0 response time steps=6.28=(5.20+5.20+7.40+7.00+6.60+)/5, (fp+FP)/All=(0+0)/25 Err: none gibbs:
1
12619 #vimex1 response time steps=5.72=(5.20+4.00+6.00+6.80+6.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12620 #vimex2 response time steps=6=(5.20+4.00+7.60+6.40+6.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12621 #vimex3 response time steps=5.28=(4.00+5.20+5.20+5.60+6.40+)/5, (fp+FP)/All=(0+0)/25 Err: none
12622 #vimex4 response time steps=5.36=(5.20+5.20+5.20+6.00+5.20+)/5, (fp+FP)/All=(0+0)/25 Err: none
12623 print (6.28+5.72+6+5.36)/5,"=5.728"
12624
12625 #f=. ./mineishi/text-indepdata.dat;
12626 #####Original Verification Error Rate:0.076(19/250)0.052(13/250)0.108(27/250)0.120(30/250)0.132(33/25
0)
12627 #Original Verification PP Rate:0.015(3/250)0.015(3/250)0.040(8/250)0.070(14/250)0.040(8/250)
12628 #Original Verification FN Rate:0.320(16/50)0.100(5/20)0.380(19/50)0.320(16/50)0.500(25/50)
12629 #Original Identification Error Rate:0.200(10/50)0.200(10/50)0.280(14/50)0.400(20/50)0.420(21/50)
12630 #vimex-1 response time steps=6.08=(5.40+4.00+7.80+5.80+7.40+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:0 bytes pth:.999
12631 #vimex1 response time steps=9.76=(10.00+8.80+10.00+10.00+10.00+)/5, (fp+FP)/All=(0+0)/25 Err: none #
gibbs:1 beta:0.1 pth:.26
12632 #vimex-1 response time steps=7.12=(7.60+4.00+8.80+7.60+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:0.4 pth:.44
12633 #vimex1 response time steps=7.08=(7.40+4.00+8.80+7.60+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:0.5 pth:.51
12634 #vimex-1 response time steps=7.08=(7.40+4.00+8.80+7.60+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:0.6 pth:.57
12635 #vimex-1 response time steps=6.76=(7.00+4.00+8.80+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:0.8 pth:.68
12636 #vimex-1 response time steps=6.76=(7.00+4.00+8.80+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:1.0 pth:.78
12637 #vimex-1 response time steps=6.76=(7.00+4.00+8.80+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:1.5 pth:.91
12638 #vimex-1 response time steps=6.76=(7.00+4.00+8.80+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:2.0 pth:.97
12639 #vimex-1 response time steps=6.72=(6.80+4.00+8.80+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibb
s:1 beta:4.0 pth:.999
12640
12641 #vimex0 response time steps=6.28=(5.80+4.00+8.00+6.80+6.80+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibbs
:0
12642 #vimex1 response time steps=6.64=(6.20+4.20+7.40+6.80+6.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12643 #vimex2 response time steps=6.2=(6.00+4.20+8.00+6.60+6.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12644 #vimex3 response time steps=6.24=(6.00+4.20+8.00+5.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12645 #vimex4 response time steps=5.76=(5.20+4.20+8.00+6.60+7.00+)/5, (fp+FP)/All=(0+0)/25 Err: none
12646 print (6.28+6.64+6.2+6.24+5.76)/5,"=6.224"
12647 #vimex0 response time steps=7.6=(7.60+5.20+8.80+8.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibbs:
1
12647 #vimex0 response time steps=7.6=(7.60+5.20+8.80+8.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none #gibbs:
1
12648 #vimex1 response time steps=7.72=(8.20+5.20+8.80+7.60+8.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12649 #vimex2 response time steps=7.48=(8.20+5.20+10.00+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12650 #vimex3 response time steps=6.84=(7.00+5.20+8.80+5.60+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12651 #vimex4 response time steps=7.2=(5.80+5.20+8.80+6.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12652 print (7.6+7.72+7.48+6.84+7.2)/5,"=7.368"
12653 #f=. ./mineishi/text-depdata2.dat;loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.78 ith:4 ts:4:
0:3:1:2 tdisp:3 fnt:$.3f:1 beta:1.0 PNr: .8: .8: .8: .99 void:1 gibbs:1 mex:1-1
12654 #vimex-1 response time steps=7.6=(7.00+4.00+8.80+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12655 #vimex0 response time steps=7.6=(7.60+5.20+8.80+8.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12656 #vimex1 response time steps=7.72=(8.20+5.20+8.80+7.60+8.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12657 #vimex2 response time steps=7.48=(8.20+5.20+10.00+6.40+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12658 #vimex3 response time steps=6.92=(7.40+5.20+8.80+5.60+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12659 #vimex4 response time steps=7.2=(5.80+5.20+8.80+6.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12660
12661
12662 #
12663 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.9999 ith:4 ts:4:0:3:1:2 tdisp:3 fnt:$.10f:1
```

```
PNr: .7: .7: .7: .99 void:1 gibbs:0 mex:1-1
12664
12665 #####result
12666 #vimex1 response time steps=5.56=(4.00+4.00+4.60+6.00+9.20+)/5, (fp+FP)/All=(0+0)/25 Err: none
12667 #vimex2 response time steps=6.16=(4.60+4.40+5.60+7.20+9.40+)/5, (fp+FP)/All=(0+0)/25 Err: none
12668 #vimex3 response time steps=6.2=(4.60+4.40+5.60+9.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12669 #vimex4 response time steps=6.16=(4.60+4.20+6.00+6.80+9.20+)/5, (fp+FP)/All=(0+0)/25 Err: none
12670 #vimex1 response time steps=6.28=(4.80+5.20+6.00+6.80+9.20+)/5, (fp+FP)/All=(0+0)/25 Err: none
12671 #vimex2 response time steps=6.16=(4.60+4.40+5.60+6.00+6.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12672 #vimex3 response time steps=6.4=(4.60+4.40+6.00+6.40+6.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12673 print (4.6+4.4+8)/5=4.64, (4.4+3+4.2+2)/5,5.2+5.6+6.0+5.6+4.6)/5, (7.2+6.6+6.8+6.6+5.0)/5, (9.4+9.8
+9.2+9.2+4.6)/5, "4.64 4.32 5.4 6.44 8.44"
12674 print (6.16+6.2+6.16+6.28+4.64)/5,"=5.888"
12675
12676 pth: .9999 Err: none for all
12677 pth:0.999 Err: none for all
12678 pth:0.99 Err: none for all
12679 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.9999 ith:4 ts:4:0:3:1:2 tdisp:3 fnt:$.10f:1
PNr: .7: .7: .7: .99 void:1 gibbs:0 mex:1-1
12680 #####f=. ./mineishi/text-indepdata.dat
12681 #vimex-1 response time steps=7(7.00+4.80+8.00+7.20+8.00+)/5, (fp+FP)/All=(0+0)/25 Err: none
12682
12683 #vimex0 response time steps=7.68=(8.00+4.80+8.80+8.40+8.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12684 #vimex1 response time steps=7.72=(8.20+6.00+7.80+7.60+9.00+)/5, (fp+FP)/All=(0+0)/25 Err: none
12685 #vimex2 response time steps=7.8=(8.20+5.60+9.40+7.20+8.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12686 #vimex3 response time steps=7.44=(7.60+5.60+8.80+8.40+)/5, (fp+FP)/All=(0+0)/25 Err: none
12687 #vimex4 response time steps=7.16=(6.60+5.40+7.40+8.40+8.00+)/5, (fp+FP)/All=(0+0)/25 Err: none
12688 print (8+8.2+7.6+6.6)/5,(4.6+6+5.6+2+5.4)/5,(8.8+2+7.8+9.4+7.4)/5,(8.4*2+7.6+7.2+6.8)/5,(8.6*2+9.0
+8.4+8)/5,"=7.2 5.44 8.44 7.68 8.52"
12689 print (7.68+7.72+7.8+7.44+7.16)/5,"=7.56"
12690
12691 f=. ./mineishi/text-indepdata.dat;loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.9999 ith:4
ts:4:0:3:1:2 tdisp:3 fnt:$.9f:1 PNr: .7: .7: .7: .99 void:1 gibbs:0 mex:1
12692
12693 pth: .9999 Err: none for all
12694 pth:0.999 Err: none for all
12695
12696 #vimex1 response time steps=6.04=(6.00+4.20+5.40+6.00+8.60+)/5, (fp+FP)/All=(1+0)/25 Err: Idm0s1t3
12696 pth: .99
12697 #vimex1 response time steps=5.44=(5.00+4.00+4.80+5.60+7.80+)/5, (fp+FP)/All=(1+0)/25 Err: Idm0s1t3
12698 #vimex3 response time steps=5.16=(4.80+4.00+5.00+4.40+7.60+)/5, (fp+FP)/All=(1+0)/25 Err: Idm2s3t3
12699 pth: .98
12700 #vimex1 response time steps=5.36=(4.80+4.00+4.80+5.60+7.60+)/5, (fp+FP)/All=(1+0)/25 Err: Idm0s1t3
12701 #vimex2 response time steps=5(4.60+4.20+5.60+5.40+)/5, (fp+FP)/All=(1+0)/25 Err: Idm5s0t4
12702 #vimex3 response time steps=5.08=(4.60+4.00+5.00+4.20+7.60+)/5, (fp+FP)/All=(1+0)/25 Err: Idm2s3t3
12703 pth:0.97
12704
12705 #vimex-1 response time steps=4.8=(4.60+4.00+4.80+5.40+5.40+)/5, (fp+FP)/All=(1+0)/25 Err: Idm5s0t4
12706 #vimex1 response time steps=5(4.60+4.00+4.60+5.40+6.60+)/5, (fp+FP)/All=(2+0)/25 Err: Idm5s0t4 ID
m0s1t3
12707 #vimex2 response time steps=4.96=(4.60+4.20+5.00+5.60+5.40+)/5, (fp+FP)/All=(1+0)/25 Err: Idm5s0t4
12708 #vimex3 response time steps=5.04=(4.40+4.00+5.00+4.20+7.60+)/5, (fp+FP)/All=(1+0)/25 Err: Idm2s3t3
12709 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.999 ith:4 ts:4:0:3:1:2 tdisp:3 fnt:$.10f:1 PNr
: .7: .7: .7: .99 void:1 gibbs:0 mex:1-1
12710 #vimex-1 response time steps=5.68=(5.40+4.00+5.60+6.00+7.40+)/5, (fp+FP)/All=(0+0)/25 Err: none
12711 #vimex0 response time steps=5.88=(6.00+4.00+5.80+6.80+6.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12712 #vimex1 response time steps=6.04=(6.00+4.20+5.40+6.00+8.60+)/5, (fp+FP)/All=(0+0)/25 Err: Idm0s1t3
12713 #vimex2 response time steps=6.24=(7.00+4.60+7.20+5.80+6.60+)/5, (fp+FP)/All=(0+0)/25 Err: none
12714 #vimex3 response time steps=5.84=(5.80+4.20+6.20+5.40+7.80+)/5, (fp+FP)/All=(0+0)/25 Err: none
12715 #vimex4 response time steps=5.88=(5.20+4.20+6.80+7.00+7.40+)/5, (fp+FP)/All=(0+0)/25 Err: none
12716 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.999 ith:4 ts:4:0:3:1:2 tdisp:3 fnt:$.10f:1 PNr
: .7: .7: .7: .99 void:1 gibbs:0 mex:1-1
12717 vl stl_310 ml:1.0.2000000000
12717 vl stl_310 ml:1.0.2000000000
12718 vl stl_311 ml:1.0.9346232728
12718 vl stl_311 ml:1.0.9346232728
12719 vl stl_312 ml:1.0.9979186410
12719 vl stl_312 ml:1.0.9979186410
12720 vl stl_313 ml:1.0.0015422083
12720 vl stl_313 ml:1.0.0015422083
12721 vl stl_314 ml:0.000607492
12721 vl stl_314 ml:0.000607492
12722 vl stl_315 ml:0.0002825157
12722 vl stl_315 ml:0.0002825157
12723 vl stl_316 ml:0.0.9995544320
12723 vl stl_316 ml:0.0.9995544320
12724 vl stl_317 ml:0.0.9876324087
12724 vl stl_317 ml:0.0.9876324087
12725 vl stl_318 ml:0.0.8592574376
12725 vl stl_318 ml:0.0.8592574376
12726 vl stl_319 ml:0.0.3102872424
12726 vl stl_319 ml:0.0.3102872424
12727 vl stl_310 ml:0.0.0196494162
12727 vl stl_310 ml:0.0.0196494162
```

```
0669602 m5:0:0.980280392
12728 #v1 mex1 Case2:Err @4 by IDm0sl3 fp=1 fp=1 Number of Responses 2=CP(1)-fP(1)
12729 #####
12730 v1 stl1_310 ml:-0.200 uml:-0.000 m2:-0.200 ml:-0.200 ml:-0.200 ml:-0.200 ml:-0.200
12731 v1 stl1_311 ml:-0.0.935 uml:-0.000 m2:-0.0.004 m4:-0.0.021 m5:-0.0.037
12732 v1 stl1_312 ml:-0.0.998 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.001 m5:-0.0.002
12733 v1 stl1_313 ml:-0.1.000 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.000 m5:-0.0.000
12734 v1 stl1_314 ml:-0.0.999x uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.000 m5:-0.0.001
12735 v1 stl1_315 ml:-0.1.000 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.000 m5:-0.0.000
12736 v1 stl1_316 ml:-0.0.1.000 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.000 m5:-0.0.000
12737 v1 stl1_317 ml:-0.0.0.988 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.001 m5:-0.0.012
12738 v1 stl1_318 ml:-0.0.0.959 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.001 m5:-0.0.140
12739 v1 stl1_319 ml:-0.0.0.31 uml:-0.000 m2:-0.0.000 m3:-0.0.000 m4:-0.0.001 m5:-0.0.689
12740 v1 stl1_310 m0:0.0.020 uml:-0.000 m2:0.0.000 m4:0.0.000 m5:0.0.980
12741 #v1 mex1 Case2:Err @4 by IDm0sl3 fp=1 fp=1 Number of Responses 2=CP(1)-fP(1)
12742 #v1mex1 response time steps=6.04=(6.00+4.20+5.40+6.00+8.60)/5, (fp+FP)/All=(1+0)/25 Err:IDm0sl3
12743 ##
12744 f#=#./mineishi/text-indepdata.dat
12745 f#=#./mineishi/text-depdata2.dat
12746 f#=#./mineishi/text-depdata2.dat
12747 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.55 ith:4 ts:4:0:3:1:2 tdisp:3 fmc:$.2f:1 beta
:0.5 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:1 mex:1
12748 #v1mex1 response time steps=5.48=(4.00+4.00+4.00+6.00+9.40+)/5, (fp+FP)/All=(0+0)/25 Err:none
12749 #####
12750 #v1mex0 response time steps=6.52=(5.20+5.20+5.20+7.60+9.40+)/5, (fp+FP)/All=(0+0)/25 Err:none
12751 #v1mex1 response time steps=5.96=(5.20+4.00+5.20+5.40+10.00+)/5, (fp+FP)/All=(0+0)/25 Err:none
12752 #v1mex2 response time steps=5.44=(5.20+4.00+5.20+5.40+7.40+)/5, (fp+FP)/All=(0+0)/25 Err:none
12753 #v1mex3 response time steps=5.72=(5.20+5.20+5.20+5.60+7.40+)/5, (fp+FP)/All=(0+0)/25 Err:none
12754 #v1mex4 response time steps=5.2=(5.20+5.20+5.20+5.20+5.20+)/5, (fp+FP)/All=(0+0)/25 Err:none
12755 #v1mex5 response time steps=5.2=(5.20+5.20+5.20+5.20+5.20+)/5, (fp+FP)/All=(0+0)/25 Err:none
12756 print 5.2,(5.2+3+4*2)/5, 5.2,(7.6+5.4+2+5.6+5.2)/5,(9.4+10+7.4+2+5.2)/5,"=5.2 4.72 5.2 8.4 7.88"
12757 print (6.52+5.96+5.44+5.72+5.2)/5,"=5.768"
12758
12759 #####./mineishi/text-indepdata.dat
12760 f#=#./mineishi/text-indepdata.dat;loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.55 ith:4 ts:
4:0:3:1:2 tdisp:3 fmc:$.3f:1 beta:0.5 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:1 mex:1
12761 #pth:~.55
12762 #v1mex-1 response time steps=7.28=(8.40+4.00+8.80+7.60+7.60+)/5, (fp+FP)/All=(0+0)/25 Err:none
12763
12764 #v1mex0 response time steps=7.36=(7.60+5.20+7.60+8.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err:none
12765 #v1mex1 response time steps=7.52=(8.40+5.20+7.60+7.60+8.80+)/5, (fp+FP)/All=(0+0)/25 Err:none
12766 #v1mex2 response time steps=7.24=(9.00+5.20+10.00+6.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err:none
12767 #v1mex3 response time steps=7.28=(8.20+5.20+10.00+6.80+7.60+)/5, (fp+FP)/All=(0+0)/25 Err:none
12768 #v1mex4 response time steps=7.32=(6.60+5.20+8.80+7.60+8.80+)/5, (fp+FP)/All=(0+0)/25 Err:none
12769 print (7.6+8.4+9+8.2+6.6)/5,5.2,(7.6+2+10+8.8+8.4)/5, (8.8+7.6+2+6.6+6.4)/5,(7.6+3+8.8+2)/5,"=7.96
5.2 8.48 7.44 8.08"
12770 print (7.36+7.52+7.72+7.24+7.32)/5,"=7.432"
12771 #pth:0.55 Error none
12772 #v1mex1 response time steps=7.28=(8.20+5.20+7.60+6.60+8.80+)/5, (fp+FP)/All=(1+0)/25 Err:IDm0sl3 pt
h:~.54
12773 #v1mex1 response time steps=6.92=(7.80+5.20+6.40+6.40+8.80+)/5, (fp+FP)/All=(1+0)/25 Err:IDm0sl3 pt
h:~.45
12774 #v1mex3 response time steps=5.8=(5.60+4.00+7.60+4.20+7.60+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 pt
h:~.45
12775 #v1mex1 response time steps=6=(6.60+4.00+6.00+5.80+7.60+)/5, (fp+FP)/All=(1+0)/25 Err:IDm0sl3 pt
h:~.40
12776 #v1mex2 response time steps=5.4=(5.20+4.00+6.20+4.00+7.60+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 pt
h:~.40
12777 #v1mex4 response time steps=5.4=(5.80+4.00+4.20+5.40+7.60+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 pt
h:~.40
12778 #v1mex1 response time steps=5.6=(6.60+4.00+5.40+4.40+7.60+)/5, (fp+FP)/All=(2+0)/25 Err:IDm0sl3 IDm
2s3t3 pth:~.38
12779 #v1mex3 response time steps=5.32=(5.20+4.00+5.80+4.00+7.60+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 pt
h:~.38
12780 #v1mex4 response time steps=5.12=(5.60+4.00+4.20+5.40+6.40+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 pt
h:~.38
12781
12782 #v1mex-1 response time steps=4.92=(5.00+4.00+5.00+4.20+6.40+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 p
th:~.35
12783 #v1mex1 response time steps=4.8=(4.80+4.00+4.00+4.40+6.80+)/5, (fp+FP)/All=(2+0)/25 Err:IDm0sl3 IDm
2s3t3 pth:~.35
12784 #v1mex2 response time steps=4.72=(4.60+4.00+5.80+4.00+5.20+)/5, (fp+FP)/All=(1+0)/25 Err:IDm3s2t3 pt
h:~.35
12785 #v1mex3 response time steps=4.96=(4.20+4.00+5.80+4.00+6.80+)/5, (fp+FP)/All=(1+0)/25 Err:IDm2s3t3 pt
h:~.35
12786 #v1mex4 response time steps=4.76=(5.60+4.00+4.00+4.00+6.20+)/5, (fp+FP)/All=(2+0)/25 Err:IDm3s2t3 ID
m2s3s3t3 pth:~.35
12787
12788 #####./mineishi/text-depdata2.dat
12789 #v1mex-1 response time steps=5.48=(4.00+4.00+4.00+6.00+9.40+)/5, (fp+FP)/All=(0+0)/25 Err:none pth:
0.55
12790
```

```
12791 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.54 ith:4 ts:4:0:3:1:2 tdisp:3 fmc:$.2f:1 beta
:0.5 PNr:~.7:~.7:~.7:~.99 void:1:0.4 gibbs:1 mex:1
12792 v1 stl1_310 ml:-0.20 uml:-0.20 uml:-0.20 uml:-0.20 uml:-0.20 uml:-0.20
12793 v1 stl1_311 ml:-0.0.935 uml:-0.000 m2:-0.0.004 m4:-0.0.010 m5:-0.0.013
12794 v1 stl1_312 ml:-0.0.998 uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12795 v1 stl1_313 ml:-0.1.000 uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12796 v1 stl1_314 ml:-0.0.999x uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12797 v1 stl1_315 ml:-0.0.1.000 uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12798 v1 stl1_316 ml:-0.0.0.988 uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12799 v1 stl1_317 ml:-0.0.0.959 uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12800 v1 stl1_318 ml:-0.0.0.931 uml:-0.000 m2:-0.0.000 m3:-0.0.004 m4:-0.0.010 m5:-0.0.013
12801 v1 stl1_319 ml:-0.0.0.28 uml:-0.000 m2:-0.0.011 m3:-0.0.010 m4:-0.0.020 m5:-0.0.29
12802 v1 stl1_310 m0:0.0.024 uml:-0.000 m2:0.0.013 m3:-0.0.014 m4:-0.0.18 m5:-0.0.30
12803 #v1 mex1 Case2:Err @5 by IDm0sl3 fp=1 fp=1 Number of Responses 2=CP(1)-fP(1)
12804 #####
12805 #test of void:0
12806 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.22 ith:4 ts:4:0:3:1:2 tdisp:3 fmc:$.2f:1 beta
:0.06 PNr:~.7:~.7:~.7:~.99 void:1:0.28 gibbs:1 mex:0
12807
12808 loo4gibbs-sr fn:$f ns:5 ntx:5 ntxi:10:10 pmin:0.0 pth:.3 ith:4 ts:4:0:3:1:2 tdisp:3 fmc:$.2f:1 beta:
0.1 PNr:~.7:~.7:~.7:~.99 void:0:0.28 gibbs:1 mex:0
12809
12810 #####
12811
12812 loo4gibbs-sr fn:~./mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:3
:1:2 tdisp:3 beta:2. PNr:~.7:~.7:~.7:~.99 void:1:0.4 gibbs:1 mex:-1
12813 loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:
3:1:2 tdisp:3 beta:2. PNr:~.7:~.7:~.7:~.99 void:1:0.4 gibbs:1 mex:-1
12814 loo4gibbs-sr fn:~./mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:3
:1:2 tdisp:2 beta:0.6 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:0 mex:-1
12815 loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:
3:1:2 tdisp:2 beta:0.6 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:-0 mex:-1
12816 #####
12817 loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:
3:1:2 tdisp:3 beta:0.6 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:0 mex:-1
12818 loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:10 ts:4:0
:3:1:2 tdisp:4 beta:0.6 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:0 mex:2
12819
12820
12821
12822
12823 loo4gibbs-sr fn:~./mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:3
:1:2 tdisp:3 beta:2. PNr:~.7:~.7:~.7:~.99 void:1:0.4 gibbs:1 mex:-1
12824 loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:
3:1:2 tdisp:3 beta:2. PNr:~.7:~.7:~.7:~.99 void:1:0.4 gibbs:1 mex:-1
12825 loo4gibbs-sr fn:~./mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:3
:1:2 tdisp:2 beta:0.6 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:0 mex:-1
12826 loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:
3:1:2 tdisp:2 beta:0.6 PNr:~.7:~.7:~.7:~.99 void:1 gibbs:-0 mex:-1
12827
12828 #v1mex-1 response time steps=4.28=(4.20+4.20+4.00+4.60+4.40+)/5, (fp+FP)/All=(0+0)/25 Err:none
12829
12830
12831
12832 (1) See 2012.02.14 for void:<m>, mex:<m>, pth:<pth1><pth2>:...
12833 > 2012.02.14
12834 > (1) ギブス分布を使う語者識別プログラム(loo4gibbs-sr.c)を作成し,単純ペイズを使う語者識別プログラ
ム(loo4bays-sr.c)
12835 > も同等の機能を持つように改変した.
12836 > (2) 次のオプション void:<m>, mex:<m>, pth:<pth1><pth2>:... を追加した
12837 > void:0 void識別器を使わない.
12838 > void:1 void識別器を使う.初期確率はすべての学習機械で均一.
12839 > void:2 void識別器を使う.初期確率はvoidの学習機械が1(=1-pmin) 他の学習機械は0(=pmin=0.01?)
12840 > mex:<m> 学習機械<m>を識別に用いない.m=-1のときはすべて使う.
12841 > pth:<pth1><pth2>:... テキスト毎に認識のしきい値を設定する.
12842 > (2) Text-indepdata.datに対し,loo4gibbs-sr でvoid:2を使って,mex:-1で識別率100%,mex:4で1個間違いと
できた.
12843 > text-indepdata.datに対し,loo4bays-srではvoid:0,1,2 のいづれも,mex:-1で識別率100%,mex:4でこ
れより
12844 > 良い識別率を達成するパラメタは見つからない(見つかるかもしれないが...).
12845
12846 (2) void:0 を修正した.gibbs:0 でも良くなった!?.
12847 修正内容:最後までしきい値に達しなかったらvoidとする.
12848 (3) New PP: see the paper iconip2012speech.pdf
12849 2012.06.06
12850 (1) void:0:[P1rth] <=void:0 にオプションを追加
12851 最終判断で,max PI >=P1rth であればそのマシンで認識.
12852 ==No Good
12853
12854 NG:loo4gibbs-sr fn:~./mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.8 ts:4:0:3:1:
2 tdisp:4 beta:~.8 void:0:0.5 gibbs:1 mex:-1
12855 (2) PNr = PNr[t] とし,text毎にyth[m][t]=PNr[t]*meanp[m][t]+(1.-PNr[t])*meanN[m][t]と設定できるよ
```

うにした。
12856 (3) i<1th では認識判断しないようにした

```
12857 [1]
12858 gibbs:0,1th:4
12859 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0+3
1:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12860 #v1mex-1 response time steps=4.2=(4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12861
12862 gibbs:0,1th:10
12863 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:10 ts:4:0
3:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12864 #v1mex-1 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+1)/25 Err:IDm5S3t
4
12865
12866 [2]gibbs:1,1th:4
12867 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0+3
1:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:-1
12868 #v1mex-1 response time steps=4.32=(4.00+4.20+4.40+4.60+5.80+)/5, (fp+fp)/All=(0+0)/25 Err:none
12869 gibbs:1,1th:10
12870 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:10 ts:4:0
3:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:-1
12871 #v1mex-1 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12872
12873 bayes=gibbs:0,1th:4,unreg
12874 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0+3
1:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12875 #v1mex0 response time steps=4.2=(4.00+4.00+4.40+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12876 #v1mex1 response time steps=4.16=(4.00+4.00+4.40+4.40+4.40+)/5, (fp+fp)/All=(0+0)/25 Err:none
12877 #v1mex2 response time steps=4.16=(4.00+4.00+4.40+4.20+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12878 #v1mex3 response time steps=4.28=(4.00+4.40+4.20+4.20+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12879 #v1mex4 response time steps=4.16=(4.20+4.00+4.00+4.40+4.20+)/5, (fp+fp)/All=(0+0)/25 Err:none
12880 #4.04+4.08+4.04+4.32+4.48
12881 print (4.43+4.4.2*2)/5=4.32
12882 print (4.6*3+4.4+4.2)/5=4.48
12883 bayes=gibbs:0,1th:4,unreg
12884 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:10 ts:4:0
3:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12885 #v1mex0 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+1)/25 Err:IDm5S3t4
12886 #v1mex1 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+1)/25 Err:IDm5S3t4
12887 #v1mex2 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+1)/25 Err:IDm5S3t4
12888 #v1mex3 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+1)/25 Err:none
12889 #v1mex4 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+1)/25 Err:IDm5S3t4
12890 #####
12891 gibbs:1,1th:4,unreg
12892 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0+3
1:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:-1
12893 #v1mex0 response time steps=4.68=(4.00+4.20+4.00+4.40+6.80+)/5, (fp+fp)/All=(0+0)/25 Err:none
12894 #v1mex1 response time steps=4.6=(4.00+4.20+4.00+4.40+6.40+)/5, (fp+fp)/All=(0+0)/25 Err:none
12895 #v1mex2 response time steps=4.58=(4.00+4.00+4.00+4.20+6.40+)/5, (fp+fp)/All=(0+0)/25 Err:none
12896 #v1mex3 response time steps=4.68=(4.00+4.80+4.20+4.20+6.20+)/5, (fp+fp)/All=(0+0)/25 Err:none
12897 #v1mex4 response time steps=4.24=(4.40+4.20+4.00+4.40+4.20+)/5, (fp+fp)/All=(0+0)/25 Err:none
12898 #4.08+4.28+4.04+4.32+6.0
12899 print (4.2+3+4+4.8)/5=4.28
12900 print (4.4+3+4.2*2)/5=4.32
12901 print (6.8+6.4+2+6.2+4.2)/5=6.0
12902 gibbs:1,1th:10,unreg
12903 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:10 ts:4:0
3:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:0
12904 #v1mex0 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12905 #v1mex1 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12906 #v1mex2 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12907 #v1mex3 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12908 #v1mex4 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12909 #####text-independent
12910 #text-independent,bayes=gibbs:0,1th:4,
12911 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0
3:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12912 #v1mex-1 response time steps=5.04=(4.60+4.20+4.60+5.00+6.80+)/5, (fp+fp)/All=(0+0)/25 Err:none
12913 #text-independent,gibbs:1,1th:4,
12914 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0
3:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:-1
12915 #v1mex-1 response time steps=5.8=(5.20+4.20+5.40+6.60+7.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12916 #text-independent,bayes=gibbs:0,1th:10,
12917
12918 #worst case???
12919 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:10 ts:4:0
3:1:1:2 tdisp:4 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12920 #v1mex-1 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+4)/25 Err:IDm5S0t
```

```
0 IDm5S1t4 IDm2S3t1 IDm5S4t4
12921
12922 #text-independent,gibbs:1,1th:10,
12923 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0
3:1:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12924 #v1mex-1 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12925 ##
12926 #text-independent,bayes=gibbs:0,1th:4,unreg
12927 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0
3:1:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:0
12928 #v1mex0 response time steps=4.96=(5.20+4.00+4.80+5.80+5.80+)/5, (fp+fp)/All=(0+0)/25 Err:none
12929 #v1mex1 response time steps=5.2=(4.60+4.20+4.60+5.20+7.40+)/5, (fp+fp)/All=(1+0)/25 Err:IDm0S1t3 <=
mex:-1 tdisp:3 =tag1
12930 #v1mex2 response time steps=5.16=(4.60+4.20+5.00+5.60+6.40+)/5, (fp+fp)/All=(0+0)/25 Err:none
12931 #v1mex3 response time steps=5.12=(4.60+4.00+5.00+5.20+6.80+)/5, (fp+fp)/All=(0+0)/25 Err:none
12932 #v1mex4 response time steps=4.48=(4.60+4.00+4.20+5.00+4.60+)/5, (fp+fp)/All=(1+0)/25 Err:IDm5S0t4 <=
mex:-4 tdisp:4 =tag2
12933 #
12934 4.72+4.08+4.72+5.2+6.2
12935 print (5.2+4.6*4)/5=4.72
12936 print (4.3+4.2*2)/5=4.08
12937 print (4.8+4.6+5+5+4.2)/5=5.472
12938 print (5+5.2+5.6+5.2+5)/5=5.2
12939 print (5.8+7.4+6.4+6.8+4.6)/5=6.2
12940 #####text-independent,gibbs:1,1th:4,unreg
12941 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0
3:1:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:0
12942 #v1mex0 response time steps=6.04=(6.20+4.20+5.60+6.60+7.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12943 #v1mex1 response time steps=6.04=(5.20+4.20+4.80+7.40+8.80+)/5, (fp+fp)/All=(0+0)/25 Err:none
12944 #v1mex2 response time steps=5.68=(5.20+4.60+6.40+5.80+6.40+)/5, (fp+fp)/All=(0+0)/25 Err:none
12945 #v1mex3 response time steps=5.76=(5.60+4.00+6.20+5.40+7.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12946 #v1mex4 response time steps=5.52=(5.60+4.20+4.20+6.00+7.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12947 print (6.2+5.2+5.2+5.6*2)/5 =5.52
12948 print (4.2+3+4.6+4)/5 =4.24
12949 print (5.6+4.8+6.4+6.2+4.2)/5 =5.44
12950 print (6.6+7.4+5.8+5.4+6)/5 =6.24
12951 print (7.6+8.8+6.4+7.6*2)/5 =7.60
12952 #####text-independent,gibbs:0,1th:10,unreg
12953 #text-independent,bayes=gibbs:0,1th:10,unreg
12954 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:10 ts:4:0
3:1:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:0
12955 #v1mex0 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+2)/25 Err:IDm2S3t1
IDm5S4t4
12956 #v1mex1 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+3)/25 Err:IDm3S1t3
IDm2S3t1 IDm5S4t4
12957 #v1mex2 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+4)/25 Err:IDm5S1t0
IDm5S1t4 IDm1S2t2 IDm5S4t4?worst
12958 #v1mex3 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+2)/25 Err:IDm2S3t1
IDm5S4t4
12959 #v1mex4 response time steps=10=(10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+3)/25 Err:IDm5S0t0
IDm5S1t4 IDm2S3t1
12960 Err:14= t0:2 t1:4, t2:1 t3:1, t4:6
12961 #text-independent,gibbs:1,1th:10,unreg
12962 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:10 ts:4:0
3:1:1:2 tdisp:3 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:0
12963 #v1mex0 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12964 #v1mex1 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12965 #v1mex2 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12966 #v1mex3 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12967 #v1mex4 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+0)/25 Err:none
12968 #corresponding worstcase?
12969 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:10 ts:4:0
3:1:1:2 tdisp:4 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:2
12970 #v1mex2 response time steps=10=(10.00+10.00+10.00+10.00+10.00+)/5, (fp+fp)/All=(0+4)/25 Err:IDm5S1t0
IDm5S1t4 IDm1S2t2 IDm5S4t4
12971 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:10 ts:4:0
3:1:1:2 tdisp:4 beta:2. PNr:7:7:7:7:99 void:1:0.4 gibbs:1 mex:2
12972
12973 #####text-independent,gibbs:0,1th:4,unreg
12974 #text-independent,bayes=gibbs:0,1th:4,unreg
12975 #text-independent,bayes=gibbs:0,1th:4,unreg
12976 [1]loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4
0:3:1:2 tdisp:2 beta:0.6 PNr:7:7:7:7:99 void:1 gibbs:0 mex:-1
12977 #v1mex-1 response time steps=5.04=(4.60+4.20+4.60+5.00+6.80+)/5, (fp+fp)/All=(0+1)/25 Err:none
12978
12979 #v1mex0 response time steps=4.96=(5.2+4 +4.8 +5 +4.75+)/5 (fp+fp)/All=(0+0)/25 Err:none
12980 #v1mex1 response time steps=5.2=(4.6+4.2 +4.6 +5.25+6.75+)/5 (fp+fp)/All=(1+0)/25 Err:IDm0S1t3 <=
mex:-1 tdisp:3 =tag1
12981 #v1mex2 response time steps=5.16=(4.6+4.2 +5 +4.5+5.5+)/5 (fp+fp)/All=(0+0)/25 Err:none
12982 #v1mex3 response time steps=5.12=(4.6+4 +5 +5.2+6+)/5 (fp+fp)/All=(0+0)/25 Err:none
12983 #v1mex4 response time steps=4.48=(4.6+4 +4.2 +5 +4.5+4+)/5 (fp+fp)/All=(1+0)/25 Err:IDm5S0t4 <=m
ex:4 tdisp:4 =tag2
```

```
12984      4.72+ 4.08+4.72+4.99+5.5
12985      loo4gibbs-sr fn:../mineishi/text-indepdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:3
12986      1:1:2 tdisp:2 beta:0.6 PNr:.7:7:7:7:7:99 void:1.0 4 gibbs:0 mex:-1
12987      #v1mex-1 mean response time steps=4.2 (4.00+4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12988      #v1mex0 response time steps=4.2 (4.00+4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12989      #v1mex1 mean response time steps=4.16 (4.00+4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12990      #v1mex2 mean response time steps=4.16 (4.00+4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12991      #v1mex3 response time steps=4.28 (4.00+4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12992      #v1mex4 response time steps=4.16 (4.20+4.00+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
12993      4.04+4.08+4.04+4.32+4.52
12994
12995      [2] use for ICONIP2012 ?
12996      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:
12997      3:1:2 tdisp:3 beta:2. PNr:.7:7:7:7:7:99 void:1.0 4 gibbs:1 mex:-1
12998      #v1mex-1 response time steps=5.8 (5.2 +4.2+5.4+5.75+4+)/5, (fp+fp)/All=(0+0)/25 Err:none
12999      #v1mex0 response time steps=6.04 (5.25+4.2 +4.5+6.6+4+)/5, (fp+fp)/All=(0+0)/25 Err:none
13000      #v1mex1 mean response time steps=6.04 (5 +4.2 +4.8+6.75+4+)/5, (fp+fp)/All=(0+0)/25 Err:none
13001      #v1mex2 response time steps=5.68 (5.2 +4.6 +5.5+4.75+4+)/5, (fp+fp)/All=(0+0)/25 Err:none
13002      #v1mex3 response time steps=5.76 (4.5 +4 +5.25+4.25+4+)/5, (fp+fp)/All=(0+0)/25 Err:none
13003      #v1mex4 response time steps=5.52 (4.5 +4.2 +4.2+6+4+)/5, (fp+fp)/All=(0+0)/25 Err:none <==mex:4 td
isp:4 == see tag2 above
13004      4.89
13005      loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:3
13006      1:1:2 tdisp:3 beta:2. PNr:.7:7:7:7:7:99 void:1.0 4 gibbs:1 mex:-1
13007      #v1mex-1 response time steps=4.52 (4+4.2+4+4.6+4.75+)/5, (fp+fp)/All=(0+0)/25 Err:none
13008      #v1mex0 response time steps=4.68 (4.00+4.20+4.00+4.40+4.67+)/5, (fp+fp)/All=(0+0)/25 Err:none
13009      #v1mex1 response time steps=4.6 (4.00+4.20+4.00+4.40+4.60+)/5, (fp+fp)/All=(0+0)/25 Err:none
13010      #v1mex2 response time steps=4.52 (4.00+4.00+4.00+4.20+5.5+5+)/5, (fp+fp)/All=(0+0)/25 Err:none
13011      #v1mex3 response time steps=4.68 (4.00+4.80+4.20+4.20+5.25+5+)/5, (fp+fp)/All=(0+0)/25 Err:none
13012      #v1mex4 response time steps=4.24 (4.40+4.20+4.00+4.40+4.20+)/5, (fp+fp)/All=(0+0)/25 Err:none
13013      4.08+4.28+4.04+4.32+4.724
13014
13015      ##do not believe below
13016      [1] use for ICONIP2012 ?
13017      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:
13018      3:1:2 tdisp:3 beta:2. PNr:.7:7:7:7:7:99 void:1.0 4 gibbs:1 mex:-1
13019      #v1mex-1 mean response time steps=5.8 (fp+fp)/All=(0+0)/25 Err:none
13020      #v1mex0 mean response time steps=6.04 (fp+fp)/All=(0+0)/25 Err:none
13021      #v1mex1 mean response time steps=6.04 (fp+fp)/All=(0+0)/25 Err:none <== see tag1 below
13022      #v1mex2 mean response time steps=5.68 (fp+fp)/All=(0+0)/25 Err:none <==for iconip2012 use this; tag
2 mex:2 tdisp:2
13023      #v1mex3 mean response time steps=5.76 (fp+fp)/All=(0+0)/25 Err:none
13024      #v1mex4 mean response time steps=5.52 (fp+fp)/All=(0+0)/25 Err:none
13025      mean time steps
13026      #v1mex0 mean time steps:<t4>5.25<t0>4.2<t3>4.5<t1>6.6<t2>4
13027      #v1mex1 mean time steps:<t4>5.2<t0>4.2<t3>4.8<t1>6.75<t2>4
13028      #v1mex2 mean time steps:<t4>5.2<t0>4.6<t3>5.5<t1>6.4<t2>4
13029      #v1mex3 mean time steps:<t4>4.5<t0>4.2<t3>4.5<t1>6.4<t2>4
13030      #v1mex4 mean time steps:<t4>4.5<t0>4.2<t3>4.2<t1>6<t2>4
13031      4.89 4.24 4.85 5.67 4
13032      #v1mex0-4
13033
13034      pth=1.0
13035      #v1mex-1 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13036      #v1mex0 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13037      #v1mex1 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13038      #v1mex2 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13039      #v1mex3 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13040      #v1mex4 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13041      #v1mex0 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13042      #v1mex1 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13043      #v1mex2 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13044      #v1mex3 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13045      #v1mex4 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13046      #v1mex0 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13047      #v1mex1 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13048      #v1mex2 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13049      #v1mex3 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13050      #v1mex4 mean response time steps=10 (fp+fp)/All=(0+0)/25 Err:none
13051
13052      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:
13053      3:1:2 tdisp:4 beta:2. PNr:.8:8:8:8:8:99 void:1.0 4 gibbs:1 mex:-1
13054      #v1mex-1 mean response time steps=6.36 (fp+fp)/All=(0+0)/25 Err:none
13055      #v1mex0 mean response time steps=6.4 (fp+fp)/All=(0+0)/25 Err:none
13056      #v1mex1 mean response time steps=6.56 (fp+fp)/All=(0+0)/25 Err:none
13057      #v1mex2 mean response time steps=6.04 (fp+fp)/All=(0+0)/25 Err:none
13058      #v1mex3 mean response time steps=6.08 (fp+fp)/All=(0+0)/25 Err:none
13059      #v1mex4 mean response time steps=6.08 (fp+fp)/All=(0+0)/25 Err:none
```

```
13058      #v1mex4 mean response time steps=5.64 (fp+fp)/All=(0+0)/25 Err:none
13059      loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.78 ith:4 ts:4:0:3
13060      1:1:2 tdisp:4 beta:2. PNr:.7:7:7:7:7:99 void:1.0 4 gibbs:1 mex:-1
13061      #v1mex-1 mean response time steps=4.52 (fp+fp)/All=(0+0)/25 Err:none
13062      #v1mex0 mean response time steps=4.68 (fp+fp)/All=(0+0)/25 Err:none
13063      #v1mex1 mean response time steps=4.6 (fp+fp)/All=(0+0)/25 Err:none
13064      #v1mex2 mean response time steps=4.52 (fp+fp)/All=(0+0)/25 Err:none
13065      #v1mex3 mean response time steps=4.68 (fp+fp)/All=(0+0)/25 Err:none
13066      #v1mex4 mean response time steps=4.24 (fp+fp)/All=(0+0)/25 Err:none
13067      [2] Original Bayesian
13068      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:
13069      3:1:1:2 tdisp:3 beta:0.6 PNr:.7:7:7:7:7:99 void:1 gibbs:0 mex:-1
13070      #v1mex-1 mean response time steps=5.04 (fp+fp)/All=(0+0)/25 Err:none
13071      #v1mex0 mean response time steps=5.96 (fp+fp)/All=(0+0)/25 Err:none
13072      #v1mex1 mean response time steps=5.2 (fp+fp)/All=(0+1)/25 Err:IDm0s1t3 <== tag1
13073      #v1mex2 mean response time steps=5.32 (fp+fp)/All=(0+1)/25 Err:IDm1s2t2 <==use this; tag2 mex:2 tdi
sp:2
13074      #v1mex3 mean response time steps=5.12 (fp+fp)/All=(0+0)/25 Err:none
13075      #v1mex4 mean response time steps=4.6 (fp+fp)/All=(0+0)/25 Err:none
13076      men time step[]
13077      #v1mex0 mean time steps:<t4>5.2<t0>4.2<t3>4.8<t1>5<t2>4.75
13078      #v1mex1 mean time steps:<t4>4.6<t0>4.2<t3>4.6<t1>5.25<t2>6.75
13079      #v1mex2 mean time steps:<t4>4.6<t0>4.2<t3>5<t1>4.5<t2>5.5
13080      #v1mex3 mean time steps:<t4>4.6<t0>4<t3>5<t1>5.2<t2>6
13081      #v1mex4 mean time steps:<t4>4.6<t0>4<t3>4.2<t1>5<t2>5.2
13082      4.72 4.08 4.72 4.99 5.64
13083      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:1.0 ith:4 ts:4:0:
13084      3:1:1:2 tdisp:4 beta:0.6 PNr:.7:7:7:7:7:99 void:1 gibbs:0 mex:-1
13085      #v1mex-1 mean response time steps=10 (fp+fp)/All=(2+0)/25 Err:IDm5s0t0 IDm5s1t4 IDm2s3t1 IDm5s4t4
13086      #v1mex0 mean response time steps=10 (fp+fp)/All=(2+0)/25 Err:IDm2s3t1 IDm5s4t4
13087      #v1mex1 mean response time steps=10 (fp+fp)/All=(3+0)/25 Err:IDm3s1t3 IDm2s3t1 IDm5s4t4
13088      #v1mex2 mean response time steps=10 (fp+fp)/All=(4+0)/25 Err:IDm5s1t0 IDm5s1t4 IDm1s2t2 IDm5s4t4
13089      #v1mex3 mean response time steps=10 (fp+fp)/All=(2+0)/25 Err:IDm2s3t1 IDm5s1t4 IDm2s3t1
13090      #v1mex4 mean response time steps=10 (fp+fp)/All=(3+0)/25 Err:IDm5s0t0 IDm5s1t4 IDm2s3t1
13091      1:1:2 tdisp:4 beta:0.6 PNr:.7:7:7:7:7:99 void:1 gibbs:0 mex:-1
13092      #v1mex-1 mean response time steps=4.2 (fp+fp)/All=(0+0)/25 Err:none
13093      #v1mex0 mean response time steps=4.2 (fp+fp)/All=(0+0)/25 Err:none
13094      #v1mex1 mean response time steps=4.16 (fp+fp)/All=(0+0)/25 Err:none
13095      #v1mex2 mean response time steps=4.16 (fp+fp)/All=(0+0)/25 Err:none
13096      #v1mex3 mean response time steps=4.28 (fp+fp)/All=(0+0)/25 Err:none
13097      #v1mex4 mean response time steps=4.16 (fp+fp)/All=(0+0)/25 Err:none
13098      #####
13099      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:
13100      3:1:1:2 tdisp:4 beta:0.6 PNr:.7 void:1 gibbs:0 mex:-1
13101      #v1mex-1 mean response time steps=4.72 (fp+fp)/All=(0+0)/25 Err:none
13102      #v1mex0 mean response time steps=4.84 (fp+fp)/All=(0+0)/25 Err:none
13103      #v1mex1 mean response time steps=4.84 (fp+fp)/All=(0+2)/25 Err:IDm0s1t3 IDm2s1t4
13104      #v1mex2 mean response time steps=4.92 (fp+fp)/All=(0+1)/25 Err:IDm1s2t2
13105      #v1mex3 mean response time steps=4.56 (fp+fp)/All=(0+1)/25 Err:IDm2s3t4
13106      #v1mex4 mean response time steps=4.6 (fp+fp)/All=(0+0)/25 Err:none
13107
13108      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ith:4 ts:4:0:
13109      3:1:1:2 tdisp:4 beta:0.6 PNr:.8 void:1 gibbs:0 mex:-1
13110      #v1mex-1 mean response time steps=4.72 (fp+fp)/All=(0+0)/25 Err:none
13111      #v1mex0 mean response time steps=4.8 (fp+fp)/All=(0+1)/25 Err:IDm2s1t4
13112      #v1mex1 mean response time steps=5.2 (fp+fp)/All=(1+0)/25 Err:IDm1s2t2
13113      #v1mex2 mean response time steps=4.88 (fp+fp)/All=(0+1)/25 Err:IDm2s3t4
13114      #v1mex3 mean response time steps=4.44 (fp+fp)/All=(0+0)/25 Err:none
13115      pth:1.0
13116      #v1mex-1 mean response time steps=10 (fp+fp)/All=(4+0)/25 Err:IDm5s0t0 IDm3s1t4 IDm2s3t1
13117      #v1mex0 mean response time steps=10 (fp+fp)/All=(3+0)/25 Err:IDm3s1t0 IDm3s1t4 IDm2s3t1
13118      #v1mex1 mean response time steps=10 (fp+fp)/All=(3+0)/25 Err:IDm3s1t3 IDm3s1t4 IDm2s3t1
13119      #v1mex2 mean response time steps=10 (fp+fp)/All=(3+0)/25 Err:IDm5s1t0 IDm3s1t4 IDm1s2t2
13120      #v1mex3 mean response time steps=10 (fp+fp)/All=(2+0)/25 Err:IDm5s1t0 IDm2s3t1
13121      #v1mex4 mean response time steps=10 (fp+fp)/All=(4+0)/25 Err:IDm5s0t0 IDm5s1t0 IDm2s3t1
13122
13123      loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ts:4:0:3:1:2
13124      tdisp:4 beta:0.6 PNr:.8 void:1 gibbs:0 mex:-1
13125      #v1mex-1 mean response time steps=3.52 (fp+fp)/All=(0+0)/25 Err:none
13126      #v1mex0 mean response time steps=3.6 (fp+fp)/All=(0+0)/25 Err:none
13127      #v1mex1 mean response time steps=3.56 (fp+fp)/All=(0+2)/25 Err:IDm0s1t3 IDm2s1t4
13128      #v1mex2 mean response time steps=4.08 (fp+fp)/All=(1+0)/25 Err:IDm1s2t2
13129      #v1mex3 mean response time steps=3.52 (fp+fp)/All=(0+1)/25 Err:IDm2s3t4
13130      #v1mex4 mean response time steps=3.56 (fp+fp)/All=(0+0)/25 Err:none
13131
13132      13131
```



```
13132 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.68 ith:4 ts:4:0:
3:1:2 tdisp:4 beta:1. PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13133 #v1mex:1 mean response time steps=7.04 (fp+fp)/All=(0+0)/25 Err:none
13134 #v1mex0 mean response time steps=7.12 (fp+fp)/All=(0+0)/25 Err:none
13135 #v1mex1 mean response time steps=7.4 (fp+fp)/All=(0+0)/25 Err:none
13136 #v1mex2 mean response time steps=7.36 (fp+fp)/All=(0+0)/25 Err:none
13137 #v1mex3 mean response time steps=6.8 (fp+fp)/All=(0+0)/25 Err:none
13138 #v1mex4 mean response time steps=6.84 (fp+fp)/All=(0+0)/25 Err:none
13139
13140
13141 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.65 ith:4 ts:4:0:
3:1:2 tdisp:4 beta:1. PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13142 #v1mex:1 mean response time steps=7.52 (fp+fp)/All=(0+0)/25 Err:none
13143 #v1mex0 mean response time steps=7.36 (fp+fp)/All=(0+0)/25 Err:none
13144 #v1mex1 mean response time steps=7.68 (fp+fp)/All=(0+0)/25 Err:none
13145 #v1mex2 mean response time steps=7.8 (fp+fp)/All=(0+0)/25 Err:none
13146 #v1mex3 mean response time steps=7.28 (fp+fp)/All=(0+0)/25 Err:none
13147 #v1mex4 mean response time steps=7.44 (fp+fp)/All=(0+0)/25 Err:none
13148
13149 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.65 ith:4 ts:4:0:
3:1:2 tdisp:4 beta:1. PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13150 #v1mex:1 mean response time steps=7.56 (fp+fp)/All=(0+0)/25 Err:none
13151 #v1mex0 mean response time steps=7.6 (fp+fp)/All=(0+0)/25 Err:none
13152 #v1mex1 mean response time steps=7.88 (fp+fp)/All=(0+0)/25 Err:none
13153 #v1mex2 mean response time steps=7.92 (fp+fp)/All=(0+0)/25 Err:none
13154 #v1mex3 mean response time steps=7.44 (fp+fp)/All=(0+0)/25 Err:none
13155 #v1mex4 mean response time steps=7.76 (fp+fp)/All=(0+0)/25 Err:none
13156
13157 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.61 ith:4 ts:4:0:
3:1:2 tdisp:4 beta:1. PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13158 #v1mex:1 mean response time steps=7.68 (fp+fp)/All=(0+0)/25 Err:none
13159 #v1mex0 mean response time steps=7.88 (fp+fp)/All=(0+0)/25 Err:none
13160 #v1mex1 mean response time steps=7.88 (fp+fp)/All=(0+0)/25 Err:none
13161 #v1mex2 mean response time steps=7.96 (fp+fp)/All=(0+0)/25 Err:none
13162 #v1mex3 mean response time steps=7.72 (fp+fp)/All=(0+0)/25 Err:none
13163 #v1mex4 mean response time steps=7.72 (fp+fp)/All=(0+0)/25 Err:none
13164
13165
13166 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.55 ith:4 ts:4:0:
3:1:2 tdisp:4 beta:1. PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13167 #mean response time steps=7.64 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13168 #mean response time steps=7.84 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13169 #mean response time steps=7.84 (fp+fp)/All=(0+0)/25 v1mex1 Err:
13170 #mean response time steps=7.96 (fp+fp)/All=(0+0)/25 v1mex2 Err:
13171 #mean response time steps=7.72 (fp+fp)/All=(0+0)/25 v1mex3 Err:
13172 #mean response time steps=7.72 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13173
13174 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.51
1:1:2 tdisp:4 beta:5 PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13175 #mean response time steps=8.12 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13176 #mean response time steps=7.88 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13177 #mean response time steps=7.88 (fp+fp)/All=(0+0)/25 v1mex1 Err:
13178 #mean response time steps=8.24 (fp+fp)/All=(0+0)/25 v1mex2 Err:
13179 #mean response time steps=7.84 (fp+fp)/All=(0+0)/25 v1mex3 Err:
13180 #mean response time steps=7.76 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13181
13182 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.45 ith:4 ts:4:0:
3:1:2 tdisp:4 beta:1. PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13183 #mean response time steps=8.92 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13184 #mean response time steps=8.2 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13185 #mean response time steps=8.12 (fp+fp)/All=(0+0)/25 v1mex1 Err:
13186 #mean response time steps=8.56 (fp+fp)/All=(0+0)/25 v1mex2 Err:
13187 #mean response time steps=7.84 (fp+fp)/All=(0+0)/25 v1mex3 Err:
13188 #mean response time steps=8.16 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13189
13190 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.5 ith:4 ts:4:0:3
1:1:2 tdisp:4 beta:4 PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13192 #mean response time steps=9.28 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13193 #mean response time steps=8.84 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13194 #mean response time steps=9.08 (fp+fp)/All=(0+0)/25 v1mex1 Err:
13195 #mean response time steps=9.16 (fp+fp)/All=(0+0)/25 v1mex2 Err:
13196 #mean response time steps=9.24 (fp+fp)/All=(0+0)/25 v1mex3 Err:
13197 #mean response time steps=8.64 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13198
13199 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.3 ts:4:0:3:1:2 t
disp:4 beta:1 PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13201 #mean response time steps=10 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13202 #mean response time steps=10 (fp+fp)/All=(0+0)/25 v1mex0 Err: same for all mex0:1,2,3,4
13203 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.55 ts:4:0:3:1:2
tdisp:4 beta:4 PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
```

```
13204 #mean response time steps=8.92 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13205 #mean response time steps=8.56 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13206 #mean response time steps=9.28 (fp+fp)/All=(0+0)/25 v1mex1 Err:
13207 #mean response time steps=8.92 (fp+fp)/All=(0+0)/25 v1mex2 Err:
13208 #mean response time steps=8.92 (fp+fp)/All=(0+0)/25 v1mex3 Err:
13209 #mean response time steps=8.92 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13210 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.3 ts:4:0:3:1:2 t
disp:4 beta:2 PNR:7:7:7:7:7:99 void:1:0.4 gibbs:1 mex:1
13211 #mean response time steps=8.2 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13212
13213
13214 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ts:4:0:3:1:2
tdisp:4 beta:0.6 PNR:8 void:1 gibbs:0 mex:1
13215 #mean response time steps=3.48 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13216 #mean response time steps=3.4 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13217 #mean response time steps=3.52 (fp+fp)/All=(0+2)/25 v1mex1 Err:IDm0s1t3 IDm2s1t4
13218 #mean response time steps=3.04 (fp+fp)/All=(1+0)/25 v1mex2 Err:IDm1s2t2
13219 #mean response time steps=3.44 (fp+fp)/All=(0+1)/25 v1mex3 Err:IDm2s3t4
13220 #mean response time steps=3.52 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13221 保守的に最後(T_th=10)に脱線するためpth=0.99にしてみました
13222 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.99 ts:4:0:3:1:2
tdisp:4 beta:0.6 PNR:8 void:1 gibbs:0 mex:1
13223 上のv1mex1のErrを除くため.PNR:8:1:8:8:99:とすると下の様になりダメ!
13224 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.94 ts:4:0:3:1:2
tdisp:4 beta:0.6 PNR:8:1:8:8:99: void:1 gibbs:0 mex:1
13225 #mean response time steps=4.56 (fp+fp)/All=(1+0)/25 v1mex:1 Err:IDm5s1t3
13226 #mean response time steps=4.12 (fp+fp)/All=(1+0)/25 v1mex0 Err:IDm5s1t3
13227 #mean response time steps=4.76 (fp+fp)/All=(0+0)/25 v1mex1 Err:IDm5s1t3 IDm1s2t2
13228 #mean response time steps=5.08 (fp+fp)/All=(2+0)/25 v1mex2 Err:IDm5s1t3 IDm1s2t2
13229 #mean response time steps=4.72 (fp+fp)/All=(1+0)/25 v1mex3 Err:IDm5s1t3
13230 #mean response time steps=4.28 (fp+fp)/All=(1+0)/25 v1mex4 Err:IDm5s1t3
13231
13232 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.94 ts:4:0:3:1:2 t
disp:4 beta:0.6 PNR:8 void:1 gibbs:0 mex:1
13233 #mean response time steps=3.48 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13234 #mean response time steps=3.4 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13235 #mean response time steps=3.48 (fp+fp)/All=(0+2)/25 v1mex1 Err:IDm0s1t3 IDm2s1t4
13236 #mean response time steps=3.76 (fp+fp)/All=(1+0)/25 v1mex2 Err:IDm1s2t3
13237 #mean response time steps=3.28 (fp+fp)/All=(0+1)/25 v1mex3 Err:IDm2s3t4
13238 #mean response time steps=3.52 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13239
13240
13241
13242
13243 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.8 ts:4:0:3:1:2 t
disp:4 beta:6 PNR:8 void:1 gibbs:1 mex:1
13244 loo4gibbs-sr c t242 if(s==mex) continue;//do not use speech s=mex(void).//check
13245 v1m1s1t3*1.16 1:49 1:48 0:36 1:41 1:43 0:39 0:35 1:36 0:134 <==mex:-1
13246 v1m1s1t3*1.16 0:16 0:16 0:16 1:20 1:23 0:22 0:23 0:22 0:21 0:22 <==mex:0 ??
13247 //comment-out t242 if(s==mex) continue;//do not use speech s=mex(void).//check
now 2012.06.06
13248 mex:1 v1 m2s1t4*2:16 0:16 0:16 1:30 0:26 1:33 1:38 1:41 v1 m5s1t4*2:16 1:44 1:44 0:26 1:30 0:22 0:1
8 0:15
13249 mex:-1 v1 m2s1t4*2:16 0:10 0:09 1:12 0:11 1:17 1:17 1:21 v1 m5s1t4*2:16 0:05 0:05 0:05 0:05 0:05 0:0
5 0:05 v1*m1s1t4*2:16 1:61 1:61 1:65 1:63 0:54 1:57 0:50
13250 ==>
13251 [1]loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.94 ts:4:0:3:1
:2 tdisp:4 beta:0.6 PNR:8 void:1 gibbs:0 mex:1
13252 #mean response time steps=3.48 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13253 #mean response time steps=3.4 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13254 #mean response time steps=3.48 (fp+fp)/All=(0+2)/25 v1mex1 Err:m0s1t3 m2s1t4
13255 #mean response time steps=3.76 (fp+fp)/All=(1+0)/25 v1mex2 Err:m1s2t3
13256 #mean response time steps=3.28 (fp+fp)/All=(0+1)/25 v1mex3 Err:m2s3t4
13257 #mean response time steps=3.52 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13258 #mean response time steps=7 (fp+fp)/All=(1+0)/25 v1mex:1 Err:m4s1t3
13259 #mean response time steps=7 (fp+fp)/All=(2+0)/25 v1mex0 Err:m3s0t1 m4s1t3
13260 #mean response time steps=7 (fp+fp)/All=(2+0)/25 v1mex1 Err:m4s1t3 m2s1t4
13261 #mean response time steps=7 (fp+fp)/All=(2+0)/25 v1mex2 Err:m4s1t3 m1s2t3
13262 #mean response time steps=7 (fp+fp)/All=(1+0)/25 v1mex3 Err:m4s1t3
13263 #mean response time steps=7 (fp+fp)/All=(3+0)/25 v1mex4 Err:m5s1t2 m0s4t1 m0s4t2
13264
13265 [3]loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.7 ts:4:0:3:1:
2 tdisp:4 beta:6 PNR:7 void:1 gibbs:1 mex:1
13267 #mean response time steps=5.56 (fp+fp)/All=(0+0)/25 v1mex:1 Err:
13268 #mean response time steps=5.56 (fp+fp)/All=(0+0)/25 v1mex0 Err:
13269 #mean response time steps=5.32 (fp+fp)/All=(1+1)/25 v1mex1 Err:m0s1t3 m0s1t4
13270 #mean response time steps=5.44 (fp+fp)/All=(1+0)/25 v1mex2 Err:m3s1t3 m2s1t4
13271 #mean response time steps=5.56 (fp+fp)/All=(2+0)/25 v1mex3 Err:m3s1t3 m2s1t4
13272 #mean response time steps=6.04 (fp+fp)/All=(0+0)/25 v1mex4 Err:
13273 #mean response time steps=7.84 (fp+fp)/All=(0+0)/25 v1mex:1 Err: <==ntxi:10:10
13274 #mean response time steps=7.84 (fp+fp)/All=(0+0)/25 v1mex0 Err:
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13275 #mean response time steps=7.48 (Fp+fp)/All=(0+1)/25 vlmex1 Err:m0slt4
13276 #mean response time steps=7.6 (Fp+fp)/All=(0+0)/25 vlmex2 Err:
13277 #mean response time steps=7.84 (Fp+fp)/All=(1+0)/25 vlmex3 Err:m2s3t4
13278 #mean response time steps=8.56 (Fp+fp)/All=(0+0)/25 vlmex4 Err:
13279 == pth: .8
13280 #mean response time steps=10 (Fp+fp)/All=(1+0)/25 vlmex1 Err:m2slt4
13281 v1 m2slt4*2:16 0:08 0:14 1:28 0:25 1:32 1:37 1:40 1:42 0:39 0:36>v1 m5slt4*2:16 0:05 1:19 0:15 1
:21 0:17 0:14 0:13 0:11 1:14 0:13
13282 #mean response time steps=10 (Fp+fp)/All=(1+0)/25 vlmex3 Err:m2s3t4
13283 v1 m2s3t4*2:16 0:15 1:40 1:50 1:54 1:57 0:49 1:52 1:54 0:49 0:46
13284 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.8 ts:4:0:3:1:2 t
disp:4 beta: .6 PNr: .9 void:1 gibbs:1 mex:1
13285 #mean response time steps=10 (Fp+fp)/All=(0+0)/25 vlmex:1 Err:
13286 #mean response time steps=10 (Fp+fp)/All=(0+0)/25 vlmex0 Err:
13287 #mean response time steps=10 (Fp+fp)/All=(1+0)/25 vlmex1 Err:m2slt4 v1 m2slt4*2:16 0:16 0:16 1:29 0:
25 1:32 1:36 1:39 1:42 0:39 0:35
13288 #mean response time steps=10 (Fp+fp)/All=(0+0)/25 vlmex2 Err:
13289 #mean response time steps=10 (Fp+fp)/All=(0+0)/25 vlmex3 Err:
13290
13291
13292
13293
13294
13295 2012.06.04-
13296 以下の[1],[2],[3]が理論に合う結果？
13297 ・[1]のサイズでは、識別しやすい値に達すると全て識別できるが、1人ずつ除くと誤認識する。そこでしきい値を
大きくして
13297 最後、最大値で識別するようにすると、[2]の誤識別が起こる。(ntxi:10:8にするとok?)[3]のGibbsではうまく
いつている。
13298 bag of loo4gibbs-sr for void:0
13299 [1]loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.94 ts:4:0:3:1:
2 tdisp:4 beta:0.6 PNr: .8 void:0 gibbs:0 mex:1-
13300 (cf. ICONFUP2011? loo4bayes-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0
.95 ts:4:0:3:1:2 tdisp:4)
13301 #mean response time steps=3.28 (Fp+fp)/All=(0+0)/25 v0mex-1
13302 #mean response time steps=3.56 (Fp+fp)/All=(0+3)/25 v0mex0
13303 #mean response time steps=3.8 (Fp+fp)/All=(0+2)/25 v0mex1
13304 #mean response time steps=3.72 (Fp+fp)/All=(0+2)/25 v0mex2
13305 #mean response time steps=3.48 (Fp+fp)/All=(0+1)/25 v0mex3
13306 #mean response time steps=4 (Fp+fp)/All=(0+2)/25 v0mex4
13307 [2]loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.96 ts:4:0:3:1:
2 tdisp:4 beta:0.6 PNr: .8 void:0 gibbs:0 mex:1-
13308 #mean response time steps=7 (Fp+fp)/All=(1+0)/25 v0mex-1 ==>m4slt3 ==> v0*misit3*1:20 1:73 1:92 0:60
1:93 1:94 1:94 0:41
13309 #mean response time steps=7 (Fp+fp)/All=(0+0)/25 v0mex1
13310 #mean response time steps=7 (Fp+fp)/All=(0+0)/25 v0mex2
13311 #mean response time steps=7 (Fp+fp)/All=(0+0)/25 v0mex3
13312 #mean response time steps=7 (Fp+fp)/All=(0+0)/25 v0mex4
13313 [3]loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.8 ts:4:0:3:1:2
tdisp:4 beta: .6 PNr: .8 void:0 gibbs:1 mex:1-
13314 #mean response time steps=6.28 (Fp+fp)/All=(0+0)/25 v0mex0
13315 #mean response time steps=7 (Fp+fp)/All=(0+0)/25 v0mex1
13316 #mean response time steps=6.76 (Fp+fp)/All=(0+0)/25 v0mex2
13317 #mean response time steps=6.76 (Fp+fp)/All=(0+0)/25 v0mex3
13318 #mean response time steps=6.76 (Fp+fp)/All=(0+0)/25 v0mex4
13319
13320 [1,] loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.94 ts:4:0:3:1
:2 tdisp:4 beta:0.6 PNr: .8 void:0 gibbs:0 mex:1-
13321 #mean response time steps=1.8 (Fp+fp)/All=(0+0)/25 v0mex-1
13322 #mean response time steps=2.96 (Fp+fp)/All=(0+0)/25 v0mex0
13323 #mean response time steps=2.48 (Fp+fp)/All=(0+2)/25 v0mex1
13324 #mean response time steps=2.92 (Fp+fp)/All=(0+0)/25 v0mex2
13325 #mean response time steps=2.56 (Fp+fp)/All=(0+0)/25 v0mex3
13326 #mean response time steps=2.48 (Fp+fp)/All=(0+1)/25 v0mex4
13327 [3]loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.8 ts:4:0:3:1:2
tdisp:4 beta: .6 PNr: .8 void:0 gibbs:1 mex:1-
13328 #mean response time steps=5.08 (Fp+fp)/All=(0+0)/25 v0mex-1
13329 #mean response time steps=5.8 (Fp+fp)/All=(0+0)/25 v0mex0
13330 #mean response time steps=4.84 (Fp+fp)/All=(0+0)/25 v0mex1
13331 #mean response time steps=6.04 (Fp+fp)/All=(0+0)/25 v0mex2
13332 #mean response time steps=4.6 (Fp+fp)/All=(0+0)/25 v0mex3
13333 #mean response time steps=4.6 (Fp+fp)/All=(0+0)/25 v0mex4
13334
13335
```

```
13343 #mean response time steps=4.84 (Fp+fp)/All=(0+1)/25 v0mex3
13344 #mean response time steps=5.44 (Fp+fp)/All=(0+1)/25 v0mex4
13345 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.7 ts:4:0:3:1:2 t
isp:4 beta: .6 PNr: .8 void:1 gibbs:1 mex:0
13346 #mean response time steps=5.8 (Fp+fp)/All=(0+0)/25 vlmex-1
13347 #mean response time steps=6.04 (Fp+fp)/All=(1+0)/25 vlmex0
13348 #mean response time steps=6.52 (Fp+fp)/All=(1+0)/25 vlmex1
13349 #mean response time steps=6.04 (Fp+fp)/All=(1+0)/25 vlmex2
13350 #mean response time steps=6.12 (Fp+fp)/All=(1+1)/25 vlmex3
13351 #mean response time steps=6.04 (Fp+fp)/All=(0+0)/25 vlmex4
13352
13353
13354 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.6 ts:4:0:3:1:2 td
isp:4 beta: .6 PNr: .8 void:0 gibbs:1 mex:1-
13355 #mean response time steps=4.84 (Fp+fp)/All=(0+0)/25 vlmex-1
13356
13357 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.7 ts:4:0:3:1:2 td
isp:4 beta: .6 PNr: .8 void:1 gibbs:1 mex:1-
13358 #mean response time steps=5.8 (Fp+fp)/All=(0+0)/25 vlmex-1
13359 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.96 ts:4:0:3:1:2 t
disp:4 beta:0.6 PNr: .8 void:0 gibbs:0 mex:1-
13360 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.96 ts:4:0:3:1:2 t
disp:4 beta:0.6 PNr: .8 void:1 gibbs:0 mex:1-
13361 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.98 ts:4:0:3:1:2 t
disp:4 beta:0.6 PNr: .5 void:0 gibbs:0 mex:1-
13362 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.97 ts:4:0:3:1:2 t
disp:4 beta:0.6 PNr: .5 void:0 gibbs:0 mex:1-
13363 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.8 ts:4:0:3:1:2 td
isp:4 beta: .6 PNr: .8 void:0 gibbs:1 mex:1-
13364 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.7 ts:4:0:3:1:2 td
isp:4 beta: .6 PNr: .8 void:1 gibbs:1 mex:1-
13365
13366 ## donot believe below
13367
13368 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNr: .9
13369 Err:Case21:[3]<tl> ID(5) !=s(1),mex0
13370 Err:Case21:[4]<t2> ID(2) !=s(5),mex1
13371 #vlmex0:Case21 Identification Error (Fp+fp)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5
:0.000(0+0)/5:==>(1+0)/25
13372 #vlmex1:Case21 Identification Error (Fp+fp)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5
:0.200(1+0)/5:==>(1+0)/25
13373
13374 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNr: .95
13375 Err:Case21:[3]<tl> ID(5) !=s(1),mex0
13376 Err:Case21:[4]<t2> ID(2) !=s(5),mex1
13377 Err:Case21:[3]<tl> ID(5) !=s(1),mex2
13378 Err:Case21:[3]<tl> ID(5) !=s(1),mex3
13379 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNr: .9
13380 Err:Case21:[3]<tl> ID(5) !=s(1),mex0
13381 Err:Case21:[4]<t2> ID(2) !=s(5),mex1
13382 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNr: .2
13383 Err:Case21:[1]<t0> ID(1) !=s(5),mex0
13384 Err:Case21:[2]<t3> ID(1) !=s(5),mex0
13385 Err:Case21:[4]<t2> ID(4) !=s(5),mex0
13386 Err:Case21:[3]<tl> ID(4) !=s(5),mex1
13387 Err:Case21:[4]<t2> ID(2) !=s(5),mex1
13388 ...
13389 Err:Case21:[3]<tl> ID(1) !=s(5),mex4
13390 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNr: .3
13391 Err:Case21:[1]<t0> ID(3) !=s(5),mex0
13392 Err:Case21:[2]<t3> ID(2) !=s(5),mex1
13393 Err:Case21:[3]<tl> ID(4) !=s(5),mex1
13394 Err:Case21:[4]<t2> ID(2) !=s(5),mex1
13395 Err:Case21:[0]<t4> ID(3) !=s(5),mex2
13396 Err:Case21:[2]<t3> ID(1) !=s(5),mex2
13397 Err:Case21:[3]<tl> ID(3) !=s(5),mex2
13398 Err:Case21:[1]<t0> ID(2) !=s(5),mex3
13399 Err:Case21:[4]<t2> ID(2) !=s(5),mex3
13400 Err:Case21:[3]<tl> ID(1) !=s(5),mex4
13401 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNr: .4
13402 Err:Case21:[2]<t3> ID(2) !=s(5),mex1
13403 Err:Case21:[3]<tl> ID(0) !=s(5),mex1
13404 Err:Case21:[4]<t2> ID(2) !=s(5),mex1
13405 Err:Case21:[2]<t3> ID(1) !=s(5),mex2
13406 Err:Case21:[3]<tl> ID(3) !=s(5),mex2
13407 Err:Case21:[1]<t0> ID(2) !=s(5),mex3
```

```
13408 Err:Case21:[3]<t1> ID(2)!=ns(5),mex3
13409 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13410 Err:Case21:[3]<t1> ID(1)!=ns(5),mex4
13411 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNR:.5
13412 Err:Case21:[3]<t1> ID(5)!=s(1),mex0
13413 Err:Case21:[4]<t2> ID(2)!=ns(5),mex1
13414 Err:Case21:[2]<t3> ID(1)!=ns(5),mex3
13415 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13416 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNR:.6
13417 Err:Case21:[3]<t1> ID(5)!=s(1),mex0
13418 Err:Case21:[4]<t2> ID(2)!=ns(5),mex1
13419 Err:Case21:[3]<t1> ID(3)!=ns(5),mex2
13420 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13421 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNR:.7
13422 Err:Case21:[3]<t1> ID(5)!=s(1),mex0
13423 Err:Case21:[4]<t2> ID(2)!=ns(5),mex1
13424 Err:Case21:[3]<t1> ID(1)!=ns(5),mex2
13425 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13426 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNR:.8
13427 Err:Case21:[3]<t1> ID(5)!=s(1),mex0
13428 Err:Case21:[4]<t2> ID(2)!=ns(5),mex1
13429 Err:Case21:[3]<t1> ID(1)!=ns(5),mex2
13430 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13431
13432 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:2 gibbs:1 mex:-1 tdisp:4 beta:0.6 PNR:.8
13433 Err:Case21:[2]<t3> ID(5)!=s(1),mex0
13434 Err:Case21:[3]<t1> ID(5)!=s(1),mex0
13435 Err:Case21:[4]<t2> ID(2)!=ns(5),mex1
13436 Err:Case21:[2]<t3> ID(2)!=ns(5),mex3
13437 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13438
13439 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:1:2
void:1 gibbs:1 mex:4 tdisp:4 beta:0.6 PNR:.5
13440 Err:Case21:[3]<t1> ID(5)!=s(1),mex0
13441 Err:Case21:[4]<t2> ID(2)!=ns(5),mex1
13442 Err:Case21:[2]<t3> ID(1)!=ns(5),mex2
13443 Err:Case21:[4]<t2> ID(2)!=ns(5),mex3
13444 #NG loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.97 ts:4:0:3:
1:2 void:1 gibbs:1 mex:0 tdisp:4 beta:0.6 PNR:.3
13445
13446
13447
13448
13449
13450 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.95:.95:.95:.9
5 ts:4:0:3:1:2 void:2 gibbs:0 mex:-1 tdisp:4 beta:.7 PNR:.3
13451 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.95:.95:.95:.95:.
95 ts:4:0:3:1:2 void:2 gibbs:0 mex:-1 tdisp:4 beta:.7 PNR:.3
13452
13453
13454
13455 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:5 pmin:0.05 pth:.54:.6:.6:.75:.58
ts:4:0:3:1:2 tdisp:4 void:2 beta:.5 PNR:.4 mex:-1
13456 #v2mex-1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/
5:0.000(0+0)/5:==>(0+0)/25
13457 #v2mex0:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5
:0.000(0+0)/5:==>(0+0)/25
13458 #v2mex1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5
:0.000(0+0)/5:==>(1+0)/25
13459 #v2mex2:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5
:0.000(0+0)/5:==>(1+0)/25
13460 #v2mex3:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5
:0.200(1+0)/5:==>(2+0)/25
13461 #v2mex4:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5
:0.000(0+0)/5:==>(1+0)/25
13462 void:0
13463 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.54:.6:.6:.84:.7
1 ts:4:0:3:1:2 tdisp:4 void:0 beta:.7 PNR:.3 mex:-1
13464 #v0mex-1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/
5:0.000(0+0)/5:==>(0+0)/25
13465
13466 2012.02.20
13467 (L)認識率の計算を修正した？
13468 ##[1] 例 text-independent by gibbs
13469 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.05 pth:.54:.6:.6:.81:.7
1 ts:4:0:3:1:2 tdisp:4 void:2 beta:.7 PNR:.3 mex:-1
13470 #OK#v2mex-1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)
/5:0.000(0+0)/5:==>(0+0)/25
```

```
0)/5:0.000(0+0)/5:==>(0+0)/25
13471 #OK#v2mex0:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)
/5:0.000(0+0)/5:==>(0+0)/25
13472 #NG#v2mex1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)
/5:0.200(1+0)/5:==>(2+0)/25
13473 #NG#v2mex2:Case21 Identification Error(FP+FP)/Total:0.200(1+0)/5:0.000(0+0)/5:0.200(1+0)/5:0.000(0+0)
/5:0.200(1+0)/5:==>(3+0)/25
13474 #NG#v2mex3:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)
/5:0.200(1+0)/5:==>(2+0)/25
13475 #OK#v2mex4:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)
/5:0.000(0+0)/5:==>(0+0)/25
13476 ##[2] 例 text-independent by gibbs
13477 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98:0.98:0.98:0.98:0.98:0.98:0.98:0.96
ts:4:0:3:1:2 tdisp:4 void:2 gibbs:0 PNR:.3 mex:-1
13478 #OK#v2mex-1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)
/5:0.000(0+0)/5:==>(0+0)/25
13479 #NG#v2mex0:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5:0.000(0+0)
/5:0.400(1+1)/5:==>(2+1)/25
13480 #NG#v2mex1:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.400(1+1)
/5:0.400(1+1)/5:==>(2+2)/25
13481 #NG#v2mex2:Case21 Identification Error(FP+FP)/Total:0.400(1+1)/5:0.000(0+0)/5:0.200(1+0)/5:0.200(1+0)
/5:0.200(1+0)/5:==>(4+1)/25
13482 #NG#v2mex3:Case21 Identification Error(FP+FP)/Total:0.200(1+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.400(1+1)
/5:0.400(1+1)/5:==>(3+2)/25
13483 #NG#v2mex4:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.400(1+1)
/5:0.000(0+0)/5:==>(1+1)/25
13484 ##[3] 例 text-dependent by gibbs
13485 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:5 ntxi:10:10 pmin:0.05 pth:.54:.6:.6:.81:.71
ts:4:0:3:1:2 tdisp:4 void:2 beta:.7 PNR:.3 mex:-1
13486 ##[4] 例 text-dependent by gibbs
13487 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:5 ntxi:10:7 pmin:0.05 pth:0.98:0.98:0.98:0.98:0.9
8:0.96 ts:4:0:3:1:2 tdisp:4 void:2 gibbs:0 PNR:.3 mex:-1
13488 #NG#v2mex2:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)/5:0.000(0+0)
/5:0.200(1+0)/5:==>(1+0)/25
13489 #NG#v2mex4:Case21 Identification Error(FP+FP)/Total:0.000(0+0)/5:0.000(0+0)/5:0.200(1+0)/5:0.000(0+0)
/5:0.000(0+0)/5:==>(1+0)/25
13490
13491 2012.02.15a
13492 (1) loo4gibbs-srにオプションgibbs:<mex>を使うようにした。
13493 (必要無いところではプログラムの違いが出ないように。)
```

gibbs:<mex> gibbs:1でギブス分布, gibbs:0で従来のベイズ推定。

2012.02.15

(1) オプション PNR:<alpha>を追加

PNR:<alpha> CAN20の出力の正例に対する平均meanPと負例に対する平均meanNに対し

CAN20の1と-1を判定するしきい値yth[m]tを,

yth[m]t=alpha*meanP[m]t+(1-alpha)*meanN[m]t;

で設定する

注意) オプション ntxi:<ntxi>の、<ntxi>は Case1と Case2の認識切りステップ数。

(2) できるだけ速く間違いの無い話者識別法として、まず、Case1 でP(False Positive; 間違って

1を出して識別するを無くす、するとCase1ではTP(True Positive; 正しく1を出す)か、指定

ステップ数までに識別できないこととなる、そこで後者の場合、認識切りステップ数<ntxi>において

Case2で識別することとする、これにより、より速く間違いのない話者識別ができる、するど、

loo4gibbs-sr ではpth, beta, PNRを調整してmex:-1,mex:0,mex:1,mex:2,mex:3,mex:4に

loo4bayes-sr ではpth, PNRを調整してもまだできていない、

(批判:初めからCase2だけを考えればいいのでは?いや、Case2だけでは遅い、ステップ数を計算せよ)

##[1] 例 OK for text-independent by gibbs for all mex:-1,mex:0,mex:1,mex:2,mex:3,mex:4

loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:5 pmin:0.05 pth:.54:.6:.6:.75:.58

ts:4:0:3:1:2 tdisp:4 void:2 beta:.5 PNR:.3 mex:-1

##[2] 例 NG for text-independent by gibbs for all mex:-1,mex:0,mex:1,mex:2,mex:3,mex:4

loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98:0.98:0.98:0.98:0.98:0.98:0.96

ts:4:0:3:1:2 tdisp:4 void:2 PNR:.3 mex:-1

#####

13516 2012.02.14

13517

(1) ギブス分布を使う話者識別プログラム(loo4gibbs-sr.c)を作成し、単純ベイズを使う話者識別プログラム

(loo4bayes-sr.c)

も同等の機能を持つように改変した。

(2) 次のオプション void:<n> mex:<m>, pth:<pth1><pth2>:... を追加した

13520

13521 void:0 void識別器を使わない

13522 void:1 void識別器を使う、初期確率はすべての学習機械で均一。

13523 void:2 void識別器を使う、初期確率はvoidの学習機械が1(=1-pmin)、他の学習機械は0(pmin=0.01?)

13524 mex:<m> 学習機械<m>を識別に用いない、m=-1のときはすべて使う。

13525 pth:<pth1><pth2>... キヤスト毎に認識のしきい値を設定する。

13526

(2) text-indepdata.datに対し、loo4gibbs-sr でvoid:1で識別率100%, mex:-1で識別率100%、mex:4で1個間違いとして

きた。

13528 text-indepdata.datに対し、loo4bayes-srではvoid:0,1,2 のいづれも、mex:-1で識別率100%, mex:4でこれ

より

13529 良い識別率を達成するパラメタは見つからない(見つかるかもしれないが...).

13530

```
13531 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.03 pth:.64:.6:.91:.76
ts:4:0:3:1:2 tdisp:4 void:2 beta:1 mex:3
13532 ###[1] text-independent by gibbs
13533 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:20 pmin:0.03 pth:.64:.6:.6:.91:.7
3 ts:4:0:3:1:2 tdisp:4 void:2 beta:0.7 mex:0
13534
13535
13536 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.03 pth:.64:.6:.6:.80:.5
4 ts:4:0:3:1:2 tdisp:4 void:2 beta:1 mex:2
13537 #v2:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)
13538 #v2:Case2 usepp Identification Error:0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.000(0
/20FP0)
13539 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:10 pmin:0.03 pth:.64:.6:.6:.80:.5
4 ts:4:0:3:1:2 tdisp:4 void:2 beta:1 mex:1
13540 #v2:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13541 #v2:Case2 usepp Identification Error:0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0
/25FP0)
13542 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.54:.6:.6:.75:.54
ts:4:0:3:1:2 tdisp:4 void:2 beta:1 mex:1
13543 #v2:usepp Identification Error:-1 Perfect!
13544 #v2:usepp Identification (tP,fp):<t4>5@(5,0)[3.0]<t0>5@(5,0)[3.0]<t0>5@(5,0)[2.8,0]<t1>5@(5,0)[3.8,
0]<t2>5@(5,0)[3.2,0]
13545 #v2:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13546 #v2:Case2 usepp Identification Error:0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0
/25FP0)
13547 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.54:.6:.6:.75:.54
1[3.5,2]<t2>4@(4,0)[3.5,0]
13550 #v2:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)
13551 #v2:Case2 usepp Identification Error:0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.050(1/20FP1)0.000(0
/20FP0)
13552 #void:1 beta:1 mex:1 NotPerfect!
13553 #v1:usepp Identification (tP,fp):<t4>5@(5,1)[1.4,1]<t0>5@(5,0)[1.4,0]<t3>5@(5,0)[1.6,0]<t1>5@(5,2)[
3.4,1]<t2>5@(5,1)[1.2,1]
13554 #v1:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13555 #v1:Case2 usepp Identification Error:0.040(1/25FP1)0.000(0/25FP0)0.000(0/25FP0)0.080(2/25FP2)0.040(1
/25FP1)
13556 #void:1 beta:1 mex:4 NotPerfect!
13557 #v1:usepp Identification (tP,fp):<t4>4@(4,2)[1.5,1]<t0>4@(4,0)[1.5,0]<t3>4@(4,0)[1.75,0]<t1>4@(4,3)
[3.1,1]<t2>4@(4,1)[1.25,1]
13558 #v1:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)
13559 #v1:Case2 usepp Identification Error:0.100(2/20FP2)0.000(0/20FP0)0.000(0/20FP0)0.150(3/20FP3)0.050(1
/20FP1)
13560 #void:0 beta:1 mex:1 NotPerfect
13561 #v0:usepp Identification (tP,fp):<t4>5@(5,1)[1.4,1]<t0>5@(5,0)[1.4,0]<t3>5@(5,0)[1.6,0]<t1>5@(5,2)[
3.2,1]<t2>5@(5,1)[1.2,1]
13562 #v0:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13563 #v0:Case2 usepp Identification Error:0.040(1/25FP1)0.000(0/25FP0)0.000(0/25FP0)0.080(2/25FP2)0.040(1
/25FP1)
13564 #void:0 beta:1 mex:4 NotPerfect
13565 #v0:usepp Identification (tP,fp):<t4>4@(4,2)[1.5,1]<t0>4@(4,1)[1.75,6]<t3>4@(4,1)[1.75,3]<t1>4@(4,3)
[3.1,1]<t2>4@(4,1)[1.25,1]
13566 #v0:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)
13567 #v0:Case2 usepp Identification Error:0.100(2/20FP2)0.050(1/20FP1)0.050(1/20FP1)0.150(3/20FP3)0.050(1
/20FP1)
13568 ###[2] text-independent bayes
13569 loo4bayes-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98:0.98:0.
98:0.96 ts:4:0:3:1:2 tdisp:4 void:1 mex:1
13570 #void:1 mex:-1 Perfect!
13571 #v1:usepp Identification (tP,fp):<t4>5@(5,0)[2.2,0]<t0>(5,0)[2.2,0]<t3>(5,0)[2.4,0]<t1>(5,0)[2.6,0]<t2>(5,0)[
2.0,1]
13572 #v1:usepp Identification (tP,fp):<t4>5@(5,0)[3.0]<t0>5@(5,0)[2.8,0]<t3>5@(5,0)[2.4,0]<t1>5@(5,0)[3.
4,0]<t2>5@(5,0)[3.4,0]
13573 #v1:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13574 #v1:Case2 usepp Identification Error:0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0
/25FP0)
13575 #void:2 mex:-1 NotPerfect!
13576 #v2:usepp Identification (tP,fp):<t4>5@(4,0)[3.5,0]<t0>5@(5,0)[4,0]<t3>5@(5,0)[3.8,0]<t1>5@(5,0)[4.
0]<t2>5@(5,0)[3.8,0]
13577 #v2:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13578 #v2:Case2 usepp Identification Error:0.040(1/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0
/25FP0)
13579 loo4bayes-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98:0.98:0.
98:0.96 ts:4:0:3:1:2 tdisp:4 void:1 mex:4
13580 #v1:usepp Identification (tP,fp):<t4>4@(4,0)[3.25,0]<t0>4@(4,0)[2.75,0]<t3>3@(4,0)[2.5,0]<t1>4@(4,1)
[3.25,2]<t2>4@(3,0)[3.3333,0]
13581 #v1:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.250(1/4)0.000(0/4)0.000(0/4)
13582 #v1:Case2 usepp Identification Error:0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.050(1/20FP1)0.050(1
/20FP0)
13583 void:2 mex:4 NotPerfect
13584 #v2:usepp Identification (tP,fp):<t4>4@(3,0)[3.0]<t0>4@(4,0)[4,0]<t2>5@(4,0)[3.75,0]<t3>3@(4,0)[3.75,0]<t1>4@(4,1)[
```

```
4,3]<t2>4@(3,0)[3.6667,0]
13585 #v2:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.250(1/4)0.000(0/4)0.000(0/4)
13586 #v2:Case2 usepp Identification Error:0.050(1/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.050(1/20FP1)0.050(1
/20FP0)
13587 ###[3] text-dependent by gibbs
13588 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:.6:.6:.75:.57 t
s:4:0:3:1:2 tdisp:4 void:2 beta:1 mex:-1
13589 #void:2 beta:1 mex:-1 Perfect!
13590 #v2:usepp Identification (CP,fp):<t4>5@(5,0)[3,0]<t0>5@(5,0)[2,0]<t3>5@(5,0)[2.6,0]<t1>5@(5,0)[3.4,
0]<t2>5@(5,0)[2,0]
13591 #v2:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13592 #v2:Case2 usepp Identification Error:0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0
/25FP0)
13593 #void:2 beta:2 mex:4 Perfect!
13594 #v2:usepp Identification (CP,fp):<t4>4@(4,0)[2.25,0]<t0>4@(4,0)[2,0]<t3>4@(4,0)[2.5,0]<t1>4@(4,0)[4
,0]<t2>4@(4,0)[2,0]
13595 #v2:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)
13596 #v2:Case2 usepp Identification Error:0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.000(0
/20FP0)
13597 ###[4] text-dependent by bayes
13598 loo4bayes-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98:0.98:0.98:0.9
8:0.96 ts:4:0:3:1:2 tdisp:4 void:2 mex:-1
13600 #void:2 mex:-1 Perfect
13601 #v2:usepp Identification (CP,fp):<t4>5@(5,0)[3.8,0]<t0>5@(5,0)[2.8,0]<t3>5@(5,0)[3.6,0]<t1>5@(5,0)[
3.4,0]<t2>5@(5,0)[2.8,0]
13602 #v2:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13603 #v2:Case2 usepp Identification Error:0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0/25FP0)0.000(0
/25FP0)
13604 #void:2 mex:4 Perfect
13605 #v2:usepp Identification (CP,fp):<t4>4@(4,0)[3.5,0]<t0>4@(4,0)[2.75,0]<t3>4@(4,0)[3.5,0]<t1>4@(4,0)
[3.5,0]<t2>4@(4,0)[2.75,0]
13606 #v2:Case1 usepp Identification Error:0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)0.000(0/4)
13607 #v2:Case2 usepp Identification Error:0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.000(0/20FP0)0.000(0
/20FP0)
13608 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.55 ts:4:0:3:1:2
tdisp:4 void:1 beta:1
13609 loo4gibbs-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.60 ts:4:0:3:1:2
tdisp:4 void:1 beta:1.2
13611 loo4gibbs-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.55 ts:4:0:3:1:2
tdisp:4 void:1 beta:1
13612 loo4bayes-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98 ts:4:0:3:1:2
tdisp:4 void:2
13613 loo4bayes-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98 ts:4:0:3:1:2
tdisp:4 void:2
13614 loo4bayes-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98 ts:4:0:3:1:2
tdisp:4 void:2
13615 #Use iconpl1
13617 #experr datag
13618 (1)loo4bayes-sr fn:../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98 ts:4:0:3:1
:2 tdisp:4
13619
13620 #Original Verification Error Rate:0.028(7/250)0.020(5/250)0.032(8/250)0.044(11/250)0.016(4/250)
13621 #Original Verification FP Rate:0.020(4/200)0.015(3/200)0.025(5/200)0.030(6/200)0.020(4/200)
13622 #Original Verification FN Rate:0.060(3/50)0.040(2/50)0.060(3/50)0.100(5/50)0.000(0/50)
13623 #Original Identification Error Rate:0.080(4/50)0.060(3/50)0.060(3/50)0.100(5/50)0.040(2/50)
13624 MinMaxFP-->Better to use 'ts:2:0:3:4:1'?
13625 MinMaxFP-->Better to use 'ts:4:0:3:2:1'?
13626 MinErr-->Better to use 'ts:2:0:4:3:1'?
13627 #Bayes Verification (tP,fp):<t4>(5,0)[2.2,0]<t0>(5,0)[2.2,0]<t3>(5,0)[2.4,0]<t1>(5,0)[2.6,0]<t2>(5,0)[
2,0,1]
13628 #Bayes Verification Error Rate:0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)
13629 #Bayes Verification FP:0.000(0/20)0.000(0/20)0.000(0/20)0.000(0/20)0.000(0/20)
13630 #Bayes Verification FN:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13631 Err[t4]=0.028Err[t0]=0.02Err[t3]=0.032Err[t1]=0.044Err[t2]=0.016
13632 #BIN Identification v1(tP,fp):<t4>5@(5,0)[2.2,0]<t0>5(5,0)[1.8,0]<t3>5(5,0)[2.2,0]<t1>5(5,0)[2.4,
0]<t2>5(5,0)[1.4,0]
13633 #v1:usepp Identification (CP,fp):<t4>5@(5,0)[1.8,0]<t0>5@(5,0)[1.6,0]<t3>5@(5,0)[1.8,0]<t1>5@(5,0)[
2.2,0]<t2>5@(5,0)[1.4,0]
13634 #v1:Case1 usepp Identification Error:0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13635 #v1:Case2 usepp Identification Error:0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)
13636 loo4bayes-sr fn:../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.95 ts:4:0:3:1:2
tdisp:4
13637 #Original Verification Error Rate:0.092(23/250)0.056(14/250)0.096(24/250)0.140(35/250)0.132(33/250)
13638 #Original Verification FP Rate:0.070(14/200)0.045(9/200)0.080(16/200)0.135(27/200)0.120(24/200)
13639 #Original Verification FN Rate:0.180(9/50)0.100(5/50)0.160(8/50)0.160(8/50)0.180(9/50)
13640 #Original Identification Error Rate:0.200(10/50)0.280(14/50)0.400(20/50)0.420(21/50)
13641 MinMaxFP-->Better to use 'ts:4:0:1:3:2'?
13642 MinMaxFP-->Better to use 'ts:0:4:1:3:1'?
13643 MinErr-->Better to use 'ts:0:4:3:2:1'?
```

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13645 #Bayes Verification (tP, fP): <t4>(5, 0)[3, 2, 0]<t0>(5, 1)[2, 2, 2]<t3>(5, 0)[2, 6, 0]<t1>(5, 4, 3, 6, 3)<t2>(4, 4, 1, 0)
13646 #Bayes Verification Error Rate: 0.000(0/25)0.040(1/25)0.000(0/25)0.160(4/25)0.040(1/25)
13647 #Bayes Verification FP Rate: 0.000(0/20)0.050(1/20)0.000(0/20)0.040(2/20)0.000(0/20)
13648 #Bayes Verification FN: 0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.200(1/5)
13649 Err[t4]=0.092Err[t0]=0.056Err[t3]=0.096Err[t1]=0.148Err[t2]=0.132
13650 #BN Identification vI((tP, fP): <t4>@5(5, 1)[3, 4, 3]<t0>@4(4, 2)[1, 5, 5]<t3>@4(4, 1)[2, 5, 6]<t1>@3(3, 2)[3, 2, 1]<t2>@3(3, 1)[3, 6667, 4])
13651 #BN Identification (tP, fP): <t4>5@5(5, 0)[3, 0]<t0>5@5(5, 1)[2, 2, 2]<t3>5@5(5, 0)[2, 6, 0]<t1>5@5(5, 0)[3, 0]<t2>4@4(4, 0)[3, 0]
13652 #vI: Casel usePP Identification Error: 0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.200(1/5)
13653 #vI: Casel2 usePP Identification Error: 0.000(0/25)0.040(1/25)0.000(0/25)0.000(0/25)0.040(1/25)
13654 #vI: Casel3 usePP Identification Error: 0.000(0/25)0.040(1/25)0.000(0/25)0.000(0/25)0.040(1/25)
13655 (2) emacs tmp/loof4bys.dat for table of tex
13656 (3) gnuplot tmp/loof4bys.plt for fig
13657
13658 #dataF
13659 loof4bays-sr fn: ../mineishi/text-depdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98 ts:4:0:3:1:2
tdisp:4
13660 #Original Verification Error Rate: 0.028(7/25)0.020(5/25)0.032(8/25)0.044(11/25)0.016(4/25)
13661 #Original Verification FP Rate: 0.020(4/20)0.015(3/20)0.025(5/20)0.030(6/20)0.020(4/20)
13662 #Original Verification FN Rate: 0.060(3/5)0.040(2/5)0.060(3/5)0.100(5/5)0.000(0/5)
13663 #BN Identification Error Rate: 0.080(4/5)0.060(3/5)0.060(3/5)0.100(5/5)0.040(2/5)
13664 MinMaxFN->Better to use 'ts:2:0:3:4:1'?
13665 MinMaxFN->Better to use 'ts:4:0:3:2:1'?
13666 MinErr->Better to use 'ts:2:0:4:3:1'?
13667 #Bayes Verification (tP, fP): <t4>(5, 0)[2, 2, 0]<t0>(5, 0)[2, 2, 0]<t3>(5, 0)[2, 4, 0]<t1>(5, 0)[2, 6, 0]<t2>(5, 0)[2, 0]
13668 #Bayes Verification Error Rate: 0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)
13669 #Bayes Verification FP Rate: 0.000(0/20)0.000(0/20)0.000(0/20)0.000(0/20)0.000(0/20)
13670 #Bayes Verification FN: 0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13671 Err[t4]=0.028Err[t0]=0.028Err[t3]=0.032Err[t1]=0.044Err[t2]=0.016
13672 #BN Identification vI((tP, fP): <t4>@5(5, 0)[2, 2, 0]<t0>@5(5, 0)[1, 8, 0]<t3>@5(5, 0)[2, 2, 0]<t1>@5(5, 0)[2, 4, 0]<t2>@5(5, 0)[1, 4, 0]
13673 #vI: Casel usePP Identification (tP, fP): <t4>5@5(5, 0)[1, 8, 0]<t0>5@5(5, 0)[1, 6, 0]<t3>5@5(5, 0)[1, 8, 0]<t1>5@5(5, 0)[1, 2, 2, 0]<t2>5@5(5, 0)[1, 4, 0]
13674 #vI: Casel2 usePP Identification Error: 0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)
13675 #vI: Casel3 usePP Identification Error: 0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)
13676 #vI: Casel4 usePP Identification Error: 0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)
13677
13678 loof4bays-sr fn: ../mineishi/text-indepdata2.dat ns:5 ntx:5 ntxi:10:7 pmin:0.05 pth:0.98 ts:4:0:3:1:2
tdisp:4
13679 #Original Verification Error Rate: 0.092(23/25)0.056(14/25)0.096(24/25)0.140(35/25)0.132(33/25)
13680 #Original Verification FP Rate: 0.070(14/20)0.045(9/20)0.080(16/20)0.135(27/20)0.120(24/20)
13681 #Original Verification FN Rate: 0.180(9/5)0.100(5/5)0.160(8/5)0.160(8/5)0.180(9/5)
13682 #BN Identification Error Rate: 0.200(10/50)0.200(10/50)0.280(14/50)0.400(20/50)0.420(21/50)
13683 MinMaxFN->Better to use 'ts:4:0:1:3:2'?
13684 MinMaxFN->Better to use 'ts:4:0:1:3:2'?
13685 MinErr->Better to use 'ts:0:4:3:2:1'?
13686 #Bayes Verification (tP, fP): <t4>(5, 0)[3, 8, 0]<t0>(5, 1)[2, 4, 2]<t3>(5, 0)[3, 0]<t1>(5, 2, 3, 8, 4, 5)<t2>(4, 5, 0)[4, 5, 0]
13687 #Bayes Verification Error Rate: 0.000(0/25)0.040(1/25)0.000(0/25)0.080(2/25)0.040(1/25)
13688 #Bayes Verification FP Rate: 0.000(0/20)0.050(1/20)0.000(0/20)0.100(2/20)0.000(0/20)
13689 #Bayes Verification FN: 0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.200(1/5)
13690 Err[t4]=0.092Err[t0]=0.056Err[t3]=0.096Err[t1]=0.148Err[t2]=0.132
13691 #BN Identification vI((tP, fP): <t4>@5(5, 0)[3, 8, 0]<t0>@4(4, 1)[2, 2, 1]<t3>@4(4, 1)[2, 7, 5, 6]<t1>@3(2, 2)[3, 2, 1]<t2>@3(3, 1)[3, 6667, 5])
13692 #vI: Casel usePP Identification (tP, fP): <t4>5@5(5, 0)[3, 2, 0]<t0>5@5(5, 0)[2, 4, 0]<t3>5@5(5, 0)[2, 8, 0]<t1>5@5(5, 0)[3, 4, 0]<t2>4@4(3, 0)[2, 3333, 0]
13693 #vI: Casel2 usePP Identification Error: 0.000(0/5)0.000(0/5)0.000(0/5)0.000(0/5)0.200(1/5)
13694 #vI: Casel3 usePP Identification Error: 0.000(0/25)0.000(0/25)0.000(0/25)0.000(0/25)0.080(2/25)
13695 #Error (FP, FN) Rate[] for text 4, 0, 3, 1, 2: (nFP, nFN) = (10, 40)
13696 ( 2.5, 30.0)( 5.0, 30.0)( 2.5, 0.0)( 20.0, 0.0)( 12.5, 20.0)Hm0
13697 ( 2.5, 20.0)( 5.0, 0.0)( 15.0, 40.0)( 22.5, 30.0)( 0.0, 10.0)Hm1
13698 ( 7.5, 10.0)( 5.0, 10.0)( 10.0, 20.0)( 7.5, 20.0)( 27.5, 20.0)Hm2
13699 ( 15.0, 20.0)( 5.0, 10.0)( 5.0, 10.0)( 10.0, 20.0)( 17.5, 40.0)Hm3
13700 ( 7.5, 10.0)( 2.5, 0.0)( 7.5, 10.0)( 7.5, 10.0)( 2.5, 0.0)Hm4
13701 ( 7.0, 18.0)( 4.5, 10.0)( 8.0, 16.0)( 13.5, 16.0)( 12.0, 18.0)HClassification error for each text
'
13702
13703
13704
13705 [1] loof4bays-sr fn: ../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10 yth:0 ist:0 ts:0:1:2:3:4
13706 > use minL maxL m Fw[mL]
13707 [2] loof4bays-sr fn: ../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10 yth:0 ist:0 ts:4:3:0:1:2
13708 [3] better?
13709 loof4bays-sr fn: ../mineishi/text-indepdata.dat ns:5 ntx:5 ntxi:10 yth:0 ist:0 ts:4:3:0:1:2
13710
13711 080202
13712 loof4vowels N:2 k:8 rsa:2:0:7:1:20 dir:../sato/vowels/512 faf ffs fkm fks fms fsu ftk fyn mau mms mny
13713 mm
```

[illegible]

```

13794 #l0o4vowels N:2 k:8 rsa:2:0.71:20 faf ffs fkm fks fms fsu ftk fyn mau nms mny nmw msh mtn mtt mxm
13795 #5-class Accuracy=0.9875=79/80

```

```
13796 #2-class ACCURACY=0.9675=387/400=(317+70)/(317+3+10+70)
13797 #lo4vowels N:2 k:9 rsa:2:0.7:1:20 faf ffs fkm fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm
13798 #5-class Accuracy=0.975=78/80
13799 #2-class ACCURACY=0.9725=389/400=(317+72)/(317+3+8+72)
13800 #rsa:2:0.7:1:20
13801 #5-class Accuracy=0.975=78/80
13802 #2-class ACCURACY=0.9725=389/400=(317+72)/(317+3+8+72)
13803 #rsa:2:0.7:1:40
13804 #5-class Accuracy=0.975=78/80.
13805 #2-class ACCURACY=0.9675=387/400=(317+70)/(317+3+10+70)
13806
13807 lo4vowels N:2 k:8 rsa:2:0.7:1:20 r:2:1:-1 dir:../sato/vowels/512 faf ffs fkm fms fsu ftk fyn ma
u mms mmy nmrm mesh mtm mtt mxm
13808 #5-class ACCURACY=0.9625=77/80
13809 #2-class ACCURACY=0.8325=333/400=(320+13)/(320+0+67+13)
13810 lo4vowels N:2 k:8 rsa:2:0.7:1:20 r:2:1:0 dir:../sato/vowels/512 faf ffs fkm fms fsu ftk fyn mau
mms mmy nmrm mtt mxm
13811 #5-class Accuracy=0.8625=69/80
13812 #2-class ACCURACY=0.975=388/400=(317+71)/(317+3+9+71)
13813
13814
13815 (1) 図を描く
13816 cd orig
13817 for v in a i u e o: do
13818   for name in faf ffs fkm fks fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm: do
13819     f=${name}-${v}
13820     echo $f
13821     gnuplot <<EOF
13822     #set terminal tgif
13823     #set output "$f.obj"
13824     set terminal gif
13825     set output "$f.gif"
13826     plot "$f.dat" using 0:1 w lp
13827     EOF
13828     #tgif -print -gif $f.obj; convert -size 120x120 $f.gif eps2:$f.eps
13829     convert -size 120x120 $f.gif eps2:$f.eps
13830     done
13831     done
13832     done
13833     latex showvowels.tex
13834     xdvip showvowels.dvi
13835     cd ..
13836
13837 (2) 512個のデータを抽出 →絵を描く
13838 export n=512
13839 mkdir $[n]
13840 for v in a i u e o: do
13841   for name in faf ffs fkm fks fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm: do
13842     f=${name}-${v}
13843     echo $f
13844     head -$[n] orig/$[f].dat > $[n]/$[f].dat
13845     done
13846     done
13847     export f="ftk-i" ; head -1000 orig/$[f].dat | tail -$[n] > $[n]/$[f].dat
13848     export f="ftk-e" ; head -1000 orig/$[f].dat | tail -$[n] > $[n]/$[f].dat
13849     export f="fms-u" ; head -1000 orig/$[f].dat | tail -$[n] > $[n]/$[f].dat
13850     cd $n
13851     for v in a i u e o: do
13852       for name in faf ffs fkm fks fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm: do
13853         f=${name}-${v}
13854         echo $f
13855         gnuplot <<EOF
13856         #set terminal tgif
13857         #set output "$f.obj"
13858         set terminal gif
13859         set output "$f.gif"
13860         plot "$f.dat" using 0:1 w lp
13861         EOF
13862         #tgif -print -gif $f.obj; convert -size 120x120 $f.gif eps2:$f.eps
13863         convert -size 120x120 $f.gif eps2:$f.eps
13864         done
13865         done
13866         cp ../showvowels.tex .
13867         latex showvowels.tex;
13868         xdvip showvowels.dvi&
13869         done
13870         (3) DCT-ケプストラム
13871         cd ../../can2b
13872         #melf=2595*log10(1+mf/700)
13873         export cmd="mkpat4ford08 method:2 flc:2:1:266 flt:3:273.013:58.7854 cep:1:256"
13874         export cmd="mkpat4ford08 method:2 flc:2:1:266 flt:3:273.013:58.7854 cep:1:130"
13875         mkpat4ford08 method:2 flt:2:1:266 flt:3:273.013:58.7854 cep:1:30 DISP:1 <../sato/vowels/512/faf-a.dat
```

```
>tmp.dat
13876 ##mkpat4ford08 method:2 flt:2:1:266 DISP:1 <../sato/vowels/s512/faf-a.dat>tmp.dat
13877 ##Use 'flt:2:1:266 flt:3:268.793:57.8692' for faster or pc without mathematics.##k=266
13878 mkpat4ford08 method:2 flt:2:1:266 flt:3:268.793:57.8692 cep:1:30 DISP:1 <../sato/vowels/512/faf-a.dat>tmp.dat
13879
13880 (4) Leave-One-Out method
13881 lo4vowels N:2 k:9 rsa:2:0.7:1:20 faf ffs fkm fks fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm
13882 #ACC=0.995=398/400=(318+0)/(318+2+0+80) for N:2 k:9 rsa:2:0.7:1:20 ***
13883 #ACC=0.995=398/400=(318+0)/(318+2+0+80) for N:2 k:9 rsa:2:0.7:1:30
13884 #ACC=0.995=398/400=(318+0)/(318+2+0+80) for N:2 k:9 rsa:2:0.7:1:50
13885 #ACC=0.9925=397/400=(317+80)/(317+3+0+80)for N:2 k:9 rsa:2:0.7:1:100
13886 #ACC=0.99=396/400=(316+80)/(316+4+0+80) for N:2 k:9 rsa:2:0.7:1:150
13887 #ACC=0.985=394/400=(314+80)/(314+6+0+80) for N:2 k:9 rsa:2:0.7:1:1:20
13888 #ACC=0.985=394/400=(314+80)/(314+6+0+80) for N:2 k:9 rsa:2:0.7:1:1:20
13889 #ACC=0.99=396/400=(316+80)/(316+4+0+80) for N:2 k:9 rsa:2:0.7:1:1:20
13890 #ACC=0.99=396/400=(316+80)/(316+4+0+80) for N:1 k:9 rsa:2:0.7:1:1:20
13891 #ACC=0.9925=397/400=(317+80)/(317+3+0+80) for N:2 k:8 rsa:2:0.7:1:1:20
13892 #ACC=0.985=394/400=(314+80)/(314+6+0+80) for N:2 k:9 rsa:1:1:0:1:1:50
13893 #ACC=0.9925=397/400=(317+80)/(317+3+0+80) for N:2 k:9 rsa:2:0.6:1:1:50
13894 #ACC=0.9925=397/400=(317+80)/(317+3+0+80) for N:2 k:9 rsa:2:0.6:1:1:50
13895 #ACC=0.9875=395/400=(315+80)/(315+5+0+80) for N:2 k:10 rsa:2:0.7:1:1:20
13896
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13900 #NGallname="faf ffs fkm fks fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm"
13901 #NGlo4vowels N:1 k:20 B:20 faf ffs
13902 #NGlo4vowels N:2 k:9 B:20 faf ffs fkm fks fms fsu ftk fyn mau mms mmy nmrm mesh mtm mtt mxm
13903 #NG#ACC=0.89=356/400=(276+80)/(276+44+0+80) for N:2 k:30 B:20
13904 #NG#ACC=0.91=364/400=(284+80)/(284+36+0+80) for N:2 k:20 B:20
13905 #NG#ACC=0.9775=391/400=(311+80)/(311+9+0+80) for N:2 k:10 B:20
13906 #NG#ACC=0.9825=393/400=(313+80)/(313+7+0+80) for N:2 k:9 B:20
13907 #NG#ACC=0.9775=391/400=(311+80)/(311+9+0+80) for N:2 k:8 B:20
13908
13909 #NG#ACC=0.965=386/400=(306+80)/(306+14+0+80) for N:2 k:9 B:19 alpha:0.7
13910 #NG#ACC=0.9825=393/400=(313+80)/(313+7+0+80) for N:2 k:9 B:20 alpha:0.7
13911 #NG#ACC=0.9625=385/400=(305+80)/(305+15+0+80) for N:2 k:9 B:21 alpha:0.7
13912 #NG#ACC=0.975=390/400=(310+80)/(310+10+0+80) for N:2 k:9 B:22 alpha:0.7
13913 #NG#ACC=0.9575=383/400=(303+80)/(303+17+0+80) for N:2 k:9 B:25
13914 #NG#ACC=0.94=376/400=(296+80)/(296+24+0+80) for N:2 k:9 B:30
13915 #NG#ACC=0.9375=375/400=(295+80)/(295+25+0+80) for N:2 k:9 B:40
13916 #NG#ACC=0.935=374/400=(294+80)/(294+26+0+80) for N:2 k:9 B:50 alpha:0.7
13917
13918
13919 #NG#ACC=0.94=376/400=(296+80)/(296+24+0+80) for N:3 k:9 B:20
13920 #NG#ACC=0.9425=377/400=(297+80)/(297+23+0+80) for N:3 k:9 B:20
13921 #NG#ACC=0.975=390/400=(310+80)/(310+10+0+80) for N:1 k:9 B:20
13922
13923 #NG#ACC=0.96=384/400=(304+80)/(304+16+0+80) N:2 k:9 B:20 alpha:0.8
13924 #NG#ACC=0.95=380/400=(300+80)/(300+20+0+80) N:2 k:9 B:30 alpha:0.8
13925 #NG#ACC=0.9325=373/400=(293+80)/(293+27+0+80) N:2 k:9 B:30 alpha:0.6
13926 #NG#ACC=0.9375=375/400=(295+80)/(295+25+0+80) N:2 k:9 B:20 alpha:0.6
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13954 # 0.037126* 0.050544 0.045928 0.050374 0.049715 #te:kita-a->kita-a
13955 # 0.038120* 0.042429 0.044229 0.040624 #te:kita-i->kita-a
13956 # 0.090577 0.037495* 0.081091 0.079126 0.090917 #te:kita-u->kita-i
13957 # 0.060020 0.056342 0.046864* 0.059241 0.046864* #te:kita-e->kita-e
13958 # 0.038134 0.049173 0.046771 0.045823 0.035850* #te:kita-o->kosi-o
13959 ##te:kita-alueo-t300+450 are recognized as aaloe (rate=3/5).##
13960 cmd='vowel recog v3 te:kita tr:fuku:kita:kosi:sanuki:take:yama k:27 N:1 m:poles4 dir:.../onseio7 rsa:-1
0.7:1:20 DiffMode:0 T:100 tt:0:150:300:150 Disp:0 > /dev/null'
13961 ## mean distance of poles of 'alueo' of kita and tr:fuku are as follows.
13962 # 0.086864* 0.125334 0.118831 0.113225 0.109768 #te:kita-a->kita-a
13963 # 0.097601 0.065109* 0.065008 0.102770 0.104083 #te:kita-i->kita-i
13964 # 0.084542 0.084308 0.067852* 0.080423 0.090796 #te:kita-u->kita-u
13965 # 0.074266* 0.094362 0.083713 0.078753 0.086541 #te:kita-e->fuku-a
13966 # 0.094603 0.085486 0.089332 0.087355 0.084728* #te:kita-o->take-o
13967 ##te:kita-alueo-t300+450 are recognized as alueo (rate=4/5).##
13968
13969 070807
13970 bw=0
13971 ldfitsmooth ../onseio7/take-a.dat 0 $[bw] 0
13972 cp smooth..dat smooth.$[bw].dat
13973 tf=1000:/tl=1000:tt='expr ${tf} + ${ctl}';pf=$tt:pl=300:pt='expr ${pf} + ${pl}\' `#
13974 #checklorenz#tr=0:tl=1000:tt='expr ${tf} + ${ctl}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
13975 #rsarsai:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firt
1}
13976 #rsarsai:-1:0.7:1:20 k=108 N=1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firtl
1}
13977 #rsarsai:-1:0.7:1:20 k=54 N=1 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:2 g=g:5e-3 w=w:0.2 T=100 ;date
13978 cmd='./tspredv3 smooth.$[bw].dat ${tf}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
13979 time $cmd >/dev/null ;date
13979 #rsarsai:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firt
1}
13980 #NSE=4.850070e+05(NMSE1.075299e+00)(n300) 1000-2000-2300k108N1mpl:1:1.000000H1-y #take-a not so
bad??
13981 #NSE=8.220460e+03(NMSE3.356675e-01)(n300) 1000-2000-2300k108N1mpl:1:1.000000H1-y #take-i
13982 #NSE=2.122831e+04(NMSE3.822037e-02)(n300) 1000-2000-2300k108N1mpl:1:1.000000H1-y #take-u
13983 #NSE=9.267949e+03(NMSE3.998219e-02)(n300) 1000-2000-2300k108N1mpl:1:1.000000H1-y #take-e
13984 #NSE=4.930433e+04(NMSE3.216551e-01)(n300) 1000-2000-2300k108N1mpl:1:1.000000H1-y #take-o
13985
13986 bw=0
13987 ldfitsmooth ../onseio7/take-i.dat 0 $[bw] 0
13988 cp smooth..dat smooth.$[bw].dat
13989 tf=1000:/tl=1000:tt='expr ${tf} + ${ctl}';pf=$tt:pl=300:pt='expr ${pf} + ${pl}\' `#
13990 #rsarsai:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firt
1}
13991 #rsarsai:-1:0.7:1:20 k=54 N=1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firtl
1}
13992 #rsarsai:-1:0.7:1:20 k=54 N=1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firtl
1}
13993 #rsarsai:-1:0.7:1:20 k=54 N=1 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
13994 cmd='./tspredv3 smooth.$[bw].dat ${tf}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
13995 time $cmd >/dev/null ;date
13995 #rsarsai:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firtl
1}
13996 #NSE=8.434503e+03(NMSE3.444075e-01) MSRD=1.570484e+04(NMSE4y1.157852e+00)(n300) 1000-2000-23000
k54N1mpl:1:1.000000H1-y #bw=0 rsa:2:0.7:1:20 k=54 N=1 take-i
13997 #NSE=8.607817e+03(NMSE3.514845e-01)(n300) 1000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 rsa:2:0.7
:1:20 k=54 N=1 take-i
13998
13999 #checklorenz#####check
14000 #checklorenz#070806
14001 #checklorenz#tr=/home/kuro/text/Lecture/ChinoSystem/07/07tsl.dat
14002 #checklorenz#tf=0:tl=1900:tt='expr ${tf} + ${ctl}';pf=$tt:pl=100:pt='expr ${pf} + ${pl}\' `#
14003 #checklorenz#rsa=rsa:-1:0.7:1:20 k=5 N=200 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100
; to=${firtl}
14004 #checklorenz#rsarsai:-1:0.7:1:20 k=10 N=10 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=1
00 ; to=${firtl}
14005 #checklorenz#rsarsai:2:0.7:1:20 k=10 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100
;date
14006 #checklorenz#cmd='./tspredv3 $fn ${tf}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
14007 #checklorenz#time $cmd >/dev/null ;date
14008 #checklorenz#
14009 #checklorenz#NSE=6.718251e+00(NMSE1.057440e-01)(n100) 0-1900-1900-2000k5N200mpl:1:1.000000H1-y
14010 #checklorenz#NSE=6.774789e+00(NMSE1.066233e-01)(n100) 0-1900-1900-2000k8N200mpl:1:1.000000H1-y
14011 #checklorenz#NSE=8.401854e+00(NMSE1.322436e-01)(n100) 0-1900-1900-2000k9N200mpl:1:1.000000H1-y
14012 #checklorenz#NSE=9.796245e+00(NMSE1.541910e-01)(n100) 0-1900-1900-2000k10N200mpl:1:1.000000H1-y
14013 #checklorenz#NSE=1.036681e+01(NMSE1.631716e-01)(n100) 0-1900-1900-2000k5N190mpl:1:1.000000H1-y
14014 #checklorenz#NSE=1.096946e+02(NMSE1.726572e+00)(n100) 0-1900-1900-2000k7N200mpl:1:1.000000H1-y
14015 #checklorenz#NSE=9.057635e+01(NMSE1.425654e+00)(n100) 0-1900-1900-2000k7N200mpl:1:1.000000H1-y
14016 #checklorenz#NSE=9.965051e+01(NMSE1.568480e+00)(n100) 0-1900-1900-2000k6N200mpl:1:1.000000H1-y
14017 #checklorenz###
14018 #checklorenz#k=8
14019 #checklorenz#./can2 <BOF
14020 #checklorenz#0
14021 #checklorenz#${k} 0
0:時系列,3:ijcnn04,4:距離ニータ
次元 kl k2
```

```
14022 #checklorenz#/home/kuro/text/Lecture/ChinoSystem/07/07tsl.dat
14023 #checklorenz#0-2000-2000-2000
14024 #checklorenz#0 0 0 #y正規化 [ymin0:yamax]→ [ymini:ymax1]
14025 #checklorenz#quit
14026 #checklorenz#BOF
14027 #checklorenz#fn=tmp/07train.dat
14028 #checklorenz#cp tmp/train-test.dat ${fnl}
14029 #checklorenz#export rsa=rsa:2:0.7:1:20 train=${fnl} pred=/dev/null
14030 #checklorenz#rsarsai:-1:0.7:1:20 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${f
rtl}
14031 #checklorenz#time ens2ge ${train} ${pred} N:1-500:1 M:1-1:1 ib:0:0:0 $[rsa] k:${k} >/dev/null #s
earch optimal
14032 #checklorenz#k=5
14033 #checklorenz#tr=0:tl=1900:tt='expr ${tf} + ${ctl}';pf=$tt:pl=100:pt='expr ${pf} + ${pl}\' `#
14034 #checklorenz#0:tl=1900:tt='expr ${tf} + ${ctl}';pf=$tt:pl=100:pt='expr ${pf} + ${pl}\' `#
14035 #checklorenz#rsa=rsa:-1:0.7:1:20 k=5 N=200 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=1
00 ; to=${firtl}
14036 #checklorenz#rsa=rsa:-1:0.7:1:20 k=10 N=10 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=1
00 ; to=${firtl}
14037 #checklorenz#rsa=rsa:2:0.7:1:20 k=8 N=171 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100
;date
14038 #checklorenz#cmd='./tspredv3 $fn ${tf}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
14039 #checklorenz#time $cmd >/dev/null ;date
14040 #checklorenz#k=8;fn=/home/kuro/text/Lecture/ChinoSystem/07/07tsl.dat
14041 #checklorenz#./can2 <BOF
14042 #checklorenz#0 0:時系列,3:ijcnn04,4:距離ニータ
次元 kl k2
14043 #checklorenz#${k} 0
14044 #checklorenz#0-2000-2000-2000
14045 #checklorenz#time $cmd >/dev/null ;date
14046 #checklorenz#k=8;fn=/home/kuro/text/Lecture/ChinoSystem/07/07tsl.dat
14047 #checklorenz#./can2 <BOF
14048 #checklorenz#0
14049 #checklorenz#${k} 0
14050 #checklorenz#0-2000-2000-2000
14051 #checklorenz#time $cmd >/dev/null ;date
14052 #checklorenz#quit
14053 #checklorenz#BOF
14054 #checklorenz#fn=tmp/07train.dat;cp tmp/train-test.dat ${fnl}
14055 #checklorenz#trains=${fnl} ;pred=/dev/null
14056 #checklorenz#rsa=rsa:-1:0.7:1:20 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${
firtl}
14057 #checklorenz#rsa=rsa:2:0.7:1:40 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${
firtl}
14058 #checklorenz#time ens2ge ${train} ${pred} Ngs:1-500:1 Lstd:0:12 M:1-1:1 ib:0:0:0 $[rsa] k:${k} y:0:
0:0 $[w] T:${T} vt:0.5 vr:10 >/dev/null #search optimal
14060 #checklorenz#tr=0:tl=1900:tt='expr ${tf} + ${ctl}';pf=$tt:pl=300:pt='expr ${pf} + ${pl}\' `#
835e-05UtrainE4.136e-04H0.7585N190-1M:1rsa:2:0.7:1:40bst:-1:0
14061 #checklorenz#
14062 #checklorenz#k=8;N=90;rsa=rsa:2:0.7:1:40;fn=/home/kuro/text/Lecture/ChinoSystem/07/07tsl.dat
14063 #checklorenz#tf=0:tl=2000:tt='expr ${tf} + ${ctl}';pf=$tt:pl=100:pt='expr ${pf} + ${pl}\' `#
14064 #checklorenz#mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
14065 #checklorenz#cmd='./tspredv3 $fn ${tf}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
14066 #checklorenz#time $cmd >/dev/null ;date
14067 #checklorenz#0
14068 #checklorenz#0
14069 #checklorenz#bagging
14070 #bw=8000;
14071
14072 bw=0
14073 ldfitsmooth ../onseio7/take-i.dat 0 $[bw] 0
14074 cp smooth..dat smooth.$[bw].dat
14075 tf=1000:/tl=1000:tt='expr ${tf} + ${ctl}';pf=$tt:pl=300:pt='expr ${pf} + ${pl}\' `#
14076 #rsarsai:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firt
1}
14077 #rsarsai:-1:0.7:1:20 k=10 N=10 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${firt
1}
14078 #rsarsai:-1:0.7:1:20 k=54 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
14079 cmd='./tspredv3 smooth.$[bw].dat ${tf}';$[ctl]';$[tf]';$[pt]';$[pl]\' `#
14080 #checklorenz#0:tl=1900:tt='expr ${tf} + ${ctl}';pf=$tt:pl=300:pt='expr ${pf} + ${pl}\' `#
14081 #checklorenz#time $cmd >/dev/null ;date
14082 #NSE=3.836574e+03(NMSE1.742402e-01)(n300) 1000-2000-2300k54N6mpl:1:1.000000H1-y #bw=8000#real12
7ml:7568user73ml:2.810s
14082 #NSE=7.282911e+03(NMSE2.973844e-01)(n300) 1000-2000-2300k54N6mpl:1:1.000000H1-y #bw=0#real110ml
.917user73ml:7.00s bagging
14083 #NSE=8.607817e+03(NMSE3.514845e-01)(n300) 1000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 rsa:2:0.7
:1:20 k=54 N=1 take-i
```

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14084 #MSE=-1.649300e+04(NMSE6.734613e-01)(n300) 1000-2000-2000-2300k54N2mpl:1:1.000000H1-y #bw=0 rsa=-1:0.
7:1:20 k=54 N=2 sing1ecAN2
14085 #MSE=-6.604056e+03(NMSE3.513309e-01)(n300) 1000-2000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 rsa=-1:0.
7:1:20 k=54 N=1 sing1ecAN2 take-i
14086 #MSE=4.280764e+04(NMSE2.792716e-01)(n300) 1000-2000-2000-2300k54N6mpl:1:1.000000H1-y #bw=0 rsa:2:0.7
1:1:20 k=54 N=6 take-o
14087 #MSE=6.943526e+03(NMSE2.835262e-01)(n300) 1000-2000-2000-2300k108N6mpl:1:1.000000H1-y #bw=0 rsa:2:0.
7:1:20 k=108 N=6 take-i
14088
14089 #MSE=3.771251e+05(NMSE8.361159e-01)(n300) 1000-2000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 k=54 N=1
sing1ecAN2 take-a
14090 #MSE=4.229602e+05(NMSE1.160003e+00)(n300) 1000-2000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 k=54 N=1
sing1ecAN2 take-u
14091 #MSE=3.341643e+05(NMSE2.162712e+00)(n300) 1000-2000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 k=54 N=1
sing1ecAN2 take-e
14092 #MSE=4.191310e+05(NMSE2.734239e+00)(n300) 1000-2000-2000-2300k54N1mpl:1:1.000000H1-y #bw=0 k=54 N=1
sing1ecAN2 take-o
14093 #####
14094
14095 1dftsmooth ../onseio7/take-i.dat 0 8000 0
14096 tf=1000:/tl=1000:tt="expr ${tf} + ${tl}"/pf=$tt;pl=300;pt="expr ${pf} + ${pl}" #
14097 rsa=rsa:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${frt
}
14098 rsa=rsa:-1:0.7:1:20 k=10 N=10 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${frt1
}
14099 #rsa=rsa:2:0.7:1:20 k=54 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
14100 cmd="./tspredv3 smooth,.dat ${tf}:-${tt}:-${pf}:-${pt}:-${mp}:-${pl}:-${N}:-${N}:-1 M:1-1:1 ib:0:0:0:0
${rsa} k:${k} y:0:0:1 ${g} ${w} T:${T} vt:0.5 vr:10"
14101 time $cmd >/dev/null ;date
14102 #MSE=3.847903e+04(NMSE1.747549e+00)(n300) 1000-2000-2000-2300k10N10mpl:1:1.000000H1-y #1dftsmooth .
./onseio7/take-i.dat 0 8000 0
14103 #MSE=4.195095e+04(NMSE1.712990e+00)(n300) 1000-2000-2000-2300k10N10mpl:1:1.000000H1-y #1dftsmooth .
./onseio7/take-i.dat 0 0
14104
14105 #####
14106 1dftsmooth ../onseio7/take-i.dat 0 8000 0
14107 tf=500:/tl=1000:tt="expr ${tf} + ${tl}"/pf=$tt;pl=150;pt="expr ${pf} + ${pl}" #
14108 #rsa=rsa:-1:0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${frt
}
14109 rsa=rsa:-1:0.7:1:20 k=10 N=10 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=${frt1
}
14110 #rsa=rsa:2:0.7:1:20 k=54 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
14111 cmd="./tspredv3 smooth,.dat ${tf}:-${tt}:-${pf}:-${pt}:-${mp}:-${pl}:-${N}:-${N}:-1 M:1-1:1 ib:0:0:0:0
${rsa} k:${k} y:0:0:1 ${g} ${w} T:${T} vt:0.5 vr:10"
14112 time $cmd >/dev/null ;date
14113
14114 #MSE=3.073411e+02(NMSE1.540332e-02)(n100) 500-1500-1500-1600k54N6mpl:1:1.000000H1-y bagging
14115
14116 #MSE=7.677453e+03(NMSE3.847785e-01)(n100) 500-1500-1500-1600k108N9mpl:1:1.000000H1-y N9 0 10000 0
14117 #MSE=3.407013e+03(NMSE1.707527e-01)(n100) 500-1500-1500-1600k108N9mpl:1:1.000000H1-y N8 0 10000 0 pri
nt 4.*10000./32768-1.220703125
14118 #MSE=4.457887e+03(NMSE2.234204e-01)(n100) 500-1500-1500-1600k108N7mpl:1:1.000000H1-y N7 0 10000 0
14119
14120 #MSE=3.530281e+03(NMSE1.752576e-01)(n100) 500-1500-1500-1600k108N9mpl:1:1.000000H1-y N8 0 9000 0 prin
t 4.*9000./32768-1.096328125
14121 #MSE=5.498508e+03(NMSE2.461048e-01)(n100) 500-1500-1500-1600k108N9mpl:1:1.000000H1-y N8 0 8000 0 prin
t 4.*8000./32768-0.9755625
14122 #MSE=9.491524e+03(NMSE3.639910e-01)(n100) 500-1500-1500-1600k108N9mpl:1:1.000000H1-y N8 0 0 0 print 4
.*0./32768=0.9765625=0
14123
14124 #MSE=2.836424e+03(NMSE1.087742e-01)(n100) 500-1500-1500-1600k54N6mpl:1:1.000000H1-y k=54 N=6 0 0
14125
14126
14127 070209
14128 ## fig2 after (8)
14129 set output "k9N33take-a.obj"/plot "predictDM0:rsa-lk9N33tt1000-1200-take-a.dat" using 2:3 w 1, "predi
ctDM0:rsa-lk9N33t1000-1200-take-a.dat" using 2:1 w 1
14130 set output "k9N33take-i.obj"/plot "predictDM0:rsa-lk9N33tt1000-1200-take-i.dat" using 2:3 w 1, "predi
ctDM0:rsa-lk9N33t1000-1200-take-i.dat" using 2:1 w 1
14131 set output "k9N33take-u.obj"/plot "predictDM0:rsa-lk9N33tt1000-1200-take-u.dat" using 2:3 w 1, "predi
ctDM0:rsa-lk9N33t1000-1200-take-u.dat" using 2:1 w 1
14132 set output "k9N33take-e.obj"/plot "predictDM0:rsa-lk9N33tt1000-1200-take-e.dat" using 2:3 w 1, "predi
ctDM0:rsa-lk9N33t1000-1200-take-e.dat" using 2:1 w 1
14133 set output "k9N33take-o.obj"/plot "predictDM0:rsa-lk9N33tt1000-1200-take-o.dat" using 2:3 w 1, "predi
ctDM0:rsa-lk9N33t1000-1200-take-o.dat" using 2:1 w 1
14134 ## fig2 after (9)
14135 set terminal tgif
14136
14137 set output "k54N6take-a.obj"/plot "predictDM0:k54N6tt1000-1200-take-a.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-a.dat" using 2:1 w 1
14138 set output "k54N6take-i.obj"/plot "predictDM0:k54N6tt1000-1200-take-i.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-i.dat" using 2:1 w 1
14139 set output "k54N6take-u.obj"/plot "predictDM0:k54N6tt1000-1200-take-u.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-u.dat" using 2:1 w 1
14140 set output "k54N6take-e.obj"/plot "predictDM0:k54N6tt1000-1200-take-e.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-e.dat" using 2:1 w 1
14141 set output "k54N6take-o.obj"/plot "predictDM0:k54N6tt1000-1200-take-o.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-o.dat" using 2:1 w 1
14142
14143 set output "k54N6take-a.obj"/plot "predictDM0:k54N6tt1000-1200-take-a.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-a.dat" using 2:1 w 1
14144 set output "k54N6take-i.obj"/plot "predictDM0:k54N6tt1000-1200-take-i.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-i.dat" using 2:1 w 1
14145 set output "k54N6take-u.obj"/plot "predictDM0:k54N6tt1000-1200-take-u.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-u.dat" using 2:1 w 1
14146 set output "k54N6take-e.obj"/plot "predictDM0:k54N6tt1000-1200-take-e.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-e.dat" using 2:1 w 1
14147 set output "k54N6take-o.obj"/plot "predictDM0:k54N6tt1000-1200-take-o.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-o.dat" using 2:1 w 1
14148
14149 set output "k54N6take-a.obj"/plot "predictDM0:k54N6tt1000-1200-take-a.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-a.dat" using 2:1 w 1
14150 set output "k54N6take-i.obj"/plot "predictDM0:k54N6tt1000-1200-take-i.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-i.dat" using 2:1 w 1
14151 set output "k54N6take-u.obj"/plot "predictDM0:k54N6tt1000-1200-take-u.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-u.dat" using 2:1 w 1
14152 set output "k54N6take-e.obj"/plot "predictDM0:k54N6tt1000-1200-take-e.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-e.dat" using 2:1 w 1
14153 set output "k54N6take-o.obj"/plot "predictDM0:k54N6tt1000-1200-take-o.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-o.dat" using 2:1 w 1
14154
14155 set output "k54N6take-a.obj"/plot "predictDM0:k54N6tt1000-1200-take-a.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-a.dat" using 2:1 w 1
14156 set output "k54N6take-i.obj"/plot "predictDM0:k54N6tt1000-1200-take-i.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-i.dat" using 2:1 w 1
14157 set output "k54N6take-u.obj"/plot "predictDM0:k54N6tt1000-1200-take-u.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-u.dat" using 2:1 w 1
14158 set output "k54N6take-e.obj"/plot "predictDM0:k54N6tt1000-1200-take-e.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-e.dat" using 2:1 w 1
14159 set output "k54N6take-o.obj"/plot "predictDM0:k54N6tt1000-1200-take-o.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-o.dat" using 2:1 w 1
14160
14161 set output "k54N6take-a.obj"/plot "predictDM0:k54N6tt1000-1200-take-a.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-a.dat" using 2:1 w 1
14162 set output "k54N6take-i.obj"/plot "predictDM0:k54N6tt1000-1200-take-i.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-i.dat" using 2:1 w 1
14163 set output "k54N6take-u.obj"/plot "predictDM0:k54N6tt1000-1200-take-u.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-u.dat" using 2:1 w 1
14164 set output "k54N6take-e.obj"/plot "predictDM0:k54N6tt1000-1200-take-e.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-e.dat" using 2:1 w 1
14165 set output "k54N6take-o.obj"/plot "predictDM0:k54N6tt1000-1200-take-o.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-o.dat" using 2:1 w 1
14166
14167 set terminal tgif
14168 set output "k54N6-s-take-a.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-a.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-a.dat" using 2:1 w 1
14169 set output "k54N6-s-take-i.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-i.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-i.dat" using 2:1 w 1
14170 set output "k54N6-s-take-u.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-u.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-u.dat" using 2:1 w 1
14171 set output "k54N6-s-take-e.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-e.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-e.dat" using 2:1 w 1
14172 set output "k54N6-s-take-o.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-o.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-o.dat" using 2:1 w 1
14173 set output "k54N6-s-take-a.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-a.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-a.dat" using 2:1 w 1
14174 set output "k54N6-s-take-i.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-i.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-i.dat" using 2:1 w 1
14175 set output "k54N6-s-take-u.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-u.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-u.dat" using 2:1 w 1
14176 set output "k54N6-s-take-e.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-e.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-e.dat" using 2:1 w 1
14177 set output "k54N6-s-take-o.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-o.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-o.dat" using 2:1 w 1
14178
14179 predictDM0:k54N6t1600-1650-s-take-a.dat
14180 #MSE=3.103220e+04(NMSE6.284037e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-a good onl
y 30stepts
14181 #MSE=5.016779e+02(NMSE6.303207e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-i good onl
y 30stepts
14182 #MSE=9.183176e+02(NMSE3.631833e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-u good onl
y 30stepts
14183 #MSE=4.709621e+03(NMSE2.866689e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-e good onl
y 30stepts
14184 #MSE=9.486100e+01(NMSE1.193815e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-o good onl
y 30stepts
14185
14186 070207
14187 (1) see
14188
14189 ##(2) for single CAN2 vowel recognition using M4 80.3%
14190 ##(2+1) single CAN2 for speaker and vowel recognition
14191 ##(3) Single CAN2 with k:9 N:1 m:poles4 with DISP:1 for unstable poles using rsa=-1, N=1
14192 ##(3+1) Single CAN2 with k:9 N:1 m:poles4
14193 ##(4) bagging CAN2 vowel recognition using bagging poles4 80.3%
14194 ##(4+1) bagging CAN2 for speaker and vowel recognition
14195 ##(5) for bagging vowel recognition using poles4. npt:0.7:1:1:1:1:179 90.0%
14196 ##(5+1) for bagging speaker and vowel recognition with tl=150??
14197 information on neither vowels nor speakers
14198 070205
14199 (1)新しいデーターファイル from kurolab:/home/funatsu/kurogisensei
14200 kita-a.dat kosi-e.dat sanuki-i.dat take-o.dat yama-u.dat
14201 fuku-a.dat kita-e.dat kosi-i.dat sanuki-o.dat take-u.dat
14202 fuku-e.dat kita-i.dat kosi-o.dat sanuki-u.dat yama-a.dat
```

```
k:54N6t1000-1200-take-u.dat" using 2:1 w 1
14139 set output "k54N6take-e.obj"/plot "predictDM0:k54N6t1000-1200-take-e.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-e.dat" using 2:1 w 1
14140 set output "k54N6take-o.obj"/plot "predictDM0:k54N6t1000-1200-take-o.dat" using 2:3 w 1, "predictDM0
:k54N6t1000-1200-take-o.dat" using 2:1 w 1
14141 ##vowelrecog3 tr:fuku te:take k:9 N:1 m:poles4 dir:../onseio7 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:
150:150:150:150 DISP:1 > /dev/null
14142 cp tmp/_aiueo-fuku-poles0-N1.obj ../onseio7/
14143 cp tmp/_aiueo-fuku-poles0-N1.obj ../onseio7/
14144 ## vowelrecog3 tr:fuku te:take k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:
150:150:150:150 DISP:1 > /dev/null
14145 cp tmp/_aiueo-take-poles0-N1.obj ../onseio7/_aiueo-take-poles0-N1bag.obj
14146 cp tmp/_aiueo-fuku-poles0-N1.obj ../onseio7/_aiueo-fuku-poles0-N1bag.obj
14147 ##vowelrecog3 tr:fuku te:take k:27 N:6 m:poles4 dir:../onseio7 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:
150:150:150:150 DISP:1 > /dev/null
14148 cp tmp/_aiueo-take-poles0-N6.obj ../onseio7/_aiueo-take-poles0-N6bag.obj
14149 cp tmp/_aiueo-fuku-poles0-N6.obj ../onseio7/_aiueo-fuku-poles0-N6bag.obj
14150 ## vowelrecog3 tr:fuku te:take k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:
150:150:150:150 DISP:1 > /dev/null
14151 rm -rf result-ensrs2ge/tmp;
14152 for name in take ; do for v in a; do
14153 do=../onseio7
14154 #t=0:/tl=200:tt="expr ${t} + ${tl}"/pf=$tt;pl=200;pt="expr ${pf} + ${pl}" # NG for take-i pl=200
14155 #t=0:/tl=400:tt="expr ${t} + ${tl}"/pf=$tt;pl=200;pt="expr ${pf} + ${pl}" # OK for take-i pl=200
14156 #t=0:/tl=1000:tt="expr ${t} + ${tl}"/pf=$tt;pl=150;pt="expr ${pf} + ${pl}" # vrry OK for take-i
14157 #t=0:/tl=150:tt="expr ${t} + ${tl}"/pf=$tt;pl=150;pt="expr ${pf} + ${pl}" # NG for take-i pl=200
14158 #rsa=rsa:2:0.7:1:20 k=54 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
14159 rsa=rsa:2:0.7:1:20 k=27 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;date
14160 cmd="./tspredv3 $d/${name}:-${t}:-${tf}:-${pt}:-${mp}:-${pl}:-${N}:-${N}:-1 M:1-1:1 ib:0:0:0:0
0:10:0 ${rsa} k:${k} y:0:0:0:0 ${g} ${w} T:${T} vt:0.5 vr:10"
14161 $cmd >/dev/null ;date
14162 echo "cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../onseio7/predictDM0:k${k}N${N}:-${pf}:-${pt}:-$name-$
v.dat"
14163 cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../onseio7/predictDM0:k${k}N${N}:-${pf}:-${pt}:-$name-$v.dat
14164 echo "## Done for $cmd ###"
14165 done done
14166
14167 ##(9'')
14168 set terminal tgif
14169 set output "k54N6-s-take-a.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-a.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-a.dat" using 2:1 w 1
14170 set output "k54N6-s-take-i.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-i.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-i.dat" using 2:1 w 1
14171 set output "k54N6-s-take-u.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-u.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-u.dat" using 2:1 w 1
14172 set output "k54N6-s-take-e.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-e.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-e.dat" using 2:1 w 1
14173 set output "k54N6-s-take-o.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-o.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-o.dat" using 2:1 w 1
14174 set output "k54N6-s-take-a.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-a.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-a.dat" using 2:1 w 1
14175 set output "k54N6-s-take-i.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-i.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-i.dat" using 2:1 w 1
14176 set output "k54N6-s-take-u.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-u.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-u.dat" using 2:1 w 1
14177 set output "k54N6-s-take-e.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-e.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-e.dat" using 2:1 w 1
14178 set output "k54N6-s-take-o.obj"/plot "predictDM0:k54N6tt1600-1650-s-take-o.dat" using 2:3 w 1, "predi
ctDM0:k54N6t1600-1650-s-take-o.dat" using 2:1 w 1
14179
14180 #MSE=3.103220e+04(NMSE6.284037e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-a good onl
y 30stepts
14181 #MSE=5.016779e+02(NMSE6.303207e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-i good onl
y 30stepts
14182 #MSE=9.183176e+02(NMSE3.631833e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-u good onl
y 30stepts
14183 #MSE=4.709621e+03(NMSE2.866689e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-e good onl
y 30stepts
14184 #MSE=9.486100e+01(NMSE1.193815e-01)(n50) 800-1600-1600-1650k54N6mpl:1:1.000000H1-y s-taka-o good onl
y 30stepts
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14196 ##(5+1) for bagging speaker and vowel recognition with tl=150??
14197 information on neither vowels nor speakers
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14199 (1)新しいデーターファイル from kurolab:/home/funatsu/kurogisensei
14200 kita-a.dat kosi-e.dat sanuki-i.dat take-o.dat yama-u.dat
14201 fuku-a.dat kita-e.dat kosi-i.dat sanuki-o.dat take-u.dat
14202 fuku-e.dat kita-i.dat kosi-o.dat sanuki-u.dat yama-a.dat
```


:20 DiffMode:0 T:100 tt:150:150:150 DISP:0 > /dev/null'
14494 ### mean distance of 'aiueo' of sanuki and tr:fuku are as follows.
14495 # 0.092067* 0.319407 0.216082 0.134948 #te:sanuki-a->yama-u 1,1
14496 # 0.284272 0.169320 0.180377 0.123288 #te:sanuki-i->yama-u 1,1
14497 # 0.250060 0.248704 0.189859 0.249053 #te:sanuki-u->yama-u 1,1
14498 # 0.321361 0.159772 0.145301 0.065866* #te:sanuki-e->yama-e 1,1
14499 # 0.139542 0.239679 0.216657 0.131538 0.034828* #te:sanuki-o->kita-o 1,1
14500 ###te:sanuki-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14501 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:yama te:take k:9 N:1 m:poles4 dir:../onsei07 rsa:-1:0.7:1
:20 DiffMode:0 T:100 tt:150:150:150 DISP:0 > /dev/null'
14502 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
14503 # 0.204819* 0.383365 0.266511 0.328965 0.299701 #te:take-a->kosi-a 1,1
14504 # 0.232523 0.194553* 0.270739 0.226177 0.226920 #te:take-i->kita-i 1,1
14505 # 0.256467 0.232687 0.139882* 0.145301 0.294628 #te:take-u->sanuki-u 1,1
14506 # 0.231136 0.169320* 0.193280 0.178982 0.186992 #te:take-e->sanuki-e NG
14507 # 0.140460* 0.198672 0.227756 0.174335 0.163419 #te:take-o->sanuki-a NG
14508 ###te:take-aiueo-t150+300 are recognized as aiuea (rate=3/5).###
14509 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take te:yama k:9 N:1 m:poles4 dir:../onsei07 rsa:-1:0.7:1
:20 DiffMode:0 T:100 tt:150:150:150 DISP:0 > /dev/null'
14510 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
14511 # 0.092067* 0.346349 0.257040 0.275322 0.127499 #te:yama-a->sanuki-a 1,1
14512 # 0.296511* 0.096544 0.154129 0.144760 0.228259 #te:yama-i->sanuki-i 1,1
14513 # 0.299324 0.277728 0.106867* 0.228232 0.294334 #te:yama-u->sanuki-u 1,1
14514 # 0.291112 0.19364 0.155946 0.065866* 0.260193 #te:yama-e->sanuki-e NG
14515 # 0.124825* 0.22542 0.245930 0.171509 0.126263 #te:yama-o->sanuki-a NG
14516 ###te:yama-aiueo-t150+300 are recognized as aiuea (rate=4/5).###
14517
14518 ###(3+1) Single CAN2 with k:9 N:1 m:poles4 LeaveOneOut perfect SR30/30 VR30/30
14519 vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:fuku k:9 N:1 m:poles4 dir:../onsei07 rsa:-1:0.7:1
:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null
14520 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:fuku k:9 N:1 m:poles4 dir:../onse107 rsa:-1:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null'
14521 ### mean distance of poles of 'aiueo' of fuku and tr:fuku are as follows.
14522 # 0.080891* 0.261461 0.306997 0.195553 0.181897 #te:fuku-a->fuku-a 1,1
14523 # 0.158939 0.115972* 0.233341 0.120580 #te:fuku-i->fuku-i 1,1
14524 # 0.190260 0.216405 0.076389* 0.207750 #te:fuku-u->fuku-u 1,1
14525 # 0.158211 0.157149 0.231852 0.072219* 0.140279 #te:fuku-e->fuku-e 1,1
14526 # 0.113988 0.151418 0.221712 0.14247 0.104643* #te:fuku-o->fuku-o 1,1
14527 ###te:kita-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14528 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kita k:9 N:1 m:poles4 dir:../onse107 rsa:-1:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null'
14529 ### mean distance of poles of 'aiueo' of kita and tr:fuku are as follows.
14530 # 0.018888* 0.332620 0.241490 0.265717 0.183200 #te:kita-a->kita-a 1,1
14531 # 0.258391 0.069702* 0.216129 0.243136 #te:kita-i->kita-i 1,1
14532 # 0.209904 0.304397 0.233328* 0.224075 #te:kita-u->kita-u 1,1
14533 # 0.230288 0.192501 0.268763 0.062622* 0.297510 #te:kita-e->kita-e 1,1
14534 # 0.130992 0.222529 0.227205 0.150499 0.043389* #te:kita-o->kita-o 1,1
14535 ###te:kita-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14536
14537 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kosi k:9 N:1 m:poles4 dir:../onse107 rsa:-1:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null'
14538 ### mean distance of poles of 'aiueo' of kosi and tr:fuku are as follows.
14539 # 0.033023* 0.346225 0.260107 0.245950 0.230716 #te:kosi-a->kosi-a 1,1
14540 # 0.245311 0.069442* 0.168449 0.203290 0.213490 #te:kosi-i->kosi-i 1,1
14541 # 0.302772 0.316462 0.012245* 0.327591 0.327928 #te:kosi-u->kosi-u 1,1
14542 # 0.232439 0.175857 0.176020 0.012517* 0.274037 #te:kosi-e->kosi-e 1,1
14543 # 0.134790 0.237339 0.204792 0.132120 0.034353* #te:kosi-o->kosi-o 1,1
14544 ###te:kosi-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14545
14546 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:sanuki k:9 N:1 m:poles4 dir:../onse107 rsa:-1:
1.0:7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null'
14547 ### mean distance of poles of 'aiueo' of sanuki and tr:fuku are as follows.
14548 # 0.161996* 0.300208 0.208986 0.209439 0.136838 #te:sanuki-a->sanuki-a 1,1
14549 # 0.234810 0.079111* 0.173560 0.050372 0.121071 #te:sanuki-i->sanuki-i 1,1
14550 # 0.233495 0.251527 0.040963* 0.195887 0.246538 #te:sanuki-u->sanuki-u 1,1
14551 # 0.251313 0.170868 0.155461 0.018511* 0.253067 #te:sanuki-e->sanuki-e 1,1
14552 # 0.121148 0.229381 0.217217 0.131037 0.037003* #te:sanuki-o->sanuki-o 1,1
14553 ###te:sanuki-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14554 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:take k:9 N:1 m:poles4 dir:../onse107 rsa:-1:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null'
14555 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
14556 # 0.043459* 0.342469 0.262595 0.305449 0.313255 #te:take-a->take-a 1,1
14557 # 0.232041 0.133783* 0.246157 0.214800 0.265137 #te:take-i->take-i 1,1
14558 # 0.247404 0.230843 0.028410* 0.140841 0.251976 #te:take-u->take-u 1,1
14559 # 0.225366 0.176238 0.157054 0.031646* 0.202618 #te:take-e->take-e 1,1
14560 # 0.130718 0.188004 0.224620 0.173627 0.010380* #te:take-o->take-o 1,1
14561 ###te:take-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14562
14563 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:yama k:9 N:1 m:poles4 dir:../onse107 rsa:-1:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 > /dev/null'
14564 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
14565 # 0.008562* 0.346678 0.257779 0.237559 0.130275 #te:yama-a->yama-a 1,1

14566 # 0.248287 0.016706* 0.120310 0.138926 0.208766 #te:yama-i->yama-i 1,1
14567 # 0.279984 0.229074 0.034868* 0.214289 0.282068 #te:yama-u->yama-u 1,1
14568 # 0.212585 0.139326 0.159530 0.008479* 0.213803 #te:yama-e->yama-e 1,1
14569 # 0.127029 0.223991 0.251038 0.161465 0.017940* #te:yama-o->yama-o 1,1
14570 ###te:yama-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
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14575 ###(4) bagging CAN2 with k:9 N:1 LeaveOneOut (2+4+5+5+4+5)/6*5=25/30=80.3%
14575 cmd='vowelrecogv3 tr:kita:kosi:sanuki:take:yama te:fuku k:9 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14576 ### mean distance of poles of 'aiueo' of fuku and tr:kita are as follows.
14577 # 0.083882 0.162354 0.160639 0.144666 0.070717* #te:fuku-a->yama-o
14578 # 0.054957 0.032687* 0.084952 0.066239 0.079237 #te:fuku-i->take-i
14579 # 0.091615 0.046313 0.041559* 0.070389 0.081961 #te:fuku-u->sanuki-u
14580 # 0.205291 0.080039* 0.106008 0.084099 0.175920 #te:fuku-e->sanuki-e
14581 # 0.111500 0.083143 0.099299 0.073320* 0.100669 #te:fuku-o->kita-e
14582 ###te:kita-aiueo-t150+300 are recognized as aiue (rate=2/5).###
14583 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kita k:9 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14584 ### mean distance of poles of 'aiueo' of kita and tr:fuku are as follows.
14585 # 0.061570* 0.289647 0.213317 0.205035 0.130746 #te:kita-a->sanuki-a
14586 # 0.079028 0.093754 0.036391* 0.086641 0.109592 #te:kita-i->sanuki-i
14587 # 0.135144 0.225720 0.083270* 0.188213 0.163039 #te:kita-u->sanuki-u
14588 # 0.173741 0.099368 0.167561 0.051239* 0.116414 #te:kita-e->take-e
14589 # 0.086470 0.169111 0.187185 0.104862 0.042426* #te:kita-o->sanuki-o
14590 ###te:kita-aiueo-t150+300 are recognized as aiueo (rate=4/5).###
14591 cmd='vowelrecogv3 tr:fuku:kita:sanuki:take:yama te:kosi k:9 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14592 ### mean distance of poles of 'aiueo' of kosi and tr:fuku are as follows.
14593 # 0.038816* 0.270975 0.185391 0.187981 0.091081 #te:kosi-a->sanuki-a
14594 # 0.118914 0.049714* 0.065236 0.084727 0.123472 #te:kosi-i->sanuki-i
14595 # 0.194111 0.206688 0.133997* 0.175259 0.216970 #te:kosi-u->yama-u
14596 # 0.235861 0.174632 0.120539 0.060725* 0.214344 #te:kosi-e->sanuki-e
14597 # 0.108375 0.194473 0.173710 0.120148 0.048476* #te:kosi-o->sanuki-o
14598 ###te:kosi-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14599 cmd='vowelrecogv3 tr:fuku:kita:kosi:take:yama te:sanuki k:9 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14600 ### mean distance of poles of 'aiueo' of sanuki and tr:fuku are as follows.
14601 # 0.085441* 0.277621 0.192056 0.196789 0.111783 #te:sanuki-a->yama-a
14602 # 0.186165 0.068197* 0.153744 0.092846 0.174541 #te:sanuki-i->yama-i
14603 # 0.113883 0.123260 0.052062* 0.104786 0.135293 #te:sanuki-u->yama-u
14604 # 0.210486 0.175659 0.117239 0.050075* 0.199091 #te:sanuki-e->yama-e
14605 # 0.132475 0.201354 0.179126 0.116330 0.048826* #te:sanuki-o->kosi-o
14606 ###te:sanuki-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14607 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:yama te:take k:9 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14608 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
14609 # 0.051606* 0.270735 0.164568 0.224666 0.123985 #te:take-a->yama-a
14610 # 0.078976 0.053179* 0.069006 0.074922 0.070692 #te:take-i->sanuki-i
14611 # 0.206886 0.212280 0.061076* 0.108538 0.206462 #te:take-u->sanuki-u
14612 # 0.148265 0.069699* 0.126252 0.093603 0.110936 #te:take-e->sanuki-e
14613 # 0.121510 0.173216 0.194818 0.152451 0.110114* #te:take-o->yama-o
14614 ###te:take-aiueo-t150+300 are recognized as aiueo (rate=4/5).###
14615 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take te:yama k:9 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14616 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
14617 # 0.059762* 0.301984 0.221282 0.262291 0.115543 #te:yama-a->sanuki-a
14618 # 0.167603 0.071602* 0.125814 0.099637 0.150842 #te:yama-i->sanuki-i
14619 # 0.18393 0.222365 0.077930* 0.158448 0.226057 #te:yama-u->take-u
14620 # 0.213414 0.159304 0.126697 0.05586* 0.182807 #te:yama-e->sanuki-e
14621 # 0.112428 0.205344 0.219146 0.152177 0.097377* #te:yama-o->kita-o
14622 ###te:yama-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
14623 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take te:yama k:27 N:1 m:poles4 dir:../onse107 rsa:2:0.7:1:
:20 DiffMode:0 T:100 tt:150:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14624 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
14625 # 0.056159* 0.058805 0.059653 0.058980 0.057520 #te:yama-a->kosi-a
14626 # 0.063551 0.055622* 0.056637 0.060175 0.059913 #te:yama-i->kosi-i
14627 # 0.059359 0.053906 0.051958* 0.054665 0.053672 #te:yama-u->sanuki-u
14628 # 0.058965 0.058288 0.057835 0.052226* 0.055385 #te:yama-e->sanuki-e
14629 # 0.056136 0.059915 0.058478 0.05073 0.054051* #te:yama-o->kita-o
14630 ###te:yama-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
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14640 ##t#te:fuku-aieuo-tl50+300 are recognized as aieua (rate=4/5).##
14641 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:kita k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0
7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14642 ## mean distance of poles of 'aieuo' of kita and tr:fuku are as follows.
14643 # 0.057653* 0.322430 0.253325 0.271757 0.198798 #te:kita-a->kita-a 1,1
14644 # 0.246101 0.122711* 0.224054 0.211699 0.242610 #te:kita-i->kita-i 1,1
14645 # 0.203900 0.294835 0.068115* 0.282015 0.240572 #te:kita-u->kita-u 1,1
14646 # 0.124290 0.201349 0.291090 0.096163* 0.291905 #te:kita-e->kita-e 1,1
14647 # 0.121406 0.244072 0.233601 0.152224 0.086975* #te:kita-o->kita-o 1,1
14648 ##t#te:kita-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14649 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:kosi k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0
7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14650 ## mean distance of poles of 'aieuo' of kosi and tr:fuku are as follows.
14651 # 0.033023* 0.346225 0.260107 0.245950 0.230716 #te:kosi-a->kosi-a 1,1
14652 # 0.245311 0.069442* 0.168449 0.203290 0.213490 #te:kosi-i->kosi-i 1,1
14653 # 0.202772 0.316462 0.1012245* 0.327598 #te:kosi-u->kosi-u 1,1
14654 # 0.223439 0.1715857 0.176020 0.012617* 0.274037 #te:kosi-e->kosi-e 1,1
14655 # 0.134790 0.237359 0.204792 0.132120 0.034353* #te:kosi-o->kosi-o 1,1
14656 ##t#te:fuku-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14657 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:sanuki k:9 N:1 m:poles4 dir:../onseio7 rsa:2
0:7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14658 ## mean distance of poles of 'aieuo' of sanuki and tr:fuku are as follows.
14659 # 0.016996* 0.300208 0.208986 0.209439 0.136838 #te:sanuki-a->sanuki-a 1,1
14660 # 0.234810 0.007911* 0.173560 0.150372 0.212071 #te:sanuki-i->sanuki-i 1,1
14661 # 0.223495 0.251527 0.040963* 0.195887 0.246538 #te:sanuki-u->sanuki-u 1,1
14662 # 0.251313 0.170868 0.155461 0.018511* 0.253067 #te:sanuki-e->sanuki-e 1,1
14663 # 0.121148 0.229381 0.217217 0.131037 0.037003* #te:sanuki-o->sanuki-o 1,1
14664 ##t#te:sanuki-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14665 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:take k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0
7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14666 ## mean distance of poles of 'aieuo' of take and tr:fuku are as follows.
14667 # 0.109333* 0.330241 0.271895 0.321348 0.261746 #te:take-a->take-a 1,1
14668 # 0.194954 0.191285* 0.256492 0.220032 0.263890 #te:take-i->kita-i 0,1
14669 # 0.236305 0.232108 0.060772* 0.147681 0.254239 #te:take-u->take-u 1,1
14670 # 0.218823 0.183011 0.210379 0.146165* 0.221799 #te:take-e->take-e 1,1
14671 # 0.125036 0.178929 0.213409 0.163452 0.026177* #te:take-o->take-o 1,1
14672 ##t#te:take-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14673 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:yama k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0
7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14674 ## mean distance of poles of 'aieuo' of yama and tr:fuku are as follows.
14675 # 0.049321* 0.345569 0.255147 0.240279 0.140147 #te:yama-a->yama-a 1,1
14676 # 0.238716 0.045764* 0.191299 0.139637 0.205557 #te:yama-i->yama-i 1,1
14677 # 0.258565 0.232124 0.071507* 0.218586 0.286403 #te:yama-u->yama-u 1,1
14678 # 0.226731 0.191169 0.254309 0.057605* 0.219443 #te:yama-e->yama-e 1,1
14679 # 0.118203 0.231300 0.253333* #te:yama-o->yama-o 1,1
14680 ##t#te:yama-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14681 cmd='vowelrecogv3 tr:ki:ta:kosi:sanuki:takiyama te:fuku k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0:7:1:2
0 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14682 ##t#t#vowelrecogv3 tr:ki:ta:kosi:sanuki:takiyama te:fuku k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0:7:1:2
0 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14683 ##t#t#cmd='vowelrecogv3 tr:ki:ta:kosi:sanuki:takiyama te:fuku k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0:
7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 > /dev/null'
14684 ##t#t#t# mean distance of poles of 'aieuo' of fuku and tr:kita are as follows.
14685 ##t#t# 0.258898 0.265763 0.285528 0.246857* 0.285202 #te:fuku-a->kita-e
14686 ##t#t# 0.263791 0.176096* 0.229159 0.190222 0.271550 #te:fuku-i->take-i
14687 ##t#t# 0.265185 0.212757 0.120204* 0.219527 0.267506 #te:fuku-u->sanuki-u
14688 ##t#t# 0.304833 0.168526 0.227988 0.165942* 0.294790 #te:fuku-e->take-e
14689 ##t#t# 0.263908 0.175806 0.212883 0.157135* 0.255805 #te:fuku-o->take-o
14690 ##t#t#t#te:fuku-aieuo-tl50+300 are recognized as aieuo (rate=3/5).##
14691 ##t#t#t#cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:kita k:9 N:1 m:poles4 dir:../onseio7 rsa:2:0:
7:1:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:75:1:1:1:179 > /dev/null'
14692 ##t#t#t# mean distance of poles of 'aieuo' of kita and tr:fuku are as follows.
14693 ##t#t#t# 0.099342* 0.319351 0.262370 0.276596 0.192469 #te:kita-a->kosi-a
14694 ##t#t#t# 0.199110 0.142961* 0.198966 0.165193 0.196386 #te:kita-i->take-i
14695 ##t#t#t# 0.188953 0.243164 0.151663* 0.259386 0.212311 #te:kita-u->take-u
14696 ##t#t#t# 0.243456 0.169529* 0.253523 0.174155 0.231376 #te:kita-e->fuku-i
14697 ##t#t#t# 0.115694* 0.218111 0.205193 0.157609 0.144589 #te:kita-o->kosi-a
14698 ##t#t#t#t#te:kita-aieuo-tl50+300 are recognized as aieuo (rate=3/5).##
14699 ##t#t#t#t#t# bagging LeaveOneOut (3+5+4+5+5+5)/6*5=27/30=90%
14700 ##t#t#t#t#t#cmd='vowelrecogv3 tr:ki:ta:kosi:sanuki:takiyama te:fuku k:27 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14701 ##t#t#t#t#t# mean distance of poles of 'aieuo' of fuku and tr:kita are as follows.
14702 ##t#t#t#t#t# 0.059467 0.059382 0.056635 0.056120* #te:fuku-a->kita-a NG
14703 # 0.056198 0.05936* 0.055289 0.055289 0.056480 #te:fuku-i->kita-i
14704 # 0.056657 0.059313* 0.059087 0.059087 #te:fuku-u->sanuki-e NG
14705 # 0.051087 0.059139 0.059202 0.057085* 0.056667 #te:fuku-e->sanuki-e
14706 # 0.059791 0.061926 0.061309 0.055295* 0.059295 #te:fuku-o->kita-o
14707 # 0.055147 0.054828 0.054598 0.052704 0.052388* #te:fuku-o->kita-o
14708 ##t#te:fuku-aieuo-tl50+300 are recognized as aieuo (rate=3/5).##
14709 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:kita k:27 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14710 ##t#t#t# mean distance of poles of 'aieuo' of kita and tr:fuku are as follows.
14711 # 0.050618* 0.054102 0.055521 0.052133 #te:kita-a->kosi-a

14712 # 0.062392 0.055933* 0.056631 0.059023 0.057376 #te:kita-i->take-i
14713 # 0.061795 0.056116 0.059073 0.056482 0.055021* #te:kita-u->take-u
14714 # 0.060510 0.059355 0.058568 0.054204* #te:kita-e->sanuki-e
14715 # 0.058713 0.058778 0.059003 0.056355 #te:kita-o->sanuki-o
14716 ##t#te:kita-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14717 cmd='vowelrecogv3 tr:fuku:ki:ta:sanuki:takiyama te:kosi k:27 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14718 ## mean distance of poles of 'aieuo' of kosi and tr:fuku are as follows.
14719 # 0.054705* 0.058912 0.058987 0.058338 0.056698 #te:kosi-a->kita-a
14720 # 0.062180 0.054514* 0.055519 0.056461 0.055905 #te:kosi-i->sanuki-i
14721 # 0.062521 0.052625 0.050787* 0.057046 0.056634 #te:kosi-u->take-u
14722 # 0.061498 0.058599 0.057690 0.052556* 0.055913 #te:kosi-e->sanuki-e
14723 ##t#te:kosi-aieuo-tl50+300 are recognized as aieuo (rate=4/5).##
14724 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:sanuki k:27 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14725 ## mean distance of poles of 'aieuo' of sanuki and tr:fuku are as follows.
14726 # 0.06275* 0.058634 0.058299 0.058116 0.056956 #te:sanuki-a->kita-a
14727 # 0.060392 0.051506* 0.053256 0.053526 0.053933 #te:sanuki-i->yosi-i
14728 # 0.058964 0.053229 0.052411* 0.055868 0.052976 #te:sanuki-u->yosi-u
14729 # 0.059426 0.059461 0.056893 0.053971* 0.050777 #te:sanuki-e->kita-e
14730 # 0.056873 0.057829 0.057365 0.054001 0.052141* #te:sanuki-o->kita-o
14731 ##t#te:sanuki-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14732 cmd='vowelrecogv3 tr:fuku:ki:ta:kosi:sanuki:takiyama te:take k:27 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14733 ## mean distance of poles of 'aieuo' of take and tr:fuku are as follows.
14734 # 0.051584 0.053722 0.054502 0.054670 0.052657 #te:take-a->kita-a
14735 # 0.060580 0.054463* 0.054632 0.058399 0.055588 #te:take-i->kosi-i
14736 # 0.062573 0.057417 0.056111* 0.057915 0.057156 #te:take-u->kosi-u
14737 # 0.059038 0.054655 0.055352 0.052304* 0.052740 #te:take-e->kita-e
14738 # 0.056824 0.058350 0.055880 0.053431 0.052502* #te:take-o->yama-o
14739 ##t#te:kita-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14740 ##t#t#(5/5)=improved than ##(5/5)2NO!!!! bagging LeaveOneOut 2+4+5+2+3+16/30 (3+5+4+5+5+5)/6*5=27/30=90%
14741 cmd='vowelrecogv3 tr:ki:ta:kosi:sanuki:takiyama te:fuku k:54 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14742 ## mean distance of poles of 'aieuo' of fuku and tr:kita are as follows.
14743 # 0.032046* 0.034921 0.05027 0.034205 0.033366 #te:fuku-a->sanuki-a
14744 # 0.03445* 0.033905 0.03602 0.033091* 0.035021 #te:fuku-i->take-e
14745 # 0.033967 0.034585 0.03168 0.032742* 0.034274 #te:fuku-u->take-e
14746 # 0.035858 0.035337 0.035399 0.034658* 0.034892 #te:fuku-e->sanuki-e
14747 # 0.033620 0.033936 0.034036 0.034567 0.034078 #te:fuku-o->sanuki-a
14748 ##t#te:fuku-aieuo-tl50+300 are recognized as aieuo (rate=2/5).##
14749 cmd='vowelrecogv3 tr:fuku:ki:ta:sanuki:takiyama te:kita k:54 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14750 ## mean distance of poles of 'aieuo' of kita and tr:fuku are as follows.
14751 # 0.030577* 0.031764 0.032993 0.033001 0.032099 #te:kita-a->sanuki-a
14752 # 0.033548 0.02792* 0.032083 0.032644 0.032153 #te:kita-i->kosi-i
14753 # 0.033520 0.033947 0.032897 0.032523* 0.034267 #te:kita-u->take-e
14754 # 0.034611 0.033765 0.035119 0.031658* 0.034417 #te:kita-e->sanuki-e
14755 # 0.030415 0.032216 0.034681 0.032402 0.029480* #te:kita-o->take-o
14756 ##t#te:kita-aieuo-tl50+300 are recognized as aieuo (rate=4/5).##
14757 cmd='vowelrecogv3 tr:fuku:ki:ta:sanuki:takiyama te:kosi k:54 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14758 ## mean distance of poles of 'aieuo' of kosi and tr:fuku are as follows.
14759 # 0.029449* 0.032627 0.032457 0.032441 0.031113 #te:kosi-a->kita-a
14760 # 0.030717 0.027749 0.028719 0.029981 0.029981 #te:kosi-i->kita-i
14761 # 0.030362 0.031120 0.030089* 0.030312 0.031457 #te:kosi-u->kita-u
14762 # 0.030406 0.031709 0.033328 0.030470* 0.031475 #te:kosi-e->sanuki-e
14763 # 0.030406 0.031078 0.033003 0.029863 0.029188* #te:kosi-o->kita-o
14764 ##t#te:kosi-aieuo-tl50+300 are recognized as aieuo (rate=5/5).##
14765 cmd='vowelrecogv3 tr:fuku:ki:ta:sanuki:takiyama te:sanuki k:54 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14766 ## mean distance of poles of 'aieuo' of sanuki and tr:fuku are as follows.
14767 # 0.032768 0.033794 0.034174 0.033794 0.032464* #te:sanuki-a->take-o
14768 ## mean distance of poles of 'aieuo' of sanuki and tr:fuku are as follows.
14769 # 0.034958 0.030449 0.032396 0.032029* 0.033927 #te:sanuki-i->take-o
14770 # 0.035287 0.033294* 0.033498 0.033671 0.035089 #te:sanuki-u->kita-u
14771 # 0.034520 0.033511 0.034206 0.031044* 0.031773 #te:sanuki-e->kita-e
14772 # 0.033748 0.034589 0.034249 0.034189 0.031185* #te:sanuki-o->kosi-o
14773 ##t#te:sanuki-aieuo-tl50+300 are recognized as aieuo (rate=2/5).##
14774 cmd='vowelrecogv3 tr:fuku:ki:ta:sanuki:takiyama te:take k:54 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14775 ## mean distance of poles of 'aieuo' of take and tr:fuku are as follows.
14776 # 0.032486* 0.035533 0.034741 0.036364 0.034407 #te:take-a->sanuki-a
14777 # 0.035032 0.030932* 0.035221 0.035865 0.036438 #te:take-i->sanuki-i
14778 # 0.032683 0.032147 0.031970* 0.033103 0.032636 #te:take-u->kita-u
14779 # 0.031631 0.031504* 0.031789 0.032004 0.033308 #te:take-e->fuku-i
14780 # 0.029153* 0.031322 0.032771 0.032132 0.029261 #te:take-o->sanuki-a
14781 ##t#te:take-aieuo-tl50+300 are recognized as aieuo (rate=3/5).##
14782 cmd='vowelrecogv3 tr:fuku:ki:ta:sanuki:takiyama te:take k:54 N:6 m:poles4 dir:../onseio7 rsa:2:0:7:1
:20 DiffMode:0 T:100 tt:l50:l50:l50:150 DISP:0 npt:0:7:1:1:1:179 > /dev/null'
14783 ##t#t# mean distance of poles of 'aieuo' of yama and tr:fuku are as follows.
14784 ##t#t#t# bagging LeaveOneOut (3+5+4+5+5+5)/6*5=27/30=90%

14785 # 0.027329* 0.030420 0.028862 0.027631 0.030038 #te:yama-a->sanuki-a
14786 # 0.032671* 0.029237* 0.031169 0.033834 #te:yama-i->take-i
14787 # 0.033068 0.033130 0.031861* 0.034359 #te:yama-u->take-e
14788 # 0.030845 0.030888 0.030923 0.028556* #te:yama-e->sanuki-e
14789 # 0.026742 0.025617 0.026893* 0.025096* #te:yama-o->take-e
14790 ###te:yama-aiueo-tl50+300 are recognized as aieeo (rate=3/5).###
14791
14792 ###(5+1) bagging LeaveOneOut for speaker recognition with tl=150? SR28/30 VR27/30
14793 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:fuku k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14794 ### mean distance of poles of 'aiueo' of fuku and tr:fuku are as follows.
14795 # 0.053072* 0.059117 0.054793 0.054393 0.053162 #te:fuku-a->fuku-a 1,1
14796 # 0.054642 0.052526 0.051065* 0.052730 0.055543 #te:fuku-i->fuku-u NG4vr 1,0
14797 # 0.055896 0.056871 0.053751* 0.056163 0.056872* #te:fuku-u->fuku-u 1,1
14798 # 0.057087 0.059770 0.055593 0.054160 0.053183* #te:fuku-o->fuku-a NG4vr 1,0
14799 # 0.052100* 0.056958 0.052638 0.052342 0.054008 #te:fuku-o->fuku-a NG4vr 1,0
14800 ###te:fuku-aiueo-tl50+300 are recognized as auooa (rate=2/5).###
14801 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kita k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14802 ### mean distance of poles of 'aiueo' of kita and tr:fuku are as follows.
14803 # 0.049308* 0.058262 0.054501 0.054094 0.053875 #te:kita-a->take-a NG4sr 0,1
14804 # 0.060396 0.053541* 0.056303 0.060094 0.060335 #te:kita-i->kita-i 1,1
14805 # 0.059486 0.056884 0.052509* 0.059346 0.058661 #te:kita-u->kita-u 1,1
14806 # 0.059102 0.060010 0.057092 0.053036* 0.056710 #te:kita-e->kita-e 1,1
14807 # 0.056424 0.060171 0.057748 0.056689 0.051482* #te:kita-o->kita-o 1,1
14808 ###te:kita-aiueo-tl50+300 are recognized as aiueo (rate=5/5).###
14809 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kosi k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14810 ### mean distance of poles of 'aiueo' of kosi and tr:fuku are as follows.
14811 # 0.052583* 0.059516 0.058434 0.059033 0.056339 #te:kosi-a->kosi-a 1,1
14812 # 0.057794 0.049803* 0.054391 0.055263 0.057783 #te:kosi-i->kosi-i 1,1
14813 # 0.059403 0.056839 0.048180* 0.058158 0.059545 #te:kosi-u->kosi-u 1,1
14814 # 0.058384 0.058339 0.057305 0.050326* 0.057847 #te:kosi-e->kosi-e 1,1
14815 # 0.057712 0.057440 0.056221 0.056017 0.052451* #te:kosi-o->kosi-o 1,1
14816 ###te:kosi-aiueo-tl50+300 are recognized as aiueo (rate=5/5).###
14817 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:sanuki k:27 N:6 m:poles4 dir:.../onsei07 rsa:
2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14818 ### mean distance of poles of 'aiueo' of sanuki and tr:fuku are as follows.
14819 # 0.054041* 0.059562 0.057344 0.058588 0.058084 #te:sanuki-a->take-a NG4sr 0,1
14820 # 0.055694 0.049414* 0.052351 0.053258 0.057176 #te:sanuki-i->sanuki-i 1,1
14821 # 0.054277 0.053008 0.049263* 0.056890 0.055438 #te:sanuki-u->sanuki-u 1,1
14822 # 0.058385 0.059701 0.056932 0.052163* 0.055389 #te:sanuki-e->kosi-e NG4sr 1,1
14823 # 0.056585 0.057355 0.056141 0.054504 0.052541* #te:sanuki-o->sanuki-o 1,1
14824 ###te:sanuki-aiueo-tl50+300 are recognized as aiueo (rate=5/5).###
14825 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:take k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14826 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
14827 # 0.046936* 0.050522 0.053145 0.055713 0.054014 #te:take-a->take-a 1,1
14828 # 0.058587 0.050673* 0.055070 0.058562 0.059176 #te:take-i->take-i 1,1
14829 # 0.059877 0.057893 0.054672* 0.058933 0.059976 #te:take-u->take-u 1,1
14830 # 0.056773 0.055750 0.053578 0.051690* 0.052672 #te:take-e->take-e 1,1
14831 # 0.055338 0.057453 0.056798 0.055297 0.049075* #te:take-o->take-o 1,1
14832 ###te:take-aiueo-tl50+300 are recognized as aiueo (rate=5/5).###
14833 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:
0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14834 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
14835 # 0.053610* 0.060852 0.059572 0.058263 0.056862 #te:yama-a->yama-a 1,1
14836 # 0.062444 0.047913* 0.058869 0.059462 0.060977 #te:yama-i->yama-i 1,1
14837 # 0.055122 0.049420 0.049768* 0.054974 0.055091 #te:yama-u->yama-u 1,1
14838 # 0.056771 0.058143 0.056692 0.051903* 0.056892 #te:yama-e->yama-e 1,1
14839 # 0.056864 0.058807 0.058313 0.057534 0.050942* #te:yama-o->yama-o 1,1
14840 ###te:yama-aiueo-tl50+300 are recognized as aiueo (rate=5/5).###
14841
14842 **cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:fuku k:27 N:9 m:poles4 dir:.../onsei07 rsa:
2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14843 ### mean distance of poles of 'aiueo' of fuku and tr:fuku are as follows.
14844 # 0.065032* 0.071025 0.071713 0.068550 0.070380 #te:fuku-a->fuku-a 1,1
14845 # 0.058870 0.059141 0.059199 0.057469* 0.062339 #te:fuku-i->fuku-u 1,1
14846 # 0.061282* 0.062200 0.064645 0.062715 0.065948 #te:fuku-u->fuku-e
14847 # 0.060265 0.064274 0.061339 0.058804* 0.061728 #te:fuku-o->fuku-a
14848 # 0.057965* 0.059714 0.061247 0.058680 0.061512 #te:fuku-o->fuku-a
14849 ###te:fuku-aiueo-tl50+300 are recognized as aeaea (rate=2/5).###
14850 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kita k:27 N:9 m:poles4 dir:.../onsei07 rsa:
2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14851 ### mean distance of poles of 'aiueo' of kita and tr:fuku are as follows.
14852 # 0.045954* 0.051689 0.048501 0.049400 0.048701 #te:kita-a->fuku-a
14853 # 0.048324 0.049778 0.047039* 0.044869 0.047583 #te:fuku-i->fuku-u
14854 # 0.049190 0.049778 0.047039* 0.047933 0.051947 #te:fuku-u->fuku-u
14855 # 0.048184 0.050699 0.047462 0.045755* 0.047163 #te:fuku-e->fuku-e
14856 # 0.046911* 0.048215 0.048375 0.047057 0.047836 #te:fuku-o->fuku-a
14857 ###te:fuku-aiueo-tl50+300 are recognized as auuea (rate=3/5).###
14858 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:fuku k:27 N:6 m:poles4 dir:.../onsei07 rsa:
2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14859 ### mean distance of poles of 'aiueo' of fuku and tr:fuku are as follows.
14860 # 0.046937* 0.067733 0.067733 0.067733 0.067733 #te:fuku-a->fuku-a
14861 # 0.067733 0.067733 0.067733 0.067733 0.067733 #te:fuku-i->fuku-u
14862 # 0.067733 0.067733 0.067733 0.067733 0.067733 #te:fuku-u->fuku-u
14863 # 0.067733 0.067733 0.067733 0.067733 0.067733 #te:fuku-o->fuku-a
14864 **##te:fuku-aiueo-tl50+300 are recognized as aeaea (rate=2/5).###
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2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14859 ### mean distance of poles of 'aiueo' of fuku and tr:fuku are as follows.
14860 # 0.070459* 0.076020 0.072226 0.072226 #te:fuku-a->fuku-a
14861 # 0.069185 0.069599 0.070633 0.069110* 0.073392 #te:fuku-i->fuku-u NG4vr
14862 # 0.070980 0.074416 0.073204 0.070836* 0.075556 #te:fuku-u->fuku-e
14863 # 0.069909 0.074415 0.072354 0.066472* 0.072118 #te:fuku-o->fuku-a
14864 ** 0.064937* 0.067733 0.067733 0.065884 0.068124 #te:fuku-o->fuku-a
14865 **##te:fuku-aiueo-tl50+300 are recognized as aeaea (rate=2/5).###
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14932 # 0.823336 0.345456* 0.587047 0.526930 0.781829 #te:kosi-i->kita-i
14933 # 0.606682 0.703919 0.376936 0.575287 0.687686 #te:kosi-u->yama-u
14934 # 0.739452 0.453380 0.182255* 0.769132 0.483657* 0.500991 #te:yama-u->kosi-u
14935 # 0.291458 0.498901 0.458769 0.678724 0.168524* #te:kosi-o->sanuki-o
14936 ##te:kosi-alueo-tl50+300 are recognized as alueo (rate=5/5).##
14937 cmd='vowelrecogv3 tr:fuku:kita:kosi:take:yama te:sanuki k:9 N:1 m:M4 dir:./onsei07 rsa:2:0.7:1:20 D
ifMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14938 ## mean distance of M4 of sanuki and tr:fuku are as follows.
14939 # 0.217151* 0.480614 0.496269 0.610206 0.332107 #te:sanuki-a->yama-a
14940 # 1.324991 0.231208* 0.343008 1.268682 #te:sanuki-i->yama-i
14941 # 0.392792 0.429633 0.240981* 0.414857 #te:sanuki-u->fuku-u
14942 # 0.694350 0.400190 0.347110 0.127758* 0.703931 #te:sanuki-e->yama-e
14943 # 0.353054 0.496028 0.525314 0.718309 0.157750 #te:sanuki-o->kosi-o
14944 ##te:sanuki-alueo-tl50+300 are recognized as alueo (rate=5/5).##
14945 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:yama te:take k:9 N:1 m:M4 dir:./onsei07 rsa:2:0.7:1:20 D
ifMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14946 ## mean distance of M4 of take and tr:fuku are as follows.
14947 # 0.608058* 0.890702 0.842051 0.871414 0.802184 #te:take-a->sanuki-a
14948 # 1.005128 0.284950 0.708930 0.586350 1.022645 #te:take-i->kita-i
14949 # 0.390236 0.433615 0.270047* 0.349060 #te:take-u->fuku-u
14950 # 0.771077 0.336446 0.475354 0.322768* 0.736987 #te:take-e->sanuki-e
14951 # 0.703633 1.202413 1.236412 1.367676 0.685556* #te:take-o->kita-o
14952 ##te:take-alueo-tl50+300 are recognized as alueo (rate=5/5).##
14953 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take te:yama k:9 N:1 m:M4 dir:./onsei07 rsa:2:0.7:1:20 D
ifMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14954 ## mean distance of M4 of yama and tr:fuku are as follows.
14955 # 0.215484* 0.517538 0.438501 0.611366 0.332810 #te:yama-a->sanuki-a
14956 # 1.152698 0.198878* 0.795734 0.422780 1.176954 #te:yama-i->sanuki-i
14957 # 0.388033 0.581574 0.215042* 0.374119 0.495175 #te:yama-u->sanuki-u
14958 # 0.631126 0.432743 0.275713 0.147546* 0.656288 #te:yama-e->sanuki-e
14959 # 0.625210* 0.963530 0.965306 0.997783 0.890018 #te:yama-o->kosi-a
14960 ##te:yama-alueo-tl50+300 are recognized as aluea (rate=4/5).##
14961 #####
14962 #####
14963 cmd='vowelrecogv3 tr:kita:kosi:sanuki:take:yama te:fuku k:27 N:6 m:M4 dir:./onsei07 rsa:2:0.7:1:20
DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14964 ## mean distance of M4 of fuku and tr:kita are as follows.
14965 # 2.057691* 2.096228 2.172901 2.96665 2.035507* #te:fuku-a->take-o
14966 # 0.501540* 0.508220 0.527102 0.505012 #te:fuku-i->kita-a
14967 # 0.486397 0.468459 0.471950 0.474029 0.471758* #te:fuku-u->kosi-o
14968 # 0.457275 0.460473 0.462238 0.447213* 0.457242 #te:fuku-e->kosi-e
14969 # 0.573675 0.592131 0.585214 0.585068 0.568568* #te:fuku-o->sanuki-o
14970 ##te:fuku-alueo-tl50+300 are recognized as aoceo (rate=2/5).##
14971 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:kita k:27 N:6 m:M4 dir:./onsei07 rsa:2:0.7:1:20
DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14972 ## mean distance of M4 of kita and tr:fuku are as follows.
14973 # 3.036158* 3.243190 3.237993 3.213852 3.169281 #te:kita-a->take-a
14974 # 1.044752 0.975001* 1.101021 1.124055 0.993379 #te:kita-i->sanuki-i
14975 # 0.369342 0.375783 0.395925* 0.369909 0.361015 #te:kita-u->fuku-u
14976 # 1.677141 1.630391 1.697472 1.503223* 1.537738 #te:kita-e->kosi-e
14977 # 0.804037* 0.850479 0.851278 0.823309 0.825024 #te:kita-o->sanuki-a
14978 ##te:kita-alueo-tl50+300 are recognized as aluea (rate=4/5).##
14979 cmd='vowelrecogv3 tr:fuku:kita:sanuki:take:yama te:kosi k:27 N:6 m:M4 dir:./onsei07 rsa:2:0.7:1:20
DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14980 ## mean distance of M4 of kosi and tr:fuku are as follows.
14981 # 0.592936 0.585613 0.591148 0.586338 0.530488* #te:kosi-a->kita-o
14982 # 0.358694 0.340865* 0.361108 0.349286 0.356189 #te:kosi-i->sanuki-i
14983 # 0.322019 0.309971 0.302387* 0.307928 0.309501 #te:kosi-u->yama-u
14984 # 0.688784 0.666361 0.667831 0.645334* 0.678047 #te:kosi-e->take-e
14985 # 0.631900 0.659909 0.654210 0.651509 0.590833* #te:kosi-o->take-o
14986 ##te:kosi-alueo-tl50+300 are recognized as alueo (rate=4/5).##
14987 ## mean distance of M4 of sanuki and tr:fuku are as follows.
14988 # 0.866674* 0.946011 0.953714 0.957545 0.879957 #te:sanuki-a->kita-a
14989 # 1.538571 1.498231 1.541976 1.443540* 1.484285 #te:sanuki-i->take-e
14990 # 0.704749 0.723364 0.708969 0.709323 0.701864* #te:sanuki-u->fuku-o
14991 # 0.376724 0.369807 0.378259 0.370141 0.364654* #te:sanuki-e->kita-o
14992 # 0.620536* 0.665359 0.670887 0.671211 0.643221 #te:sanuki-o->kosi-a
14993 ##te:sanuki-alueo-tl50+300 are recognized as aeceo (rate=1/5).##
14994 ## mean distance of M4 of yama and tr:fuku are as follows.
14995 ##
14996 cmd='vowelrecogv3 tr:fuku:kita:sanuki:yama te:take k:27 N:6 m:M4 dir:./onsei07 rsa:2:0.7:1:20
DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
14997 ## mean distance of M4 of take and tr:fuku are as follows.
14998 # 23.236970* 24.157710 24.280120 24.213450 24.148660 #te:take-a->kita-a
14999 # 0.950398 0.84050* 0.910691 0.911774 0.895378 #te:take-i->yama-i
15000 # 0.350747 0.340017 0.339142 0.335028* 0.344294 #te:take-u->kita-e
15001 # 1.698805 1.579369 1.699618 1.554122* 1.708690 #te:take-o->kita-i
15002 # 6.519309 6.509776* 6.662109 6.602029 6.552374 #te:take-o->kita-i
15003 ##te:take-alueo-tl50+300 are recognized as aleei (rate=3/5).##
15004 cmd='vowelrecogv3 tr:fuku:kita:sanuki:take te:yama k:27 N:6 m:M4 dir:./onsei07 rsa:2:0.7:1:20
DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null'
15005 ## mean distance of M4 of yama and tr:fuku are as follows.
15006 # 0.698974* 0.708969 0.708969 0.708969 0.708969 #te:yama-a->sanuki-a
15007 # 0.698974* 0.708969 0.708969 0.708969 0.708969 #te:yama-i->sanuki-i
15008 # 0.698974* 0.708969 0.708969 0.708969 0.708969 #te:yama-u->sanuki-u
15009 # 0.698974* 0.708969 0.708969 0.708969 0.708969 #te:yama-e->sanuki-e
15010 # 0.698974* 0.708969 0.708969 0.708969 0.708969 #te:yama-o->sanuki-o
15011 ##te:yama-alueo-tl50+300 are recognized as aluea (rate=4/5).##
15012 ##
15013 ##(8) Single CAN2 for long prediction
15014 for name in take ; do for v in a i u e o ; do
15015   rm -rf result-ensrs2ge/tmp;
15016   d=../../onsei07"
15017   tf=0:tl=1000:tt=expr $tf + ${tl}\'pf=$tt:pl=200:pt=expr ${pf} + ${pl}\' #
15018   tf=0:tl=400:tt=expr $tf + ${tl}\'pf=$tt:pl=100:pt=expr ${pf} + ${pl}\' # NG for take-i
15019   #rsarsa=-1.0.7:1:20 k=10 N=N:33-33:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 gsg:5e:3 ww=0.2 T=100 ; t
o=$ftrl]
15020   rsa=rsa:-1.0.7:1:20 k=54 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 gsg:5e:3 ww=0.2 T=100 ; to=${ftrl]
}
15021   rsa=rsa:-1.0.7:1:20 k=9 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 gsg:5e:3 ww=0.2 T=100 ; to=${ftrl]
15022   rsa=rsa:-1.0.7:1:20 k=10 N=33 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 gsg:5e:3 ww=0.2 T=100 ; to=${ftrl]
}
15023   cmd='./tspredv3 $d/$name)-${v}.dat ${tf}-${tt}):${pf}-${pt} ${mp} ${DM} ${H} N:${N} -$N:1 M:1-1:1 ib:
0:0:0 $f$ k:$k y:0:0:0:1 $g) ${w} T:$T) vt:0.5 vr:10"
15024   cp result-ensrs2ge/tmp/null ;date
15025   echo "## Done for $cmd ##"
15026   done done
15027   done done
15028   MSE=5.457008e+04 (NMSE2.090280e+00) (n100) 0-1000:1000-1100k10N33mpl:1:1.000000H1-y take-i with k10
15029   #MSE=3.857337e+04 (NMSE1.477534e+00) (n100) 0-1000:1000-1100k9N33mpl:1:1.000000H1-y take-i with k9
15030   NG fo take-i and take-e with k=9,10,27,54
15031
15032   ##(9) bagging predictions
15033   for name in take ; do for v in e i do
15034     rm -rf result-ensrs2ge/tmp;
15035     d=../../onsei07"
15036     tf=0:tl=200:tt=expr $tf + ${tl}\'pf=$tt:pl=200:pt=expr ${pf} + ${pl}\' # NG for take-i pl=200
15037     tf=0:tl=400:tt=expr $tf + ${tl}\'pf=$tt:pl=200:pt=expr ${pf} + ${pl}\' # OK for take-i pl=200
15038     tf=150:tl=150:tt=expr $tf + ${cl}\'pf=$tt:pl=30:pt=expr ${pf} + ${pl}\' # NG for take-i pl=200
15039     tf=0:tl=1000:tt=expr $tf + ${tl}\'pf=$tt:pl=200:pt=expr ${pf} + ${pl}\' # vrry OK for take-i
15040     #rsarsa=2:0.7:1:20 k=54 N=6 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 gsg:5e:3 ww=0.2 T=100 /date
15041     #rsarsa=2:0.7:1:20 k=27 N=9 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 gsg:5e:3 ww=0.2 T=100 /date
15042     cmd='./tspredv3 $d/$name)-${v}.dat ${tf}-${tt}):${pf}-${pt} ${mp} ${DM} ${H} N:$N-$N:1 M:1-1:1 ib:0:
0:0:0 $f$ k:$k y:0:0:0:0 $g) ${w} T:$T) vt:0.5 vr:10"
15043     cp result-ensrs2ge/tmp/null ;date
15044     echo "cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../../onsei07/predictDM0:k:$k N:$N)-${tf}-${pt})-$name-$
v.dat"
15045     cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../../onsei07/predictDM0:k:$k N:$N)-${tf}-${pt})-$name-$v.dat
15046     echo "## Done for $cmd ##"
15047     done done
15048     MSE=9.701686e+04 (NMSE1.117458e-01) (n200) 0-1000:1000-1200k54N6mpl:1:1.000000H1-y take-a pl=200 k54
15049     better than k27
15050     MSE=2.869175e+03 (NMSE1.136130e-01) (n200) 0-1000:1000-1200k54N6mpl:1:1.000000H1-y take-i pl=200 k54
15051     better than k27
15052     MSE=2.967348e+04 (NMSE7.758390e-02) (n200) 0-1000:1000-1200k54N6mpl:1:1.000000H1-y take-u pl=200 k54
15053     worse than k27
15054     MSE=5.607885e+04 (NMSE2.537761e-01) (n200) 0-1000:1000-1200k54N6mpl:1:1.000000H1-y take-e pl=200 k54
15055     better than k27
15056     MSE=4.532805e+03 (NMSE2.535189e-02) (n200) 0-1000:1000-1200k54N6mpl:1:1.000000H1-y take-o pl=200 k54
15057     better than k27
15058     MSE=3.178998e+05 (NMSE3.6661630e-01) (n200) 0-1000:1000-1200k27N9mpl:1:1.000000H1-y take-i pl=200 k27
15059     not so good?for t>100
15060     MSE=8.510318e+03 (NMSE3.369898e-01) (n200) 0-1000:1000-1200k27N9mpl:1:1.000000H1-y take-i pl=200 k27
15061     good
15062     MSE=1.192796e+04 (NMSE3.118669e-02) (n200) 0-1000:1000-1200k27N9mpl:1:1.000000H1-y take-u pl=200 k27
15063     good
15064     MSE=7.117342e+04 (NMSE3.220842e-01) (n200) 0-1000:1000-1200k27N9mpl:1:1.000000H1-y take-e pl=200 k27
15065     so so
15066     MSE=9.706418e+03 (NMSE5.428780e-02) (n200) 0-1000:1000-1200k27N9mpl:1:1.000000H1-y take-o pl=200 k27
15067     good
15068     MSE=3.979184e+05 (NMSE4.583299e-01) (n200) 0-1000:1000-1200k27N6mpl:1:1.000000H1-y take-a pl=200 NG f
or t>100
15069     MSE=7.754112e+03 (NMSE3.070457e-01) (n200) 0-1000:1000-1200k27N6mpl:1:1.000000H1-y take-i pl=200
15070     MSE=2.825030e+04 (NMSE7.386288e-02) (n200) 0-1000:1000-1200k27N6mpl:1:1.000000H1-y take-u pl=200
15071     MSE=7.742709e+04 (NMSE3.305842e-01) (n200) 0-1000:1000-1200k27N6mpl:1:1.000000H1-y take-e pl=200
15072     MSE=1.649875e+05 (NMSE3.850680e-01) (n30) 150-300:300-330k27N6mpl:1:1.000000H1-y take-a
15073     MSE=1.295897e+03 (NMSE2.119024e-02) (n30) 150-300:300-330k27N6mpl:1:1.000000H1-y take-u
15074     MSE=3.608968e+04 (NMSE1.248034e-01) (n30) 150-300:300-330k27N6mpl:1:1.000000H1-y take-e
15075     MSE=3.608968e+04 (NMSE1.248034e-01) (n30) 150-300:300-330k27N6mpl:1:1.000000H1-y take-e
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15070 #NSE=2.411451e+03(NMSE8.761330e-03)(n30) 150-300:300-330k27N6mpl:1:1.1.000000H1-y take-o
15071 ##(9') bagging predictions for recognition test
15072 for name in take ; do for v in a i u e o ; do
15073 rm -rf result-ensrs2ge/tmp;
15074 d=""./onse107"
15075 #f=0:0:1-200:t=tt=expr $ {tf} + $ {tl} ;pf=$tt;pl=200;pt="expr $(pf) + $(pl)" # NG for take-i pl=200
15076 #f=0:0:1-200:t=tt=expr $ {tf} + $ {tl} ;pf=$tt;pl=200;pt="expr $(pf) + $(pl)" # OK for take-i pl=200
15077 #f=1:150:t1=150:tt="expr $ {tf} + $ {tl} ;pf=$tt;pl=30:pt="expr $(pf) + $(pl)" # NG for take-i pl=200
15078 #f=1:150:t1=150:tt="expr $ {tf} + $ {tl} ;pf=$tt;pl=30:pt="expr $(pf) + $(pl)" # NG for take-i pl=200
15079 t=150:t1=150:tt="expr $ {tf} + $ {tl} ;pf=$tt;pl=150:pt="expr $(pf) + $(pl)" # vrry OK for take-i
15080 t=150:t1=150:tt="expr $ {tf} + $ {tl} ;pf=$tt;pl=150:pt="expr $(pf) + $(pl)" # vrry OK for take-i
15081 #xsa=rsa:2:0.7:11:20 k=27 N=6 mp=mp;1:1:1 DM=DiffMode:0 H=Hosei:1 g=5e-3 w=0.2 T=100 /date
15082 #xsa=rsa:2:0.7:11:20 k=54 N=6 mp=mp;1:1:1 DM=DiffMode:0 H=Hosei:1 g=5e-3 w=0.2 T=100 /date
15083 #xsa=rsap:2:0.7:11:20 k=27 N=9 mp=mp;1:1:1 DM=DiffMode:0 H=Hosei:1 g=5e-3 w=0.2 T=100 /date
15084 cnd=""./tspev3 $d/$sname) $ {tf} + $ {tl} ;pf=$tt;pl=150:pt="expr $(pf) + $(pl)" # vrry OK for take-i
0:0:0 $[raa] k:$[k] y:0:0:0:1 $[g] $ {w} T:$[T] vt:0.5 vr:10"
15085 $cmd >/dev/null /date
15086 echo "cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../onse107/predictDM0:k${k}N${N}t${pf}]-$[pt]-$name-$
cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../onse107/predictDM0:k${k}N${N}t${pf}]-$[pt]-$name-$v.dat
done echo "## Done for $cmd ##"
15088
15089 echo "## the followings are for 30 points evaluation, but we have 150data predictions.
15090 ##NSE=1.649875e+05(NMSE3.850680e-01)(n30) 150-300:300-330k27N6mpl:1:1.1.000000H1-y take-a
15091 ##NSE=2.92346e+03(NMSE1.561294e-01)(n30) 150-300:300-330k27N6mpl:1:1.1.000000H1-y take-u
15092 ##NSE=9.295897e+03(NMSE1.119024e-02)(n30) 150-300:300-330k27N6mpl:1:1.1.000000H1-y take-u
15093 ##NSE=3.608968e+04(NMSE1.248034e-01)(n30) 150-300:300-330k27N6mpl:1:1.1.000000H1-y take-e
15094 ##NSE=2.411451e+03(NMSE8.761330e-03)(n30) 150-300:300-330k27N6mpl:1:1.1.000000H1-y take-o
15095 ##NSE=1.126377e+06(NMSE1.128643e+00)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-a
15096 ##NSE=1.005699e+04(NMSE4.062435e-01)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-i
15097 ##NSE=2.100223e+05(NMSE4.970395e-01)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-u
15098 ##NSE=1.466781e+05(NMSE5.694093e-01)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-e
15099 ##NSE=7.435518e+04(NMSE3.473831e-01)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-o
15100 ##NSE=7.435518e+04(NMSE3.473831e-01)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-o
15101 ##NSE=7.435518e+04(NMSE3.473831e-01)(n150) 150-300:300-450k27N6mpl:1:1.1.000000H1-y take-o
15102 ##(9') bagging predictions for speaker recognition ##(11'')???
15103 for name in s-take ; do for v in a i u e o ; do
15104 rm -rf result-ensrs2ge/tmp;
15105 d=""./onse107"
15106 #f=0:0:1-200:t=tt=expr $ {tf} + $ {tl} ;pf=$tt;pl=50:pt="expr $(pf) + $(pl)" # vrry OK for take-i
15107 t=0:0:1-200:t=tt=expr $ {tf} + $ {tl} ;pf=$tt;pl=100:pt="expr $(pf) + $(pl)" # vrry OK for take-i
15108 #xsa=rsa:2:0.7:11:20 k=27 N=6 mp=mp;1:1:1 DM=DiffMode:0 H=Hosei:1 g=5e-3 w=0.2 T=100 /date
15109 #xsa=rsa:2:0.7:11:20 k=54 N=6 mp=mp;1:1:1 DM=DiffMode:0 H=Hosei:1 g=5e-3 w=0.2 T=100 /date
15110 cnd=""./tspev3 $d/$sname) $ {tf} + $ {tl} ;pf=$tt;pl=50:pt="expr $(pf) + $(pl)" # vrry OK for take-i
15111 o:0:0 $[raa] k:$[k] y:0:0:0:1 $[g] $ {w} T:$[T] vt:0.5 vr:10"
15112 $cmd >/dev/null /date
15113 echo "cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../onse107/predictDM0:k${k}N${N}t${pf}]-$[pt]-$name-$
v.dat"
15114 cp result-ensrs2ge/predictDM0:$pf-$pt.dat ../onse107/predictDM0:k${k}N${N}t${pf}]-$[pt]-$name-$v.dat
15115 echo "## Done for $cmd ##"
15116 done
15117 #Now executing 070207 finished
15118 #NSE=3.103290e+04(NMSE6.284037e-01)(n50) 800-1600:1600-1650k54N6mpl:1:1.1.000000H1-y s-taka-a good onl
15119 #NSE=5.016779e+02(NMSE6.303207e-01)(n50) 800-1600:1600-1650k54N6mpl:1:1.1.000000H1-y s-taka-i good onl
15120 #NSE=9.193176e+02(NMSE6.631833e-01)(n50) 800-1600:1600-1650k54N6mpl:1:1.1.000000H1-y s-taka-u good onl
15121 #NSE=4.709621e+03(NMSE2.866689e-01)(n50) 800-1600:1600-1650k54N6mpl:1:1.1.000000H1-y s-taka-e good onl
15122 #NSE=9.486100e+01(NMSE1.193815e-01)(n50) 800-1600:1600-1650k54N6mpl:1:1.1.000000H1-y s-taka-o good onl
15123 #NSE=5.450605e+04(NMSE9.773647e-01)(n100) 0-800:800-900k54N6mpl:1:1.1.000000H1-y
15124 #NSE=5.450605e+04(NMSE9.773647e-01)(n100) 0-800:800-900k54N6mpl:1:1.1.000000H1-y
15125 ##(10) making s(t) by singleCAND
15126 rm -rf result-ensrs2ge/tmp;
15127 for name in fuku kita kosi sanuki take yama; do for v in a i u e o ; do
15128 d=""./onse107 # the directory storing the onsei-data files
15129 #xsa=rsa:1:1:0.7:11:20 k=9 N=1 mp=mp;1:1:1 DM=DiffMode:0 H=Hosei:1 g=5e-3 w=0.2 T=100 ;
15130 t=100:t1=2000:tt="expr $ {tf} + $ {tl} ;pf=$tt;pl=$l;pt="expr $(pf) + $(pl)"
15131 t=100:t1=2000:tt="expr $ {tf} + $ {tl} ;pf=$tt;pl=$l;pt="expr $(pf) + $(pl)"
15132 ./tspev3 $d/$sname) $ {tf} + $ {tl} ;pf=$tt;pl=$l;pt="expr $(pf) + $(pl)"
15133 1 $[raa] k:$[k] y:0:0:0:1 $[g] $ {w} T:$[T] vt:0.5 vr:10 >/dev/null
15134 #ifto save
15135 cd result-ensrs2ge;
15136 f=""./$(d)/s-$name)-N${N}t${tf}]-$[tt]p${pf}]-$[pt]-$s(v)"
15137 f=""./$(d)/s-$name)-N${N}t${tf}]-$[tt]p${pf}]-$[pt]-$s(v)"
15138 f=""./$(d)/s-$name)-N${N}t${tf}]-$[tt]p${pf}]-$[pt]-$s(v)"
15139 p=predictDM0:$s-$[pt].dat"
15140 cat $[p] |awk '{print $3-$1}' > ../$(f).dat
15141 ##for display error from here
```

```
15142 cat > disp.plt <EOF
15143 #plot "../$(f).dat" using 0:($3-$1) t "../$(f)" w lp; pause -1 "Hit return key to quit"
15144 plot "../$(f).dat" using 0:1 t "$f}" w lp; pause -1 "Hit return key to quit"
15145 EOF
15146 xterm -geometry 50x5-0+0 -e gnuplot -geometry 300x210 disp.plt
15147 ##for display error to here
15148 cd ...
15149 echo "## Done for $(f).dat ##"
15150 done ; done
15151 ## making s(t) to here.
15152 ##(11)#speaker recognition ? Speech recognition (1+3+4+4+5+3)/30=20/30=66.6%
15153 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:9 N:1 spkr:1 m:poles4 d
ir:.../onse107 rsa:-1:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15154 ## mean distance of poles of 'aueo' of s-fuku and tr:s-fuku are as follows.
15155 # 0.042245 0.040060* 0.079731 0.042255 0.092760 0.133079 Hte:s-fuku-a->s-yama-i
15156 # 0.000989* 0.064106 0.129363 0.092760 0.133079 Hte:s-fuku-i->s-yama-a
15157 # 0.063530* 0.096177 0.101932 0.056820* 0.095917 Hte:s-fuku-u->s-yama-e
15158 # 0.147686 0.093842 0.157976 0.127572 0.069483* Hte:s-fuku-e->s-yama-o
15159 # 0.145533* 0.095947 0.122984 0.148196 0.082366* Hte:s-fuku-o->s-yama-u
15160 ##Hte:s-fuku-aueo-t800-1600 are recognized as laeo (rate=1/5).##
15161 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kita k:9 N:1 spkr:1 m:poles4 d
ir:.../onse107 rsa:-1:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15162 ## mean distance of poles of 'aueo' of s-kita and tr:s-fuku are as follows.
15163 # 0.041494* 0.081804 0.057902 0.044840 0.096422 Hte:s-kita-a->s-yama-i
15164 # 0.178910 0.211511 0.119480* 0.229855 0.218767 Hte:s-kita-i->s-yama-u
15165 # 0.183233 0.093372 0.107021 0.108216 0.039428* Hte:s-kita-u->s-yama-e
15166 # 0.083173 0.053862 0.070727 0.103526* 0.113057 Hte:s-kita-e->s-yama-o
15167 # 0.215709 0.219942 0.229450 0.219299 0.206064* Hte:s-kita-o->s-yama-u
15168 ##Hte:s-kita-aueo-t800-1600 are recognized as aueo (rate=3/5).##
15169 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kosi k:9 N:1 spkr:1 m:poles4 d
ir:.../onse107 rsa:-1:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15170 ## mean distance of poles of 'aueo' of s-kosi and tr:s-fuku are as follows.
15171 # 0.089736 0.102844 0.103473 0.064772* 0.099884 Hte:s-kosi-a->s-yama-i
15172 # 0.242934 0.144079* 0.195268 0.235222 0.241707 Hte:s-kosi-i->s-yama-u
15173 # 0.151287 0.264857 0.052750* 0.190656 0.250199 Hte:s-kosi-u->s-yama-e
15174 # 0.102829 0.066727 0.100839 0.039197* 0.108755 Hte:s-kosi-e->s-yama-o
15175 # 0.169160 0.189730 0.174399 0.186103 0.104472* Hte:s-kosi-o->s-yama-u
15176 ##Hte:s-kosi-aueo-t800-1600 are recognized as aueo (rate=4/5).##
15177 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-sanuki k:9 N:1 spkr:1 m:poles4 d
ir:.../onse107 rsa:-1:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15178 ## mean distance of poles of 'aueo' of s-sanuki and tr:s-fuku are as follows.
15179 # 0.102059* 0.129295 0.160534 0.143476 0.149273 Hte:s-sanuki-a->s-yama-i
15180 # 0.093308 0.039539* 0.132618 0.072377 0.094199 Hte:s-sanuki-i->s-yama-u
15181 # 0.168220 0.137058 0.021566* 0.159030 0.177180 Hte:s-sanuki-u->s-yama-e
15182 # 0.070106 0.063203 0.118869 0.059645 0.058313* Hte:s-sanuki-e->s-yama-o
15183 # 0.223717 0.219743 0.209831 0.208531 0.136678* Hte:s-sanuki-o->s-yama-u
15184 ##Hte:s-sanuki-aueo-t800-1600 are recognized as aueo (rate=4/5).##
15185 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-take k:9 N:1 spkr:1 m:poles4 d
ir:.../onse107 rsa:-1:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15186 ## mean distance of poles of 'aueo' of s-take and tr:s-fuku are as follows.
15187 # 0.16306* 0.070819 0.096876 0.052044 0.102440 Hte:s-take-a->s-yama-i
15188 # 0.161306 0.040085* 0.125533 0.090764 0.063168 Hte:s-take-i->s-yama-u
15189 # 0.070625 0.083610 0.03443* 0.058266 0.085636 Hte:s-take-u->s-yama-e
15190 # 0.054680 0.082903 0.08715 0.032861* 0.099999 Hte:s-take-e->s-yama-o
15191 # 0.214390 0.184185 0.215789 0.205241 0.053072* Hte:s-take-o->s-yama-u
15192 ##Hte:s-take-aueo-t800-1600 are recognized as aueo (rate=5/5).##
15193 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-yama k:9 N:1 spkr:1 m:poles4 d
ir:.../onse107 rsa:-1:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15194 ## mean distance of poles of 'aueo' of s-yama and tr:s-fuku are as follows.
15195 # 0.058675* 0.246452 0.146951 0.173575 0.226945 Hte:s-yama-a->s-yama-i
15196 # 0.052326* 0.086760 0.120618 0.076197 0.091506 Hte:s-yama-i->s-yama-u
15197 # 0.21111* 0.214146 0.171317 0.133706 0.196442 Hte:s-yama-u->s-yama-e
15198 # 0.094184 0.088324 0.062618 0.039391* 0.062781 Hte:s-yama-e->s-yama-o
15199 # 0.120890 0.078571 0.082375 0.081169 0.032462* Hte:s-yama-o->s-yama-u
15200 ##Hte:s-yama-aueo-t800-1600 are recognized as aaeo (rate=3/5).##
15201 ##(11'')#speaker recognition ? now executing 070207 finished
15202 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:54 N:6 spkr:1 m:poles4
dir:.../onse107 rsa:2:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15203
15204 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:54 N:6 spkr:1 m:poles4
dir:.../onse107 rsa:2:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15205
15206 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:54 N:6 spkr:1 m:poles4
dir:.../onse107 rsa:2:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15207 ## mean distance of poles of 'aueo' of s-fuku and tr:s-fuku are as follows.
15208 # 0.047453 0.046334 0.048888 0.046160* 0.047624 Hte:s-fuku-a->s-sanuki-e
15209 # 0.045717 0.044914* 0.047287 0.046134 0.045445 Hte:s-fuku-i->s-kita-i
15210 # 0.048443 0.048701* 0.049820 0.048051 0.048632 Hte:s-fuku-u->s-kita-i
15211 # 0.048038 0.048955* 0.050404 0.047354 0.048308 Hte:s-fuku-e->s-kita-i
15212 # 0.048038 0.048955* 0.049916 0.048370 0.048226 Hte:s-fuku-o->s-kita-i
15213 ##Hte:s-fuku-aueo-t800-1600 are recognized as eili (rate=1/5).##
15214 cmd="vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kita k:54 N:6 spkr:1 m:poles4
dir:.../onse107 rsa:2:0.7:11:20 DiffMode:0 T:100 tt:0:800:800:800 DISP:0 > /dev/null"
15215
```

15215 ## mean distance of poles of 'aiueo' of s-kita and tr:s-fuku are as follows.
15216 # 0.047241 0.045763* 0.051165 0.046977 0.094929 #te:s-kita-a->s-kita-i
15217 # 0.049597 0.047762* 0.052119 0.049033 0.052119 #te:s-kita-i->s-kita-i
15218 # 0.047009 0.048192* 0.048066 0.047743 #te:s-kita-u->s-kita-i
15219 # 0.048489 0.048213* 0.052033 0.049275 0.051045 #te:s-kita-e->s-kita-i
15220 # 0.046341 0.044413 0.048449 0.045613 0.046746 #te:s-kita-o->s-kita-i
15221 ##te:s-kita-aiueo-t800+1600 are recognized as iiii (rate=1/5).##
15222 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-kosi k:54 N:6 spkr:1 m:poles4
dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15223 ## mean distance of poles of 'aiueo' of s-kosi and tr:s-fuku are as follows.
15224 # 0.047820 0.047409* 0.051650 0.047929 0.049132 #te:s-kosi-a->s-kita-i
15225 # 0.046612 0.045829* 0.048965 0.047071 0.047602 #te:s-kosi-i->s-kita-i
15226 # 0.046683 0.045363* 0.049800 0.046887 0.048163 #te:s-kosi-u->s-kita-i
15227 # 0.049173 0.047564* 0.051616 0.049179 0.049351 #te:s-kosi-e->s-kita-i
15228 # 0.047657 0.045991* 0.049679 0.047520 0.049085 #te:s-kosi-o->s-kita-i
15229 ##te:s-kosi-aiueo-t800+1600 are recognized as iiii (rate=1/5).##
15230 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-sanuki k:54 N:6 spkr:1 m:poles
4 dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15231 ## mean distance of poles of 'aiueo' of s-sanuki and tr:s-fuku are as follows.
15232 # 0.048637 0.046188* 0.048661 0.047557 0.048661 #te:s-sanuki-a->s-kita-i
15233 # 0.048739 0.048139 0.050059 0.047811* 0.049611 #te:s-sanuki-i->s-sanuki-e
15234 # 0.045165 0.044089* 0.047849 0.045162 0.045436 #te:s-sanuki-u->s-kita-i
15235 # 0.046956 0.045996* 0.050186 0.046560 0.048842 #te:s-sanuki-e->s-kita-i
15236 # 0.046969 0.046505* 0.049493 0.047329 0.047958 #te:s-sanuki-o->s-kita-i
15237 ##te:s-sanuki-aiueo-t800+1600 are recognized as teiii (rate=0/5).##
15238
15239 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-take k:54 N:6 spkr:1 m:poles4
dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15240 ## mean distance of poles of 'aiueo' of s-take and tr:s-fuku are as follows.
15241 # 0.047778 0.047732 0.050296 0.047538* 0.050296 #te:s-take-a->s-sanuki-e
15242 # 0.046969 0.044926* 0.048270 0.047320 0.047775 #te:s-take-i->s-kita-i
15243 # 0.047174 0.046746* 0.049464 0.047434 0.048772 #te:s-take-u->s-kita-i
15244 # 0.047002 0.046445* 0.049488 0.047982 0.046844 #te:s-take-e->s-kita-i
15245 # 0.047691 0.047099* 0.051401 0.047737 0.047876 #te:s-take-o->s-kita-i
15246 ##te:s-take-aiueo-t800+1600 are recognized as eiii (rate=1/5).##
15247 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-yama k:54 N:6 spkr:1 m:poles4
dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15248 ## mean distance of poles of 'aiueo' of s-yama and tr:s-fuku are as follows.
15249 # 0.046338 0.045048* 0.046868 0.046231 0.047060 #te:s-yama-a->s-kita-i
15250 # 0.047128 0.045266* 0.050133 0.046928 0.047381 #te:s-yama-i->s-kita-i
15251 # 0.044709 0.044045 0.045508 0.043861* 0.044467 #te:s-yama-u->s-sanuki-e
15252 # 0.045680 0.044986* 0.048274 0.046187 0.046226 #te:s-yama-e->s-kita-i
15253 # 0.0450295 0.041748 0.041158 0.040294* #te:s-yama-o->s-sanuki-o
15254 ##te:s-yama-aiueo-t800+1600 are recognized as ielio (rate=2/5).##
15255
15256 (11'') speech recognition with M4 (2+2+3+2+1+1)/30=11/30
15257 cmd='vowelrecog3 tr:s-kita:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-fuku k:9 N:1 spkr:1 m:M4 dir:.../onsei
07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15258 ## mean distance of M4 of s-fuku and tr:s-kita are as follows.
15259 # 0.077369 0.041366* 0.098230 0.050398 0.087069 #te:s-fuku-a->s-yama-i
15260 # 0.097396 0.071937* 0.177443 0.091319 0.137494 #te:s-fuku-i->s-kita-i
15261 # 0.061491 0.051028 0.124240 0.039638* 0.108998 #te:s-fuku-u->s-take-e
15262 # 0.066429 0.059132 0.078626 0.054863* 0.074549 #te:s-fuku-e->s-take-e
15263 # 0.062057 0.051787 0.092993 0.036010* 0.086387 #te:s-fuku-o->s-take-e
15264 ##te:s-fuku-aiueo-t800+1600 are recognized as lieee (rate=2/5).##
15265 cmd='vowelrecog3 tr:s-fuku:s-kita:s-sanuki-s-take:s-yama te:s-kita k:9 N:1 spkr:1 m:M4 dir:.../onsei
07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15266 ## mean distance of M4 of s-kita and tr:s-fuku are as follows.
15267 # 0.1121741 0.108397 0.113028 0.077129* 0.110141 #te:s-kita-a->s-sanuki-e
15268 # 0.131211 0.083299 0.086010 0.076955* 0.113867 #te:s-kita-i->s-kosi-e
15269 # 0.081991 0.088415 0.078492 0.068193 0.047061* #te:s-kita-u->s-fuku-o
15270 # 0.125455 0.090351 0.112177 0.061451* 0.128039 #te:s-kita-e->s-sanuki-e
15271 # 0.243974 0.220652 0.257720 0.218344 0.124816* 0.248916 #te:s-kita-o->s-kosi-o
15272 ##te:s-kita-aiueo-t800+1600 are recognized as eeoo (rate=2/5).##
15273 cmd='vowelrecog3 tr:s-fuku:s-kita:s-sanuki-s-take:s-yama te:s-kosi k:9 N:1 spkr:1 m:M4 dir:.../onsei
07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15274 ## mean distance of M4 of s-kosi and tr:s-fuku are as follows.
15275 # 0.111280 0.136498 0.140543 0.082968* 0.146909 #te:s-kosi-a->s-kita-e
15276 # 0.217247 0.189761* 0.202131 #te:s-kosi-i->s-sanuki-i
15277 # 0.193345 0.202831 0.172070* 0.231817 0.229996 #te:s-kosi-u->s-sanuki-u
15278 # 0.290022 0.062423* 0.076958 0.080717 0.074549 #te:s-kosi-e->s-sanuki-i
15279 # 0.079067 0.241350 0.267497 0.243635 0.201874* 0.243635 #te:s-kosi-o->s-sanuki-o
15280 ##te:s-kosi-aiueo-t800+1600 are recognized as eiuiio (rate=3/5).##
15281 cmd='vowelrecog3 tr:s-fuku:s-kita:s-take:s-yama te:s-yama k:9 N:1 spkr:1 m:M4 dir:.../onsei
07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15282 ## mean distance of M4 of s-sanuki and tr:s-fuku are as follows.
15283 # 0.068920 0.059024 0.073631 0.052507* 0.060959 #te:s-sanuki-a->s-take-e
15284 # 0.0591423 0.099764 0.089133 0.062163* 0.068198 #te:s-sanuki-i->s-kita-e
15285 # 0.127410 0.127489 0.109023 0.112580 #te:s-sanuki-u->s-yama-u
15286 # 0.073670 0.088795 0.082560 0.076781 0.071650* #te:s-sanuki-e->s-kita-o
15287 # 0.307483 0.315429 0.312161 0.290343 0.109303 #te:s-sanuki-o->s-kosi-o
15288 ##te:s-sanuki-aiueo-t800+1600 are recognized as eeoo (rate=2/5).##

15289 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-yama te:s-take k:9 N:1 spkr:1 m:M4 dir:.../onsei
07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15290 ## mean distance of M4 of s-take and tr:s-fuku are as follows.
15291 # 0.069022 0.058749* 0.070518 0.081883 #te:s-take-a->s-fuku-u
15292 # 0.083456 0.089910 0.096541 #te:s-take-i->s-yama-o
15293 # 0.133683 0.113468 0.093998* 0.115423 0.093998* #te:s-take-u->s-yama-e
15294 # 0.059847 0.048165* 0.056038 0.072163 0.073534 #te:s-take-e->s-kita-i
15295 # 0.474819 0.498538 0.462274 0.473513 0.453792* #te:s-take-o->s-sanuki-o
15296 ##te:s-take-aiueo-t800+1600 are recognized as ueoo (rate=1/5).##
15297 ## mean distance of M4 of s-yama and tr:s-fuku are as follows.
15298 # 0.081932* 0.103215 0.111550 0.099944 0.118871 #te:s-yama-a->s-sanuki-a
15299 # 0.079468* 0.089691 0.099833 0.131961 #te:s-yama-i->s-take-a
15300 # 0.114382 0.078745 0.105309 0.088809 0.078570* #te:s-yama-u->s-fuku-o
15301 # 0.099725 0.082236 0.06988* 0.104109 0.118763 #te:s-yama-e->s-take-u
15302 # 0.085251 0.057917* 0.085288 0.082460 0.072820 #te:s-yama-o->s-take-i
15303 ##te:s-yama-aiueo-t800+1600 are recognized as asooi (rate=1/5).##
15304
15305 (11'') vowel-speaker recog M4,k9N1
15306 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-fuku k:9 N:1 spkr:1 m:M4 dir:...
/onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15307 ## mean distance of M4 of s-fuku and tr:s-fuku are as follows.
15308 # 0.052755 0.041368* 0.098230 0.050398 0.087069 #te:s-fuku-a->s-yama-i
15309 # 0.097396 0.068937* 0.077096 0.091319 0.120336 #te:s-fuku-i->s-take-e
15310 # 0.061949 0.051208 0.039638* 0.077930 #te:s-fuku-u->s-fuku-e
15311 # 0.062115 0.059132 0.071684 0.054863* 0.061596 #te:s-fuku-e->s-take-e
15312 # 0.062057 0.051787 0.065634 0.036010* 0.051473 #te:s-fuku-o->s-take-e
15313 ##te:s-fuku-aiueo-t800+1600 are recognized as lieee (rate=2/5).##
15314 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-kita k:9 N:1 spkr:1 m:M4 dir:...
/onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15315 ## mean distance of M4 of s-kita and tr:s-fuku are as follows.
15316 # 0.060011* 0.108397 0.113028 0.067545 0.110141 #te:s-kita-a->s-kita-a
15317 # 0.131211 0.083299 0.086010 0.076955* 0.113867 #te:s-kita-i->s-kosi-e
15318 # 0.081991 0.088415 0.078492 0.068193 0.047061* #te:s-kita-u->s-fuku-o
15319 # 0.109387 0.090351 0.112177 0.053881* 0.110728 #te:s-kita-e->s-kita-e
15320 # 0.243974 0.220652 0.257720 0.215457 0.124816* #te:s-kita-o->s-kosi-o
15321 ##te:s-kita-aiueo-t800+1600 are recognized as asooo (rate=3/5).##
15322 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-s-kosi k:9 N:1 spkr:1 m:M4 dir:...
/onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15323 ## mean distance of M4 of s-kosi and tr:s-fuku are as follows.
15324 # 0.111280 0.136498 0.140543 0.082968* 0.146909 #te:s-kosi-a->s-kita-e
15325 # 0.217247 0.151303* 0.202131 0.137494 #te:s-kosi-i->s-kosi-i
15326 # 0.193345 0.202831 0.086821* 0.231817 0.229996 #te:s-kosi-u->s-kosi-u
15327 # 0.090022 0.062423 0.076958 0.048200* 0.090489 #te:s-kosi-e->s-kosi-e
15328 # 0.279067 0.241350 0.267497 0.243635 0.018895* #te:s-kosi-o->s-kosi-o
15329 ##te:s-kosi-aiueo-t800+1600 are recognized as elueo (rate=4/5).##
15330 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-sanuki k:9 N:1 spkr:1 m:M4 dir
:.../onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15331 ## mean distance of M4 of s-sanuki and tr:s-fuku are as follows.
15332 # 0.055464 0.059024 0.073651 0.052507* 0.060859 #te:s-sanuki-a->s-take-e
15333 # 0.077099 0.102114* 0.089133 0.039523 0.068198 #te:s-sanuki-i->s-sanuki-i
15334 # 0.127410 0.127489 0.035638* 0.109023 0.112580 #te:s-sanuki-u->s-sanuki-u
15335 # 0.073670 0.044640 0.082560 0.042485* 0.071650 #te:s-sanuki-e->s-sanuki-e
15336 # 0.305552 0.269183 0.313216 0.277918 0.109305* #te:s-sanuki-o->s-kosi-o
15337 ##te:s-sanuki-aiueo-t800+1600 are recognized as elueo (rate=4/5).##
15338 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-take k:9 N:1 spkr:1 m:M4 dir:...
/onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15339 ## mean distance of M4 of s-take and tr:s-fuku are as follows.
15340 # 0.046336* 0.076832 0.058749 0.070192 0.081883 #te:s-take-a->s-take-a
15341 # 0.083456 0.021890* 0.095451 0.085526 0.071561 #te:s-take-i->s-take-i
15342 # 0.133683 0.134168 0.056268* 0.093998 0.118939 #te:s-take-u->s-take-u
15343 # 0.059864 0.048165* 0.056038 0.053889 0.073534 #te:s-take-e->s-kita-i
15344 # 0.474819 0.422369 0.462274 0.473513 0.129901* #te:s-take-o->s-take-o
15345 ##te:s-take-aiueo-t800+1600 are recognized as aluo (rate=4/5).##
15346 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-yama k:9 N:1 spkr:1 m:M4 dir:...
/onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15347 ## mean distance of M4 of s-yama and tr:s-fuku are as follows.
15348 # 0.1021620* 0.103215 0.111550 0.099944 0.105723 #te:s-yama-a->s-yama-a
15349 # 0.076356* 0.089629 0.099869 0.094629 0.107119 #te:s-yama-i->s-yama-a
15350 # 0.114382 0.078745 0.076891 0.088809 0.078570* #te:s-yama-u->s-yama-u
15351 # 0.099725 0.079122 0.069898 0.023622* 0.075059 #te:s-yama-e->s-yama-e
15352 # 0.085251 0.057917 0.085288 0.078214 0.027020* #te:s-yama-o->s-yama-o
15353 ##te:s-yama-aiueo-t800+1600 are recognized as aaueo (rate=4/5).##
15354
15355 (11'') speech recognition with poles4, single (0+1+1+2+3+0)/30=7/30=23/3
15356 cmd='vowelrecog3 tr:s-kita:s-kita:s-kosi:s-sanuki-s-take:s-yama te:s-fuku k:9 N:1 spkr:1 m:poles4 dir:.../o
nsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15357 ## mean distance of poles of 'aiueo' of s-fuku and tr:s-kita are as follows.
15358 # 0.066277 0.040060* 0.078731 0.042355 0.097053 #te:s-fuku-a->s-yama-i
15359 # 0.091947* 0.100067 0.136691 0.092160 0.133079 #te:s-fuku-i->s-kita-a
15360 # 0.073170 0.109844 0.140440 0.056820* 0.095917 #te:s-fuku-u->s-take-e
15361 # 0.147686 0.093842 0.171052 0.195433 0.171052 #te:s-fuku-e->s-take-e
15362 # 0.145533 0.099547* 0.122984 0.148196 0.126617 #te:s-fuku-o->s-take-i


```
15513 ### mean distance of poles of 'aiueo' of s-kita and tr:s-fuku are as follows.
15514 # 0.044812* 0.085524 0.061138 0.084943 #te:s-kita-a->s-kita-a 1,1
15515 # 0.142730* 0.156993 0.122007* 0.176881 #te:s-kita-l->s-yama-u 0,0
15516 # 0.142730* 0.156993 0.122007* 0.176881 #te:s-kita-u->s-fuku-o 1,1
15517 # 0.0714908 0.056927 0.039438* 0.084765* #te:s-kita-e->s-kita-e 1,1
15518 # 0.150260 0.179516 0.189917 0.199247 #te:s-kita-o->s-sanuki-o 0,1
15519 ##te:s-kita-aiueo-t800+1600 are recognized as aiueo (rate=3/5).##
15520 ### mean distance of poles of 'aiueo' of s-kosi and tr:s-fuku are as follows.
15521 # 0.097317 0.106913 0.106033 0.077686* 0.087947 #te:s-kosi-a->s-sanuki-e 0,0
15522 # 0.176039 0.103718* 0.193308 0.123016* 0.235016 #te:s-kosi-l->s-kosi-i 1,1
15523 # 0.120749 0.138989 0.073609* 0.150146 0.166695 #te:s-kosi-u->s-kosi-u 1,1
15524 # 0.087544 0.062425 0.108649 0.052012* 0.088815 #te:s-kosi-e->s-kosi-e 1,1
15525 # 0.142604 0.189109 0.175481 0.184523 0.036130* #te:s-kosi-o->s-kosi-o 1,1
15526 ##te:s-kosi-aiueo-t800+1600 are recognized as aiueo (rate=4/5).##
15527 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-sanuki k:9 N:1 m:poles4 dir:../
/onsel07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15528 ### mean distance of poles of 'aiueo' of s-sanuki and tr:s-fuku are as follows.
15529 # 0.091571 0.080445* 0.125675 0.115339 0.095860 #te:s-sanuki-a->s-kita-i 0,0
15530 # 0.101215 0.079422* 0.119869 0.096537 0.111780 #te:s-sanuki-l->s-sanuki-l 1,1
15531 # 0.140897 0.145367* 0.134387 0.146407 #te:s-sanuki-u->s-sanuki-u 1,1
15532 # 0.095384 0.059922* 0.113410 0.08636 0.096030 #te:s-sanuki-e->s-sanuki-e 1,1
15533 # 0.164903 0.208904 0.211381 0.208417 0.075740* #te:s-sanuki-o->s-kosi-o 0,1
15534 ##te:s-sanuki-aiueo-t800+1600 are recognized as aiueo (rate=3/5).##
15535 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-take k:9 N:1 m:poles4 dir:../o
nsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15536 ### mean distance of poles of 'aiueo' of s-take and tr:s-fuku are as follows.
15537 # 0.053734* 0.071190 0.063464 0.061788 0.072986 #te:s-take-a->s-take-a 1,1
15538 # 0.097633 0.033852* 0.124995 0.085478 0.073562 #te:s-take-l->s-take-l 1,1
15539 # 0.066520 0.081687 0.040361* 0.057243 0.089151 #te:s-take-u->s-take-u 1,1
15540 # 0.063752 0.076930 0.079373* 0.052498* 0.088314 #te:s-take-e->s-take-e 1,1
15541 # 0.202834 0.171366 0.202758 0.195057 0.067026* #te:s-take-o->s-take-o 1,1
15542 ##te:s-take-aiueo-t800+1600 are recognized as aiueo (rate=5/5).##
15543 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-yama k:9 N:1 m:poles4 dir:../o
nsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15544 ### mean distance of poles of 'aiueo' of s-yama and tr:s-fuku are as follows.
15545 # 0.062820* 0.098932 0.149893 0.139310 0.120099 #te:s-yama-a->s-yama-a 1,1
15546 # 0.072441* 0.094792 0.119861 0.091329 0.091631 #te:s-yama-l->s-take-a 0,0
15547 # 0.116383 0.112947 0.159314 0.102182 0.098694* #te:s-yama-u->s-fuku-o 0,0
15548 # 0.074593 0.071067 0.058867 0.04468* 0.058989 #te:s-yama-e->s-yama-e 1,1
15549 # 0.077640 0.051692 0.068746 0.081166 0.054569* #te:s-yama-o->s-yama-o 1,1
15550 ##te:s-yama-aiueo-t800+1600 are recognized as aaeo (rate=3/5).##
15551 15551
15552
15553 (11''') speech recognition with poles4,bag,N27 (1+2+2+1+2)/30=10/30=0.333
15554 vowelrecog3 tr:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:27 N:6 spkr:1 m:poles4 dir:../onsel
07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15555 ### mean distance of poles of 'aiueo' of s-fuku and tr:s-kita are as follows.
15556 # 0.060301 0.058799 0.061972 0.059926 0.059914 #te:s-fuku-a->s-sanuki-l
15557 # 0.059388 0.058462* 0.059703 0.059725 0.059717 #te:s-fuku-l->s-sanuki-l
15558 # 0.059291 0.058150* 0.059654 0.059394 0.059593 #te:s-fuku-u->s-sanuki-u
15559 # 0.058691 0.057125* 0.059430 0.060617 0.060380 #te:s-fuku-e->s-sanuki-e
15560 # 0.059575 0.058384 0.057773* 0.059499 0.059369 #te:s-fuku-o->s-take-u
15561 ##te:s-fuku-aiueo-t800+1600 are recognized as aiueo (rate=1/5).##
15562 ### mean distance of poles of 'aiueo' of s-kita and tr:s-fuku are as follows.
15563 # 0.052445* 0.053495 0.054305 0.053018 0.056120 #te:s-kita-a->s-sanuki-a
15564 # 0.051986* 0.052618 0.054305 0.053125 0.055154 #te:s-kita-l->s-take-a
15565 # 0.057445 0.057830 0.059265 0.057115 0.058483 #te:s-kita-u->s-kosi-e
15566 # 0.052611 0.053349 0.053260 0.051970* 0.054762 #te:s-kita-e->s-kosi-e
15567 # 0.055849 0.054089* 0.056645 0.054129 0.056285 #te:s-kita-o->s-sanuki-l
15568 ##te:s-kita-aiueo-t800+1600 are recognized as aaei (rate=2/5).##
15569 cmd='vowelrecog3 tr:s-fuku:s-kita:s-sanuki:s-take:s-yama te:s-kosi k:27 N:6 spkr:1 m:poles4 dir:../
/onsel07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15570 ### mean distance of poles of 'aiueo' of s-kosi and tr:s-fuku are as follows.
15571 # 0.055264 0.055094 0.056870 0.054734* 0.058105 #te:s-kosi-a->s-kita-e
15572 # 0.060135 0.058992* 0.059403 0.060549 0.059438 #te:s-kosi-l->s-sanuki-l
15573 # 0.060501 0.059879 0.060269 0.058603 0.058261* #te:s-kosi-u->s-kita-o
15574 # 0.052199* 0.053165 0.054553 0.053845 0.055041 #te:s-kosi-e->s-take-a
15575 # 0.060578 0.060431 0.061473 0.060648 0.071195* #te:s-kosi-o->s-kita-o
15576 ##te:s-kosi-aiueo-t800+1600 are recognized as elao (rate=2/5).##
15577 ### mean distance of poles of 'aiueo' of s-sanuki and tr:s-fuku are as follows.
15578 # 0.055153 0.055055 0.054597 0.054308* 0.056083 #te:s-sanuki-a->s-kosi-e
15579 # 0.052229* 0.053694 0.054060 0.052336 0.054761 #te:s-sanuki-l->s-take-a
15580 # 0.055235* 0.059277 0.055323 0.056031 0.055730 #te:s-sanuki-u->s-take-a
15581 # 0.055010 0.059448 0.055333 0.053206* 0.055794 #te:s-sanuki-e->s-kosi-e
15582 # 0.056777 0.057648 0.056344 0.057413 0.055612* #te:s-sanuki-o->s-kosi-o
15583 ##te:s-sanuki-aiueo-t800+1600 are recognized as aaeo (rate=2/5).##
15584 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-yama te:s-take k:27 N:6 spkr:1 m:poles4 dir:../
/onsel07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15585 ### mean distance of poles of 'aiueo' of s-take and tr:s-fuku are as follows.
15586 # 0.052310 0.052690 0.054401 0.050119* 0.050890 #te:s-take-a->s-kosi-e
15587 # 0.057812 0.056952 0.057138 0.056122* 0.058445 #te:s-take-l->s-kosi-e
15588 # 0.057391 0.056752 0.059125 0.055944 #te:s-take-u->s-yama-e
```

```
15589 # 0.054091 0.053922 0.056791 0.053204* 0.055426 #te:s-take-e->s-kosi-e
15590 # 0.057689 0.057329 0.057246 0.056467* 0.058797 #te:s-take-o->s-kosi-e
15591 ##te:s-take-aiueo-t800+1600 are recognized as eeee (rate=1/5).##
15592 ### mean distance of poles of 'aiueo' of s-yama and tr:s-fuku are as follows.
15593 # 0.050739* 0.051613 0.052917 0.051140 0.054995 #te:s-yama-a->s-take-a
15594 # 0.059713 0.058753 0.058156 0.056938* 0.060102 #te:s-yama-l->s-take-a
15595 # 0.057411 0.057123 0.056684 0.055412* 0.057044 #te:s-yama-u->s-kosi-e
15596 # 0.054303 0.054018 0.054409 0.053026* 0.056484 #te:s-yama-e->s-kosi-e
15597 # 0.054935* 0.056336 0.055776 0.056706 0.058909 #te:s-yama-o->s-take-a
15598 ##te:s-yama-aiueo-t800+1600 are recognized as aeaea (rate=2/5).##
15599 (11'''+1) vowel-speaker recognition with poles4,bag,N27 SR25/30 VR24/30
15600 vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:27 N:6 spkr:1 m:poles4 dir:../
/onsel07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15601 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:27 N:6 spkr:1 m:poles4
dir:../ /onsel07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15602 ### mean distance of poles of 'aiueo' of s-fuku and tr:s-fuku are as follows.
15603 # 0.059822 0.059709* 0.061972 0.059926 0.059914 #te:s-fuku-a->s-sanuki-l
15604 # 0.059838 0.058462* 0.057163* 0.059725 0.059317 #te:s-fuku-l->s-sanuki-l
15605 # 0.059291 0.058150* 0.059430* 0.059594 0.059550 #te:s-fuku-u->s-fuku-u 1,1
15606 # 0.058691 0.057125* 0.058430 0.059562 0.060620 #te:s-fuku-e->s-sanuki-l
15607 # 0.059575 0.058384 0.057773* 0.058442 0.058617 #te:s-fuku-o->s-take-u 0,0
15608 ##te:s-fuku-aiueo-t800+1600 are recognized as aiueu (rate=1/5).##
15609 ### mean distance of poles of 'aiueo' of s-kita and tr:s-fuku are as follows.
15610 # 0.048574* 0.053495 0.054350 0.053018 0.056120 #te:s-kita-a->s-kita-a
15611 # 0.051986 0.051705* 0.054305 0.053125 0.055154 #te:s-kita-l->s-kita-l 1,1
15612 # 0.057445 0.057830 0.058265 0.057115* 0.058483 #te:s-kita-u->s-kosi-e 1,0
15613 # 0.052611 0.053449 0.053260 0.049085* 0.054762 #te:s-kita-e->s-kita-e 1,1
15614 # 0.058489 0.054089 0.056645 0.054129 0.053700* #te:s-kita-o->s-kita-o 1,1
15615 ##te:s-kita-aiueo-t800+1600 are recognized as aleao (rate=4/5).##
15616 ### mean distance of poles of 'aiueo' of s-kosi and tr:s-fuku are as follows.
15617 # 0.052972 0.055094 0.056870 0.054734 0.058105 #te:s-kosi-a->s-kosi-a
15618 # 0.060135 0.057453* 0.059403 0.059807 0.059438 #te:s-kosi-l->s-kosi-l 1,1
15619 # 0.060501 0.059789 0.056565* 0.058603 0.058061 #te:s-kosi-u->s-kosi-u 1,1
15620 # 0.052199 0.053165 0.054553 0.049789* 0.055041 #te:s-kosi-e->s-kosi-e 1,1
15621 # 0.060578 0.060431 0.061473 0.059274 0.053709* #te:s-kosi-o->s-kosi-o 1,1
15622 ##te:s-kosi-aiueo-t800+1600 are recognized as aiueo (rate=5/5).##
15623 ### mean distance of poles of 'aiueo' of s-sanuki and tr:s-fuku are as follows.
15624 # 0.052438* 0.054290 0.054597 0.054308 0.056083 #te:s-sanuki-a->s-sanuki-a 1,1
15625 # 0.052229 0.050919* 0.054060 0.052336 0.054761 #te:s-sanuki-l->s-sanuki-l 1,1
15626 # 0.052315 0.055277 0.052563* 0.056031 0.055790 #te:s-sanuki-u->s-sanuki-u 1,1
15627 # 0.055010 0.054729 0.055333 0.053206* 0.053374 #te:s-sanuki-e->s-kosi-e 0,1
15628 # 0.056777 0.057648 0.056344 0.057413 0.053618* #te:s-sanuki-o->s-sanuki-o 1,1
15629 ##te:s-sanuki-aiueo-t800+1600 are recognized as aiueo (rate=5/5).##
15630 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-take k:27 N:6 spkr:1 m:poles4
dir:../ /onsel07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15631 ### mean distance of poles of 'aiueo' of s-take and tr:s-fuku are as follows.
15632 # 0.048940* 0.052489 0.050974 0.050119 0.050890 #te:s-take-a->s-take-a 1,1
15633 # 0.056822 0.053414* 0.057138 0.056122 0.058445 #te:s-take-l->s-take-l 1,1
15634 # 0.057356 0.056752 0.053565* 0.055764 0.055944 #te:s-take-u->s-take-u 1,1
15635 # 0.053404 0.059320 0.053874 0.053204* 0.055426 #te:s-take-e->s-kosi-e 0,1
15636 # 0.056972 0.057390 0.056467 0.052117* 0.052117 #te:s-take-o->s-take-o 1,1
15637 ##te:s-take-aiueo-t800+1600 are recognized as aiueo (rate=5/5).##
15638 ### mean distance of poles of 'aiueo' of s-yama and tr:s-fuku are as follows.
15639 # 0.050703* 0.051613 0.052917 0.051140 0.053305 #te:s-yama-a->s-yama-a 1,1
15640 # 0.059173 0.057253 0.058156 0.056938* 0.059378 #te:s-yama-l->s-kosi-e 1,0
15641 # 0.057411 0.057123 0.054115* 0.055412 0.056932 #te:s-yama-u->s-yama-u 1,1
15642 # 0.054303 0.054018 0.054409 0.052684* 0.053894 #te:s-yama-e->s-yama-e 1,1
15643 # 0.054935 0.056336 0.055776 0.055149 0.054704* #te:s-yama-o->s-yama-o 1,1
15644 ##te:s-yama-aiueo-t800+1600 are recognized as aeueo (rate=4/5).##
15645 15645
15646
15647 (11''') mistake:speech recognition with poles4 (1+0+1+0+1+1)/30=4/30
15648 vowelrecog3 tr:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:27 N:6 spkr:1 m:poles4 dir
:../ /onsel07 rsa:1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15649 ##te:s-take-aiueo-t800+1600 are recognized as aiueo (rate=1/5).##
15650 ### mean distance of poles of 'aiueo' of s-fuku and tr:s-kita are as follows.
15651 # 0.066723* 0.066967 0.078839 0.074879 0.073801 #te:s-fuku-a->s-sanuki-a
15652 # 0.071207 0.067999 0.076099 0.072618 0.067745* #te:s-fuku-l->s-sanuki-a
15653 # 0.070711 0.059287* 0.077939 0.072092 0.073631 #te:s-fuku-u->s-kita-i
15654 # 0.067720* 0.077360 0.072097 0.072123 #te:s-fuku-e->s-kita-i
15655 # 0.070378 0.071421 0.070831 0.069391* 0.071247 #te:s-fuku-o->s-kita-e
15656 ##te:s-fuku-aiueo-t800+1600 are recognized as aeie (rate=1/5).##
15657 cmd='vowelrecog3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kita k:27 N:6 spkr:1 m:poles4 dir
:../ /onsel07 rsa:1:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1:1:179 > /dev/null'
15658 ### mean distance of poles of 'aiueo' of s-kita and tr:s-fuku are as follows.
15659 # 0.060978 0.058304* 0.063810 0.062469 0.060211 #te:s-kita-a->s-yama-i
15660 # 0.062566* 0.069522 0.076446 0.059861 0.070285 #te:s-kita-l->s-take-a
15661 # 0.073432* 0.073995 0.073434 0.075829 0.073681 #te:s-kita-u->s-sanuki-a
15662 # 0.062276* 0.065123 0.066871 0.062645 #te:s-kita-e->s-kosi-a
15663 # 0.067900* 0.073699 0.073776 0.069051 0.075049 #te:s-kita-o->s-take-a
15664 ##te:s-kita-aiueo-t800+1600 are recognized as iauea (rate=0/5).##
15665 cmd='vowelrecog3 tr:s-fuku:s-kita:s-sanuki:s-take:s-yama te:s-kosi k:27 N:6 spkr:1 m:poles4 dir
```

```
./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1.1:1:179 > /dev/null'
15666 #NGM### mean distance of poles of 'alueo' of s-kosi and tr:s-fuku are as follows.
15667 #NGM### 0.074377 0.071121 0.073658 0.073133 #te:s-kosi-a->s-fuku-u
15668 #NGM### 0.071329 0.071237 0.071637* 0.071349 #te:s-kosi-i->s-kita-e
15669 #NGM### 0.075247 0.073913 0.072556 0.073472 #te:s-kosi-u->s-take-o
15670 #NGM### 0.062530 0.055914* 0.065712 0.070118 0.068071 #te:s-kosi-e->s-take-o
15671 #NGM### 0.062374 0.062238 0.066927 0.060430 #te:s-kosi-o->s-kita-o
15672 #NGM###te:s-kosi-alueo-t800-1600 are recognized as ueio (rate=1/5).##
15673 #NGMcmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-take:s-yama te:s-sanuki k:27 N:6 spkr:1 m:poles4 dir
:./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1.1:1:179 > /dev/null'
15674 #NGM### mean distance of poles of 'alueo' of s-sanuki and tr:s-fuku are as follows.
15675 #NGM### 0.064863 0.061504 0.059603* 0.066007 0.060389 #te:s-sanuki-a->s-fuku-u
15676 #NGM### 0.057471* 0.061745 0.066075 0.058050 0.061589 #te:s-sanuki-i->s-take-a
15677 #NGM### 0.075346 0.066694 0.073129 0.074616 0.074679 #te:s-sanuki-u->s-take-o
15678 #NGM### 0.066676 0.066694 0.069699 0.067990 0.061536* #te:s-sanuki-e->s-take-o
15679 #NGM### 0.063266 0.063679 0.070276 0.058703* 0.063678 #te:s-sanuki-o->s-fuku-e
15680 #NGM###te:s-sanuki-alueo-t800-1600 are recognized as alueo (rate=0.5).##
15681 #NGMcmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-take:s-yama te:s-sanuki k:27 N:6 spkr:1 m:poles4 dir
:./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1.1:1:179 > /dev/null'
15682 #NGM### mean distance of poles of 'alueo' of s-take and tr:s-fuku are as follows.
15683 #NGM### 0.069675 0.068462 0.069841 0.068270* 0.071338 #te:s-take-a->s-kosi-e
15684 #NGM### 0.068988 0.067762 0.072655 0.068619 #te:s-take-i->s-take-u
15685 #NGM### 0.073286 0.066773* 0.069127 0.070680 0.068509 #te:s-take-o->s-fuku-i
15686 #NGM### 0.059294 0.057886 0.062803 0.057373* 0.062405 #te:s-take-e->s-kosi-e
15687 #NGM### 0.069720 0.069557 0.072101 0.068982* 0.069897 #te:s-take-o->s-kosi-e
15688 #NGM###te:s-take-alueo-t800-1600 are recognized as eueio (rate=1/5).##
15689 #NGMcmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take te:s-yama k:27 N:6 spkr:1 m:poles4 dir
:./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 npt:0.7:1.1:1:179 > /dev/null'
15690 #NGM### mean distance of poles of 'alueo' of s-yama and tr:s-fuku are as follows.
15691 #NGM### 0.064507 0.059139* 0.061373 0.062004 0.060647 #te:s-yama-a->s-kosi-i
15692 #NGM### 0.068571 0.063662* 0.071094 0.069667 0.069983 #te:s-yama-i->s-kosi-e
15693 #NGM### 0.073277 0.072431 0.070979 0.066215* 0.070481 #te:s-yama-u->s-fuku-i
15694 #NGM### 0.066864* 0.071936 0.070151 0.070570 0.067984 #te:s-yama-e->s-take-a
15695 #NGM### 0.066725* 0.071980 0.069527 0.073027 0.071319 #te:s-yama-o->s-sanuki-a
15696 #NGM###te:s-yama-alueo-t800-1600 are recognized as ilaea (rate=1/5).##
15697
15698
15699
15700
15701 ##(12) speaker and vowel recognition with M4
15702 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:9 N:1 spkr:1 m:M4 dir:
./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15703 ## mean distance of M4 of s-fuku and tr:s-fuku are as follows.
15704 # 0.071041* 0.111131 0.140315 0.087912 0.125807 #te:s-fuku-a->s-fuku-a
15705 # 0.100690* 0.105229 0.133786 0.076225 0.169509 #te:s-fuku-i->s-sanuki-a
15706 # 0.085732* 0.107863 0.108167 0.111423 0.097481 #te:s-fuku-u->s-fuku-a
15707 # 0.062328* 0.106665 0.088921 0.095085 0.093553 #te:s-fuku-e->s-yama-a
15708 # 0.117965 0.056001 0.121667 0.061264 0.101322 #te:s-fuku-o->s-sanuki-i
15709 ##te:s-fuku-alueo-t150+300 are recognized as aaal (rate=1/5).##
15710
15711 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kita k:9 N:1 spkr:1 m:M4 dir:
./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15712 ## mean distance of M4 of s-kita and tr:s-fuku are as follows.
15713 # 0.068035 0.106875 0.116991 0.091825* 0.123827 #te:s-kita-a->s-sanuki-e
15714 # 0.080709* 0.130284 0.135343 0.101893 0.106538 #te:s-kita-i->s-sanuki-e
15715 # 0.245932 0.131749 0.189527 0.238006 0.295587 #te:s-kita-u->s-kita-u
15716 # 0.132884 0.130454 0.101598 0.118719 #te:s-kita-e->s-kita-e
15717 # 0.158679 0.140065 0.156185 0.157105 0.095021* #te:s-kita-o->s-kita-o
15718 ##te:s-kita-alueo-t150+300 are recognized as aeueo (rate=3/5).##
15719 ## mean distance of M4 of s-kosi and tr:s-fuku are as follows.
15720 # 0.249151* 0.164178 0.145373 0.144475 0.140182 #te:s-kosi-a->s-kita-a
15721 # 0.329977 0.067242* 0.296480 0.253467 0.171537 #te:s-kosi-i->s-kosi-i
15722 # 0.194986 0.231978 0.248151 0.232296 #te:s-kosi-u->s-kosi-u
15723 # 0.132823 0.057132 0.036505* 0.104132 #te:s-kosi-e->s-kosi-e
15724 # 0.291057 0.237483 0.256771 0.267584 0.075261* #te:s-kosi-o->s-kosi-o
15725 ##te:s-kosi-alueo-t150+300 are recognized as alueo (rate=5/5).##
15726 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-sanuki k:9 N:1 spkr:1 m:M4 dir
:./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15727 ## mean distance of M4 of s-sanuki and tr:s-fuku are as follows.
15728 # 0.052185 0.084117 0.109755 0.048363* 0.080954 #te:s-sanuki-a->s-take-e
15729 # 0.086286 0.041384* 0.093957 0.071929 0.090035 #te:s-sanuki-i->s-sanuki-i
15730 # 0.129602 0.137417 0.052393* 0.163346 0.173012 #te:s-sanuki-u->s-sanuki-u
15731 # 0.111507 0.072801 0.129744 0.036549 0.102502 #te:s-sanuki-e->s-sanuki-e
15732 # 0.156832 0.138255 0.149707 0.155936 0.107199 #te:s-sanuki-o->s-sanuki-o
15733 ##te:s-sanuki-alueo-t150+300 are recognized as aeueo (rate=4/5).##
15734
15735 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-take k:9 N:1 spkr:1 m:M4 dir:
./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15736 ## mean distance of M4 of s-take and tr:s-fuku are as follows.
15737 # 0.038518* 0.112800 0.094078 0.097694 #te:s-take-a->s-take-a
15738 # 0.101899 0.085134 0.067495 0.054001* 0.078752 #te:s-take-i->s-yama-e
15739 # 0.112323 0.120236 0.075598 #te:s-take-u->s-take-u
```

```
15740 # 0.061055 0.077200 0.110306 0.053540* 0.090935 #te:s-take-e->s-take-e
15741 # 0.306018 0.226570 0.264698 0.289547 0.063307* #te:s-take-o->s-take-o
15742 ##te:s-take-alueo-t150+300 are recognized as aeueo (rate=4/5).##
15743
15744 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-yama k:9 N:1 spkr:1 m:M4 dir:
./onse107 rsa:-1.0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15745 ## mean distance of M4 of s-yama and tr:s-fuku are as follows.
15746 # 0.057405* 0.116108 0.117219 0.062531 0.057776 #te:s-yama-a->s-yama-a
15747 # 0.094785 0.047842* 0.117008 0.080603 0.082176 #te:s-yama-i->s-yama-i
15748 # 0.110238 0.118046 0.130342 0.130342 0.154319 #te:s-yama-u->s-yama-u
15749 # 0.114841 0.101071 0.056348 0.021568* 0.079097 #te:s-yama-e->s-yama-e
15750 # 0.091986 0.108268 0.070256 0.069761 0.033604* #te:s-yama-o->s-yama-o
15751 ##te:s-yama-alueo-t150+300 are recognized as alueo (rate=5/5).##
15752
15753 ##(12)* speaker and vowel recognition with bagging poles4
15754 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:9 N:1 m:poles4 dir:./o
nse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15755 ## mean distance of poles of 'alueo' of s-fuku and tr:s-fuku are as follows.
15756 # 0.207187* 0.097541 0.128831 0.059521* 0.089244 #te:s-fuku-a->s-sanuki-e
15757 # 0.207187* 0.035551 0.209550 0.248102 0.265402 #te:s-fuku-i->s-yama-a
15758 # 0.167697 0.099811 0.124198 0.093332 0.130604 #te:s-fuku-u->s-fuku-a
15759 # 0.067697 0.194906 0.180574 0.158637 0.196524 #te:s-fuku-e->s-fuku-e
15760 # 0.067574 0.084935 0.112411 0.035912* 0.086230 #te:s-fuku-o->s-sanuki-e
15761 ##te:s-fuku-alueo-t150+300 are recognized as eaeeo (rate=1/5).##
15762
15763 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kita k:9 N:1 m:poles4 dir:./o
nse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:150:150 DISP:0 > /dev/null'
15764 ## mean distance of poles of 'alueo' of s-kita and tr:s-fuku are as follows.
15765 # 0.106714 0.085022 0.111314 0.082521* 0.136473 #te:s-kita-a->s-take-e
15766 # 0.114061 0.114482 0.140981 0.081052* 0.159072 #te:s-kita-i->s-take-e
15767 # 0.173821 0.169126 0.055857* 0.158924 0.126266 #te:s-kita-u->s-kita-u
15768 # 0.092394 0.090718 0.100727 0.032664* 0.117053 #te:s-kita-e->s-kita-e
15769 # 0.204497 0.233047 0.206898 0.235054 0.185433* #te:s-kita-o->s-sanuki-o
15770 ##te:s-kita-alueo-t150+300 are recognized as eeueo (rate=3/5).##
15771
15772
15773
15774
15775 ##(13) speaker recognition ? now executing 070206 finished
15776 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-fuku k:27 N:6 spkr:1 m:poles4
dir:./onse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15776 ## mean distance of poles of 'alueo' of s-fuku and tr:s-fuku are as follows.
15777 # 0.075109 0.074907 0.078260 0.073872* 0.078059 #te:s-fuku-a->s-kosi-e
15778 # 0.070068 0.066953* 0.071666 0.068626 0.072245 #te:s-fuku-i->s-sanuki-i
15779 # 0.068329 0.068128* 0.070413 0.068377 0.071970 #te:s-fuku-u->s-sanuki-i
15780 # 0.067341* 0.067598 0.069840 0.069078 0.071301 #te:s-fuku-e->s-sanuki-a
15781 # 0.075176 0.073775* 0.077513 0.075854 0.077373 #te:s-fuku-o->s-sanuki-i
15782 ##te:s-fuku-alueo-t800-1600 are recognized as eiaii (rate=1/5).##
15783 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kita k:27 N:6 spkr:1 m:poles4
dir:./onse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15784 ## mean distance of poles of 'alueo' of s-kita and tr:s-fuku are as follows.
15785 # 0.068335* 0.072030 0.078847 0.072339 0.080103 #te:s-kita-a->s-kita-a
15786 # 0.071760 0.070357* 0.076690 0.071054 0.076373 #te:s-kita-i->s-sanuki-i
15787 # 0.069150 0.069178 0.071891 0.066712* 0.072938 #te:s-kita-u->s-kosi-e
15788 # 0.074767 0.073650 0.077978 0.071919* 0.079595 #te:s-kita-e->s-kita-e
15789 ##te:s-kita-alueo-t800-1600 are recognized as aieae (rate=3/5).##
15790 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-kosi k:27 N:6 spkr:1 m:poles4
dir:./onse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15792 ## mean distance of poles of 'alueo' of s-kosi and tr:s-fuku are as follows.
15793 # 0.073672 0.071315* 0.076988 0.072635 0.079210 #te:s-kosi-a->s-sanuki-i
15794 # 0.072863 0.072995 0.074639 0.071557* 0.074655 #te:s-kosi-i->s-yama-e
15795 # 0.070755* 0.071595 0.073800 0.071501 0.074162 #te:s-kosi-u->s-yama-e
15796 # 0.074810 0.072486 0.072486 0.070969 0.071259* #te:s-kosi-e->s-kosi-e
15797 # 0.074987 0.074210 0.076659 0.072587* 0.074132 #te:s-kosi-o->s-kosi-e
15798 ##te:s-kosi-alueo-t800-1600 are recognized as iaeae (rate=1/5).##
15799
15800 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-sanuki k:27 N:6 spkr:1 m:poles4
dir:./onse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15801 ## mean distance of poles of 'alueo' of s-sanuki and tr:s-fuku are as follows.
15802 # 0.071669* 0.072978 0.074699 0.074058 0.076763 #te:s-sanuki-a->s-sanuki-a
15803 # 0.074733 0.072569* 0.074884 0.074184 0.079919 #te:s-sanuki-i->s-sanuki-i
15804 # 0.071962 0.073741 0.071812* 0.073083 0.077470 #te:s-sanuki-u->s-sanuki-u
15805 # 0.070897 0.071099 0.073740 0.068930* 0.075164 #te:s-sanuki-e->s-kosi-e
15806 # 0.071673 0.071366* 0.073802 0.071461 0.072096 #te:s-sanuki-o->s-sanuki-i
15807 ##te:s-sanuki-alueo-t800-1600 are recognized as aluei (rate=4/5).##
15808 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-take k:27 N:6 spkr:1 m:poles4
dir:./onse107 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:800:800 DISP:0 > /dev/null'
15809 ## mean distance of poles of 'alueo' of s-take and tr:s-fuku are as follows.
15810 # 0.067152* 0.068239 0.071660 0.067168 0.070893 #te:s-take-a->s-take-a
15811 # 0.071429 0.070179* 0.073333 0.070983 0.074759 #te:s-take-i->s-sanuki-i
15812 # 0.070669* 0.071993 0.072739 0.070903 0.073977 #te:s-take-u->s-take-u
15813 # 0.072815 0.072340 0.075457 0.069899* 0.075959 #te:s-take-e->s-take-e
```

```
15814 # 0.069363* 0.070179 0.071990 0.069376 0.072696 #te:s-take-o->s-sanuki-a
15815 ##te:s-take-aiueo-t800+1600 are recognized as alaea (rate=3/5).##
15816 cmd='vowelrecogv3 tr:s-fuku:s-kita:s-kosi:s-sanuki:s-take:s-yama te:s-yama k:27 N:6 spkr:1 m:poles4
dir:../onseio7 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15817 ### mean distance of poles of 'aiueo' of s-yama and tr:s-fuku are as follows.
15818 # 0.071374* 0.072705 0.075328 0.072548 0.078050 #te:s-yama-a->s-sanuki-a
15819 # 0.074051* 0.071846* 0.073392 0.072138 0.076993 #te:s-yama-l->s-sanuki-l
15820 # 0.074363 0.073589 0.073127 0.072533* 0.075951 #te:s-yama-u->s-kosi-e
15821 # 0.075620 0.074638 0.078294 0.073453* 0.079666 #te:s-yama-e->s-kosi-e
15822 # 0.074854 0.074222 0.076686 0.073942* 0.075886 #te:s-yama-o->s-kosi-e
15823 ##te:s-yama-aiueo-t800+1600 are recognized as aliee (rate=3/5).##
15824
15825
15826 ##(10) making s(t) by baggingCAN2
15827 for name in fuku kita kosi sanuki take yama; do for v in a i u e o; do
15828 rm -rf result-ensz8ge/cmp;
15829 cd ../onseio7 # the directory storing the onsei-data files
15830 #rsarsa-1:0.7:1:20 k=9 N=1 mp=mp1:1:1 DM=DiffMode:0 H=Hosei:1 gsg=5e-3 ww=0.2 T=100 ;
15831 #rsarsa-2:0.7:1:20 k=47 N=6 mp=mp1:1:1 DM=DiffMode:0 H=Hosei:1 gsg=5e-3 ww=0.2 T=100 ;
15832 #t=100Tt=2000:0:tt=ns-expr ${t} + ${t1}.'pf=${tf}pt=${l}pr=${exp} ${mp} + ${p}';
15833 #t=${t}predv3 ${d}/s-${name}-${v}.dat ${s}${t}-${t1}.'pf=${tf}pt=${l}pr=${exp} ${DM} ${H} N:${N}-${N} M:1-1:1 ssp
1 $[rsa] k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0:0.5 vr:1:0 >/dev/null
15835 ./tspredv3 ${d}/s-${name}-${v}.dat ${t}-${t1}.'pf=${tf}pt=${l}pr=${exp} ${DM} ${H} N:${N}-${N} M:1-1:1 ssp:
1 $[rsa] k:${k} y:0:0:0:0 ${g} ${w} T:${T} vt:0:0.5 vr:1:0 >/dev/null
15836 ##fo save
15837 cd result-ensz8ge;
15838 f#=#./${d}/s-${name}-N${N}t${t}-${t1}p${pf}-${t1}p${pt}-${t1}p${pt}-${s}${name}-${v}"
15839 f#=#${d}/s-N${N}t${t}-${t1}p${pf}-${t1}p${pt}-${s}${name}-${v}"
15840 f#=#${d}/ab-${name}-${v}"
15841 p="predictDMO:${pf}-${pt}.dat"
15842 #p="predictDMO:${k}-${pt}.dat"
15843 cat ${p} |awk '{print $3-$1}' > ../${f}.dat
15844 ##for display error from here
15845 cat > disp.plt <<EOF
15846 #plot ../${f}.dat" using 0:($3-$1) t "../${f}" w lp; pause -1 "Hit return key to quit"
15847 #plot ../${f}.dat" using 0:1 t "${f}" w lp; pause -1 "Hit return key to quit"
15848 EOF
15849 xterm -geometry 50x5-0-0 -e gnuplot -geometry 300x210 disp.plt&
15850 ##for display error to here
15851 cd ..;
15852 echo ""## Done for ${f}.dat ##"
15853 done ; done
15854 ##### making s(t) to here.
15855
15856 ##(13) poles with N=1 is unstable.
15857
15858
15859 #####npt:0.75
15860 #####npt:0.75
15861 cmd='vowelrecogv3 tr:kita:kosi:sanuki:take:yama te:fuku k:27 N:6 mipoles4 dir:../onseio7 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15862 ### mean distance of poles of 'aiueo' of fuku and tr:kita are as follows.
15863 # 0.053549 0.056038 0.055016 0.052717 0.052708* #te:fuku-a->sanuki-o
15864 # 0.053789 0.050968* 0.052314 0.053330 0.053899 #te:fuku-i->kita-i
15865 # 0.058288 0.056848 0.055969 0.053878* 0.056082 #te:fuku-u->sanuki-e
15866 # 0.056912 0.058739 0.057326 0.051939* 0.053510 #te:fuku-e->sanuki-e
15867 # 0.053134 0.052338 0.051597 0.050466 0.050135* #te:fuku-o->kita-o
15868 ##te:fuku-aiueo-t150+300 are recognized as oleeo (rate=3/5).##
15869 cmd='vowelrecogv3 tr:fuku:kosi:sanuki:take:yama te:kita k:27 N:6 mipoles4 dir:../onseio7 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15870 ### mean distance of poles of 'aiueo' of kita and tr:fuku are as follows.
15871 # 0.047605* 0.052271 0.052994 0.052997 0.049875 #te:kita-a->kosi-a
15872 # 0.059297 0.052641* 0.051909 0.054754 #te:kita-l->kite-l
15873 # 0.059107 0.053147 0.051962* 0.056208 0.053642 #te:kita-u->take-u
15874 # 0.058428 0.057097 0.055989 0.051476* 0.052878 #te:kita-e->sanuki-e
15875 # 0.056540 0.052266 0.057121 0.054272 0.052166* #te:kita-o->sanuki-o
15876 ##te:kita-aiueo-t150+300 are recognized as alueo (rate=5/5).##
15877 cmd='vowelrecogv3 tr:fuku:kita:sanuki:take:yama te:kosi k:27 N:6 mipoles4 dir:../onseio7 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15878 ### mean distance of poles of 'aiueo' of kosi and tr:sanuki are as follows.
15879 # 0.051688* 0.056277 0.055764 0.054994 0.053312 #te:kosi-a->kita-a
15880 # 0.059591 0.052297* 0.053975 0.053396 #te:kosi-l->sanuki-l
15881 # 0.060306 0.054727 0.053088* 0.050711 0.054676 #te:kosi-u->take-u
15882 # 0.058782 0.058859 0.055073 0.049650* 0.053012 #te:kosi-e->sanuki-e
15883 # 0.057911 0.056555 0.054217 0.051036* 0.052770 #te:kosi-o->sanuki-e
15884 ##te:kosi-aiueo-t150+300 are recognized as aluee (rate=4/5).##
15885
15886 cmd='vowelrecogv3 tr:fuku:kita:kosi:take:yama te:sanuki k:27 N:6 mipoles4 dir:../onseio7 rsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15887 ### mean distance of poles of 'aiueo' of sanuki and tr:fuku are as follows.
15888 # 0.053322* 0.055377 0.055185 0.055095 0.053926 #te:sanuki-a->kita-a
```

```
15889 # 0.057648 0.049309* 0.050583 0.050370 0.051645 #te:sanuki-i->kosi-i
15890 # 0.056671 0.050584 0.050011* 0.054023 0.050712 #te:sanuki-u->yama-u
15891 # 0.057655 0.057947 0.051918* 0.053505 0.053017 #te:sanuki-e->fuku-e
15892 # 0.054269 0.055118 0.054243 0.050771 0.049099* #te:sanuki-o->kita-o
15893 ##te:sanuki-aiueo-t150+300 are recognized as aiueo (rate=5/5).##
15894 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:yama te:take k:27 N:6 mipoles4 dir:../onseio7 tsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15895 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
15896 # 0.047255* 0.050460 0.050332 0.050360 0.049294 #te:take-a->sanuki-a
15897 # 0.058196 0.052265* 0.052495 0.055527 0.053758 #te:take-l->kosi-l
15898 # 0.059199 0.054666 0.052672* 0.054717 0.054518 #te:take-u->kosi-u
15899 # 0.056939 0.052141 0.052591 0.050328* 0.050711 #te:take-e->sanuki-e
15900 # 0.054916 0.055813 0.053455 0.050559 0.049595* #te:take-o->yama-o
15901 ##te:take-aiueo-t150+300 are recognized as aiueo (rate=5/5).##
15902 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:take te:yama k:27 N:6 mipoles4 dir:../onseio7 tsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15903 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
15904 # 0.056227* 0.055513 0.057821 0.056319 0.055238 #te:yama-a->kosi-a
15905 # 0.060898 0.052337* 0.053442 0.057660 0.057810 #te:yama-l->kosi-l
15906 # 0.056869 0.050907 0.049184* 0.051686 0.051362 #te:yama-u->sanuki-u
15907 # 0.056806 0.055111 0.051555 0.049160* 0.052774 #te:yama-e->sanuki-e
15908 # 0.053972 0.057250 0.052206 0.056073 0.051477* #te:yama-o->kita-o
15909 ##te:yama-aiueo-t150+300 are recognized as aiueo (rate=5/5).##
15910
15911
15912
15913 cmd='vowelrecogv3 tr:fuku:kita:kosi te:sanuki:take:yama k:27 N:6 mipoles4 dir:../onseio7 tsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15914 ### mean distance of poles of 'aiueo' of sanuki and tr:fuku are as follows.
15915 # 0.053613* 0.056222 0.054341 0.055086 0.054783 #te:sanuki-a->kosi-a
15916 # 0.053083 0.051869 0.050997* 0.052884 0.054407 #te:sanuki-i->kosi-i
15917 # 0.052776 0.050985 0.050598* 0.054268 0.053192 #te:sanuki-u->kita-u
15918 # 0.056554 0.058939 0.055801 0.050482* 0.052904 #te:sanuki-e->kosi-e
15919 # 0.054209 0.054806 0.053764 0.051709 0.049674* #te:sanuki-o->kita-o
15920 ##te:sanuki-aiueo-t150+300 are recognized as aiueo (rate=4/5).##
15921 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
15922 # 0.048605* 0.052018 0.049265 0.051973 0.052179 #te:take-a->fuku-a
15923 # 0.059104 0.052464* 0.054838 0.056072 0.057126 #te:take-l->kita-l
15924 # 0.057089 0.056100 0.052790* 0.056268 0.056996 #te:take-u->kosi-u
15925 # 0.054839 0.053563 0.053887 0.050645* 0.050792 #te:take-e->kosi-e
15926 # 0.053710 0.054252 0.054074 0.052726 0.050314* #te:take-o->kita-o
15927 ##te:take-aiueo-t150+300 are recognized as aiueo (rate=5/5).##
15928 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
15929 # 0.053889* 0.058788 0.057605 0.056965 0.054346 #te:yama-a->kosi-a
15930 # 0.059543 0.055329 0.053369* 0.056676 0.058196 #te:yama-l->kosi-l
15931 # 0.053262 0.054140 0.050892* 0.052817 0.052874 #te:yama-u->kita-u
15932 # 0.054803 0.056873 0.055892 0.051227* 0.054013 #te:yama-e->kosi-e
15933 # 0.054693 0.056620 0.056112 0.054670 0.052973* #te:yama-o->kosi-o
15934 ##te:yama-aiueo-t150+300 are recognized as aiueo (rate=4/5).##
15935 #####npt:0.75
15936 #####npt:0.75
15937 ##3train and 3test
15938 cmd='vowelrecogv3 tr:fuku:kita:kosi tr:sanuki:take:yama k:27 N:6 mipoles4 dir:../onseio7 tsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15939 ### mean distance of poles of 'aiueo' of fuku and tr:sanuki are as follows.
15940 # 0.054453 0.059116 0.055016 0.052717 0.052708* #te:fuku-a->sanuki-o
15941 # 0.054423 0.057742* 0.053132 0.053330 0.056167 #te:fuku-l->sanuki-l
15942 # 0.058168 0.057610 0.059969 0.053878* 0.057572 #te:fuku-u->sanuki-u
15943 # 0.058169 0.060160 0.057346 0.051939* 0.053842 #te:fuku-e->sanuki-e
15944 # 0.054422 0.053536 0.051597* 0.051816 0.051846 #te:fuku-o->take-u
15945 ##te:fuku-aiueo-t150+300 are recognized as oleeo (rate=2/5).##
15946 ### mean distance of poles of 'aiueo' of kita and tr:sanuki are as follows.
15947 # 0.047875* 0.054250 0.051997 0.054831 0.051266 #te:kita-a->sanuki-a
15948 # 0.059340 0.052572* 0.053919 0.056056 0.058633 #te:kita-l->take-l
15949 # 0.058965 0.054407 0.051962* 0.056208 0.058221 #te:kita-u->take-u
15950 # 0.059599 0.058845 0.055989 0.051476* 0.055752 #te:kita-e->sanuki-e
15951 # 0.059599 0.060324 0.057961 0.054489 0.051920* #te:kita-o->sanuki-o
15952 ##te:kita-aiueo-t150+300 are recognized as aiueo (rate=5/5).##
15953 ### mean distance of poles of 'aiueo' of kosi and tr:sanuki are as follows.
15954 # 0.052247* 0.057574 0.055764 0.055940 0.053312 #te:kosi-a->yama-a
15955 # 0.059911 0.052297* 0.053061 0.054284 0.059318 #te:kosi-l->sanuki-l
15956 # 0.060090 0.055224 0.053055* 0.056781 0.060454 #te:kosi-u->take-u
15957 # 0.058768 0.056971 0.055859 0.049650* 0.053460 #te:kosi-e->sanuki-e
15958 ##te:kosi-aiueo-t150+300 are recognized as aiuee (rate=4/5).##
15959
15960
15961
15962
15963
15964
15965
15966 cmd='vowelrecogv3 tr:fuku:kita:kosi te:sanuki:take:yama k:27 N:6 mipoles4 dir:../onseio7 tsa:2:0.7:1:
20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1:179 > /dev/null'
15967 ### mean distance of poles of 'aiueo' of sanuki and tr:fuku are as follows.
15968 # 0.053322* 0.055377 0.055185 0.055095 0.053926 #te:sanuki-a->kita-a
```

```
:20 DiffMode:0 T:100 tt:150:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
15967 ### mean distance of 'aiueo' of sanuki and tr:fuku are as follows.
15968 # 0.053128* 0.055362 0.055192 0.055022 0.053838 #te:sanuki-a->kita-a
15969 # 0.058051* 0.049309* 0.053624 0.051645 #te:sanuki-i->kosi-i
15970 # 0.056762 0.050811 0.051382 0.054794 #te:sanuki-u->fuku-u
15971 # 0.057655 0.057967 0.055454 0.051918* #te:sanuki-e->fuku-e
15972 # 0.054269 0.055118 0.054454 0.050771 0.049796* #te:sanuki-o->kosi-o
15973 ###te:sanuki-aiueo-t150+300 are recognized as aiueo (rate=4/5).###
15974 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
15975 # 0.048189* 0.050460 0.050332 0.050622 0.049294 #te:take-a->kita-a
15976 # 0.060816 0.052265* 0.054152 0.057504 0.053758 #te:take-i->kosi-i
15977 # 0.060449 0.054780 0.052672* 0.055688 0.054518 #te:take-u->kosi-u
15978 # 0.057298 0.053718 0.053333 0.050619 0.050711 #te:take-e->kita-e
15979 # 0.054916 0.055813 0.053455 0.050559* 0.051388 #te:take-o->kita-e
15980 ###te:take-aiueo-t150+300 are recognized as aiueo (rate=4/5).###
15981 ### mean distance of poles of 'aiueo' of yama and tr:fuku are as follows.
15982 # 0.054118* 0.057225 0.059267 0.056791 0.056156 #te:yama-a->kosi-a
15983 # 0.053871 0.052337* 0.053342 0.058143 0.057810 #te:yama-i->kosi-i
15984 # 0.058699 0.050907 0.050767* 0.052962 0.051362 #te:yama-u->kosi-u
15985 # 0.056770 0.055762 0.055205* 0.054525 0.052766 #te:yama-e->kita-e
15986 # 0.053972 0.057438 0.056073 0.052208* 0.052738 #te:yama-o->kita-e
15987 ###te:yama-aiueo-t150+300 are recognized as aiueo (rate=4/5).###
15988
15989 cmd='vowelrecogv3 tr:fuku:kita:kosi tr:sanuki:take:yama k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1
:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
15990 ### mean distance of poles of 'aiueo' of fuku and tr:sanuki are as follows.
15991 # 0.051822* 0.057138 0.053234 0.054709 0.054786 #te:fuku-a->take-a
15992 # 0.053034 0.052357 0.048593* 0.054961 0.055410 #te:fuku-i->take-u
15993 # 0.055869 0.057212 0.053093* 0.058020 0.057525 #te:fuku-u->take-u
15994 # 0.054814 0.057956 0.054571 0.054154* 0.054876 #te:fuku-e->sanuki-e
15995 # 0.049951* 0.053874 0.050816 0.053754 0.053299 #te:fuku-o->take-a
15996 ###te:fuku-aiueo-t150+300 are recognized as aiueo (rate=3/5).###
15997 ### mean distance of poles of 'aiueo' of kita and tr:sanuki are as follows.
15998 # 0.046800* 0.053931 0.052748 0.057726 0.053523 #te:kita-a->take-a
15999 # 0.057454 0.051409* 0.053369 0.059897 0.059988 #te:kita-i->take-i
16000 # 0.056619 0.053918 0.053359* 0.059824 0.059684 #te:kita-u->take-u
16001 # 0.057594 0.057446 0.055729 0.055218* 0.055690 #te:kita-e->sanuki-e
16002 # 0.056404 0.059738 0.057016 0.056713 0.053761* #te:kita-o->sanuki-o
16003 ###te:kita-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
16004 ### mean distance of poles of 'aiueo' of kosi and tr:sanuki are as follows.
16005 # 0.051571* 0.056945 0.055948 0.058435 0.054323 #te:kosi-a->take-a
16006 # 0.055598 0.051494 0.051660* 0.057141 0.058793 #te:kosi-i->sanuki-u
16007 # 0.057161 0.054674 0.053955* 0.060749 0.060205 #te:kosi-u->take-u
16008 # 0.057036 0.057838 0.054325* 0.055892 0.055892 #te:kosi-e->sanuki-e
16009 # 0.056296 0.056983 0.054760 0.054220 0.052511* #te:kosi-o->take-o
16010 ###te:kosi-aiueo-t150+300 are recognized as aiueo (rate=4/5).###
16011
16012
16013
16014
16015 cmd='vowelrecogv3 tri:yama te:take k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 t
t:0:100:100 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16016 ### mean distance of poles of 'aiueo' of take and tri:yama are as follows.
16017 # 0.047819* 0.050793 0.048599 0.053176 0.049582 #te:take-a->yama-a
16018 # 0.055873 0.043268* 0.048551 0.054085 0.054817 #te:take-i->yama-i
16019 # 0.049029 0.046639 0.045325* 0.047843 0.049052 #te:take-u->yama-u
16020 # 0.050239 0.051493 0.049774 0.045463 0.049361 #te:take-o->yama-o
16021 # 0.042334 0.032669 0.050537 0.048754 0.040395* #te:take-e->yama-e
16022 ###te:take-aiueo-t0+100 are recognized as aiueo (rate=3/5).###good
16023 ### mean distance of poles of 'aiueo' of yama and tri:take are as follows.
16024 # 0.055407 0.058689 0.055807 0.052427 0.051735* #te:yama-a->take-o
16025 # 0.056490 0.047444* 0.049326 0.052228 0.059087 #te:yama-i->take-i
16026 # 0.051381 0.050607 0.045955* 0.050548 0.054895 #te:yama-u->take-u
16027 # 0.057820 0.054638 0.053679 0.048391* 0.052329 #te:yama-e->take-e
16028 # 0.049649 0.051882 0.052953 0.050834 0.043152* #te:yama-o->take-o
16029 ###te:yama-aiueo-t0+100 are recognized as aiueo (rate=4/5).###
16030
16031 cmd='vowelrecogv3 tr:fuku:kita:kosi:sanuki:yama te:take k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1
:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16032 ### mean distance of poles of 'aiueo' of take and tr:fuku are as follows.
16033 # 0.048605* 0.051606 0.049265 0.051973 0.052179 #te:take-a->fuku-a
16034 # 0.059104 0.050719* 0.050672 0.052574 0.050712 #te:take-i->yama-i
16035 # 0.057089 0.053310 0.052790* 0.056268 0.056996 #te:take-u->kosi-u
16036 # 0.054839 0.053319 0.051460 0.050645* 0.050792 #te:take-e->kosi-e
16037 # 0.053710 0.054252 0.054074 0.052726 0.050314* #te:take-o->kita-o
16038 ###te:take-aiueo-t150+300 are recognized as aiueo (rate=5/5).###
16039
16040 vowelrecogv3 tr:fuku:kita:kosi te:sanuki:take:yama k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1:20 D
iffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null
16041
16042
16043
cmd='vowelrecogv3 tri:yama te:take k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 t
t:0:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16047 ### mean distance of poles of 'aiueo' of take and tri:yama are as follows.
16048 # 0.055170 0.055334 0.052775* 0.057093 0.055834 #te:take-a->yama-u
16049 # 0.064703 0.049811* 0.053749 0.061194 0.060686 #te:take-i->yama-i
16050 # 0.059173 0.055219 0.051990* 0.060809 0.057451 #te:take-u->yama-u
16051 # 0.060263 0.053489 0.052851* 0.055700 0.057791 #te:take-e->yama-u
16052 # 0.057974 0.055049 0.053476 0.055042 0.050104* #te:take-o->yama-o
16053 ###te:take-aiueo-t0+150 are recognized as uiueo (rate=3/5).###
16054
16055 cmd='vowelrecogv3 tri:yama te:take k:54 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 t
t:0:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16057 ### mean distance of poles of 'aiueo' of take and tri:yama are as follows.
16058 # 0.032465* 0.035575 0.033793 0.035638 0.034579 #te:take-a->yama-a
16059 # 0.034763 0.033575 0.034453 0.034670 0.033478* #te:take-i->yama-o
16060 # 0.034083* 0.034333 0.034115 0.036805 0.034222 #te:take-u->yama-a
16061 # 0.035567 0.033595 0.032158* 0.032282 #te:take-e->yama-a
16062 # 0.035314 0.036324 0.034760 0.034313* 0.036620 #te:take-o->yama-e
16063 ###te:take-aiueo-t0+150 are recognized as aoaue (rate=1/5).###
16064
16065
16066 vowelrecogv3 tr:fuku:kita:kosi:sanuki:take:yama te:take k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1
:20 DiffMode:0 T:100 tt:0:150:150:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16067
16068
16069 vowelrecogv3 tri:yama te:take k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 tt:0:1
50:0:150 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16070
16071
16072 (1) vowelrecogv2.cを作り 各母音に対して入力次元kを設定できるようにした。
16073 下の例ではtake-eをk=10としたもの、距離は小さくなったが、これが最小にはならず、
16074 結果としては同じ認識率(4/5)になった。
16075
16076
16077
16078 vowelrecogv2 te:yama#a919u#e909 tr:take#a919u#e909 k:9 N:33-33 m:poles4 dir:../onsei07 T:100 tt:0:1
00:0:100:100 DISP:0 > /dev/null'
16079 ### mean distance of poles of 'aiueo' of yama and tri:take are as follows.
16080 # 0.134780* 0.154160 0.151998 0.142151 0.136471 #te:yama-a->tri:take-aiueo
16081 # 0.158979 0.141900* 0.142316 0.143443 0.148547 #te:yama-i->tri:take-aiueo
16082 # 0.161908 0.159065 0.139856* 0.150144 0.148023 #te:yama-u->tri:take-aiueo
16083 # 0.176139 0.172353 0.140659 0.145528 0.140490* #te:yama-e->tri:take-aiueo
16084 # 0.114943 0.140118 0.106692 0.106918 0.095262* #te:yama-o->tri:take-aiueo
16085 ###te:yama-aiueo-t0+100 are recognized as tri:take-aiueo-t0+100 (4/5) via m:polesN33-33.###
16086 Result of 'vowelrecogv2 tri:yama#a919u#e909 tr:take#a919u#e909 k:9 N:33-33 m:poles4 dir:../onsei07 T
:100 tt:0:100:0:100:100 DISP:0 > /dev/null'
16087 ### mean distance of poles of 'aiueo' of take and tri:yama are as follows.
16088 # 0.116436* 0.132415 0.126448 0.119123 0.147516 #te:take-a->tri:yama-aiueo
16089 # 0.166214 0.133440* 0.136465 0.136736 0.158582 #te:take-i->tri:yama-aiueo
16090 # 0.155907 0.139426 0.135933 0.122639* 0.134053 #te:take-u->tri:yama-aiueo
16091 # 0.151498 0.130018 0.127516 0.124365* 0.143236 #te:take-e->tri:yama-aiueo
16092 # 0.141291 0.147140 0.141551 0.125116* 0.131923 #te:take-o->tri:yama-aiueo
16093 ###te:take-aiueo-t0+100 are recognized as tri:yama-aiueo-t0+100 (3/5) via m:polesN33-33.###
16094 #te:take-aiueo-t0+100 are recognized as tri:take-aiueo-t0+100 (3/5) via m:polesN33-33.###
16095 すなわち、下記の「single CNA21」のところで、
16096 (a) tf=50*tf=100*tf=expr ${tf} + ${cl} ; pf=${tf}*pl=80;pt=expr ${pf} + ${pl} ;
16097 とした学習、予測は良い結果を示すが、学習の初期時刻 tf を変え、例えば、
16098 (b) tf=150*tf=100*tf=expr ${tf} + ${cl} ; pf=${tf}*pl=40;pt=expr ${pf} + ${pl} ;
16099 のようにすると良い結果とならない、これは上記(a)区間でk=100のsingleCNA21はよりいっくら
16100 示すだけども、正しい母音情報を獲得していないことを意味するのではないかと考える。
16101 (2) また、bagging(下の「bagging predictions」の所を参照)で
16102 tf=50*tf=100*tf=expr ${tf} + ${cl} ; pf=${tf}*pl=80;pt=expr ${pf} + ${pl} ;
16103 とするとうまく行ったようにみえるが、やはり初期時刻tfを変えるとうまくいかない。
16104 学習長 pl=150 以上、および予測長 pl=30 で安定した結果が出るようだ。
16105 ここで、大きい予測長 pl に対して安定した予測結果を得るには大きい学習長 tl が必要である
16106 と考えるが、あまり pl がある程度以上に大きくなると、「カオスの予測不能性」によりいくら
16107 tl を大きくしても予測不能になると考える。しかし母音情報を獲得するのと予測するのは別の
16108 話であり、ある程度長い tl を用いれば予測はできなくとも母音情報は獲得できると考える。
16109
16110 #bidir##bidirectional
16111 #bidir##cmd='vowelrecogv3 te:yama tr:take k:27 N:6 m:poles4 dir:../onsei07 rsa:2:0.7:1:20 DiffMode:0
T:100 tt:0:100:0:100 DISP:0 npt:0.75:1.1:1.179 > /dev/null'
16112 #bidir### mean distance of poles of 'aiueo' of yama and tri:take are as follows.
16113 #bidir### 0.048537* 0.057333 0.054453 0.053069 0.052418 #te:yama-a->take-a
16114 #bidir### 0.056975 0.048879 0.047671* 0.051238 #te:yama-i->take-u
16115 #bidir### 0.052383 0.048502 0.046506* 0.046506 #te:yama-u->take-u
16116 #bidir### 0.052494 0.051962 0.047974 0.047918* 0.048309 #te:yama-e->take-e
16117 #bidir### 0.047228 0.052431 0.049338 0.048691 #te:yama-o->take-o
16118 #bidir###te:yama-aiueo-t0+100 are recognized as aiueo (rate=4/5).###
```

16119 #bidir#cmd='vowelrecogv3 tri:yama te:take k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:0
T:100 tt:0:100 DISP:0 npt:0.75:1:1:1:179 > /dev/null'
16120 #bidir### mean distance of poles of 'aiueo' of take and tri:yama are as follows.
16121 #bidir## 0.048537 0.056975 0.052383 0.052494 0.047228* #te:take-a->yama-u
16122 #bidir## 0.057333 0.048879 0.049523* 0.051962 0.047914 #te:take-i->yama-o
16123 #bidir## 0.054453 0.047671 0.045680* 0.047974 0.049338 #te:take-u->yama-u
16124 #bidir## 0.053069 0.051231 0.046906* 0.047918 0.048691 #te:take-e->yama-u
16125 #bidir## 0.052418 0.052701 0.047654 0.048309 0.046539* #te:take-o->yama-o
16126 #bidir###te:take-aiueo-t0+100 are recognized as ouuo (rate=2/5).##
16127
16128
16129 #monidir#cmd='vowelrecogv3 tri:yama te:take k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:
T:100 tt:0:100 DISP:0 npt:0.75:1:1:1:179 > /dev/null'
16130 #monidir### mean distance of poles of 'aiueo' of take and tri:yama are as follows.
16131 #monidir## 0.054693* 0.055131 0.052611 0.051834 0.048275 #te:take-a->yama-a
16132 #monidir## 0.055765 0.048086* 0.049387 0.050822 0.052721 #te:take-i->yama-i
16133 #monidir## 0.053865 0.047133 0.045475* 0.048785 0.049798 #te:take-u->yama-u
16134 #monidir## 0.052134 0.051858 0.048272 0.048263* 0.050993 #te:take-e->yama-e
16135 #monidir## 0.052237 0.051787 0.048249 0.049277 0.048214* #te:take-o->yama-o
16136 #monidir###te:take-aiueo-t0+100 are recognized as aiueo (rate=5/5).##
16137 #monidir#cmd='vowelrecogv3 tri:yama tr:take k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:
T:100 tt:0:100 DISP:0 npt:0.75:1:1:1:179 > /dev/null'
16138 #monidir### mean distance of poles of 'aiueo' of yama and tr:take are as follows.
16139 #monidir## 0.051381* 0.058910 0.055041 0.052598 #te:yama-a->take-a
16140 #monidir## 0.058818 0.049672 0.048210* 0.050618 0.053615 #te:yama-i->take-i
16141 #monidir## 0.052155 0.047617 0.045886 0.045541* 0.047060 #te:yama-u->take-u
16142 #monidir## 0.053153 0.053102 0.050163 0.047573 0.047341* #te:yama-e->take-e
16143 #monidir## 0.046182 0.052140 0.048877 0.046389 0.044863* #te:yama-o->take-o
16144 #monidir###te:yama-aiueo-t0+100 are recognized as aiueo (rate=2/5).##
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50:0:150 DISP:0 > /dev/null
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16224
50:0:150 DISP:0 npt:0.75:1:1:1:179 > /dev/null
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16237
P1-30 of take-e
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16240
50:0:150 DISP:0 npt:0.7:1:1:5:150 > /dev/null
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16248
P-0:150 DISP:0 npt:0.7:1:1:5:150 > /dev/null
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16187 # 0.596052* 1.174193 0.751944 0.846386 0.666876 #te:take-a->yama-a
16188 # 1.048518 0.345472* 0.700634 0.438245 1.235806 #te:take-i->yama-i
16189 # 0.597315 0.846020 0.283411* 0.392350 0.744878 #te:take-u->yama-u
16190 # 0.864327 0.439828 0.562029 0.297219* 1.025901 #te:take-e->yama-e
16191 # 0.302022 1.141708 0.571320 0.692034 0.298501* #te:take-o->yama-o
16192 ###te:take-aiueo-t0+150 are recognized as aiueo (rate=5/5).##
16193
16194 cmd='vowelrecogv3 tri:yama te:take k:9 N:1 m:M4 dir:.../onsei07 rsa:-1:0.7:1:20 DiffMode:0 T:100 tt:0:
150:0:150 DISP:0 > /dev/null'
16195 ### mean distance of M4 of take and tri:yama are as follows.
16196 # 0.596052* 1.174193 0.751944 0.846386 0.666876 #te:take-a->yama-a
16197 # 1.048518 0.345472* 0.700634 0.438245 1.235806 #te:take-i->yama-i
16198 # 0.597315 0.846020 0.283411* 0.392350 0.744878 #te:take-u->yama-u
16199 # 0.864327 0.439828 0.562029 0.297219* 1.025901 #te:take-e->yama-e
16200 ###te:take-aiueo-t0+150 are recognized as aiueo (rate=5/5).##
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16224
50:0:150 DISP:0 npt:0.7:1:1:1:179 > /dev/null
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50:0:150 DISP:0 npt:0.7:1:1:5:150 > /dev/null
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16248
P-0:150 DISP:0 npt:0.7:1:1:5:150 > /dev/null
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```
p:0-150:0-150 DISP:0 npt:0.7:1:1:0:180 > /dev/null'
16260 ### mean distance of poles of 'aiueo' of take and tr:yama are as follows.
16261 # 0.057887* 0.064662 0.061016 0.065455 0.059961 #te:take-a->yama-a
16262 # 0.064593 0.065717* 0.064328 0.065730 #te:take-i->yama-i
16263 # 0.062281 0.061186 0.060021* 0.062403 0.060559 #te:take-u->yama-u
16264 # 0.059597 0.058897 0.056082* 0.058234 0.058165 #te:take-e->yama-e
16265 # 0.062482 0.064648 0.061127 0.061970 0.059177* #te:take-o->yama-o
16266 ##te:take-aiueo-t0+150 are recognized as aiueo (rate=4/5).###
16267 ##single-directional
16268 cmd='vowelrecog te:yama te:take k:27 N:6 m:poles4 dir:.../onsei07 rsa:2:0.7:1:20 DiffMode:0 T:100 t
p:0-150:0-150 DISP:0 npt:0.7:1:1:0:180 > /dev/null'
16269 ### mean distance of poles of 'aiueo' of take and tr:yama are as follows.
16270 # 0.058055* 0.066552 0.062445 0.068419 0.061829 #te:take-a->yama-a
16271 # 0.062592 0.056184* 0.057425 0.065503 0.066934 #te:take-i->yama-i
16272 # 0.060752 0.060288 0.059046* 0.062190 0.059041 #te:take-u->yama-u
16273 # 0.058172 0.058091 0.055263* 0.057442 0.058824 #te:take-e->yama-e
16274 # 0.061396 0.064946 0.061161 0.063524 0.058984* #te:take-o->yama-o
16275 ##te:take-aiueo-t0+150 are recognized as aiueo (rate=4/5).###
16276
16277
16278 070129
16279 #####
16280 (1) vowelrecogのオプション dir:<dir> でデータのディレクトリを指定可にした。
16281 vowelrecogの出力形式を変えた(下参照)。
16282 #####
16283 ### making residual s(t)
16284 #####making prediction from here
16285 #fuku kita kosi sanuki take yama
16286 #for name in take yama; do for v in a i u e o ; do
16287 #for name in take i ; do for v in a ; do
16288 for name in fuku kita kosi sanuki take yama; do for v in a i u e o ; do
16289 rm -rf result-ensrs2ge/tmp;
16290 d=../onsei07 # the directory storing the onsei-data files
16291 rsarsa=-1:0.7:1:20 k=27 N=1 mpmp=1:1:1 DW=DiffMode:0 H=Hosei:1 gsg:5e-3 w=w:0.2 T=100 ;
16292 tf=50:tl=100:tt=te=expr ${tf} + ${tl} ;pf=$tf;pl=$tl;pt=expr ${pf} + ${pl} ;
16293 /tspredv3 $d/${sname}-${v}.dat ${tf} ${tl} ${tf} ${tl} ${pf} ${pl} ${pt} ${mp} ${DW} N:${N}-${N}-1 M:1-1:1 ssp:
1 ${rsra} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null
16294 ###to save
16295 cd result-ensrs2ge;
16296 #e=../${d}/${sname}-${N}${N}-${tf}-${tl}${pf}-${pl}-${pt}-${v}
16297 #e=${d}/${sname}-${N}${N}-${tf}-${tl}${pf}-${pl}-${pt}-${v}
16298 f=${d}/${e}-${sname}-${v}
16299 f="predictM0:${pf}-${v}.dat"
16300 cat ${p} |awk '{print $3-$1}' > ../${f}.dat
16301 ###for display from here
16302 cat > disp.plt <EOF
16303 #plot ../${f}.dat using 0:($3-$1) t ".,${f}" w lp; pause -1 "Hit return key to quit"
16304 plot ".,${f}.dat" using 0:1 t "${f}" w lp; pause -1 "Hit return key to quit"
16305 EOF
16306 xterm -geometry 50x5-0-0 -e gnuplot -geometry 300x210 disp.plt&
16307 ##for display error to here
16308 cd ../echo ##### Done for ${f}.dat ###
16309 done ; done
16310 ### making s(t) to here.
16311
16312
16313 #####
16314 for name in s-Nit50-1050p50-1050-take ; do for v in a ; do
16315 rm -rf result-ensrs2ge/tmp;
16316 d=../onsei07
16317 tf=0:tl=200:tt=te=expr ${tf} + ${tl} ;pf=$tf;pl=30:pt=expr ${pf} + ${pl} ; # tl=150 is necessary for
pl=30 of take-e
or pl=30 of take-e
16318 tf=50:tl=100:tt=te=expr ${tf} + ${tl} ;pf=$tf;pl=80:pt=expr ${pf} + ${pl} ;
16320 rsarsa:2:0.7:1:20 k=27 N=N:6-6:1 mpmp=1:1:1 DW=DiffMode:0 H=Hosei:1 gsg:5e-3 w=w:0.2 T=100 ;date
16321 cmd=../tspredv3 $d/${sname}-${v}.dat ${tf} ${tl} ${tf} ${tl} ${pf} ${pl} ${pt} ${mp} ${DW} N:${N}-1:1 ib:0:0:0:0
${rsra} k:${k} y:0:0:0:0 ${g} ${w} T:${T} vt:0.5 vr:10"
16322 $cmd >/dev/null ;date
16323 echo ##### Done for $cmd ###
16324 done done
16325
16326 for name in s-Nit50-1050p50-1050-take ; do for v in a ; do
16327 rm -rf result-ensrs2ge/tmp;
16328 d=../onsei07
16329 tf=50:tl=100:tt=te=expr ${tf} + ${tl} ;pf=$tf;pl=80:pt=expr ${pf} + ${pl} ;
16330 tf=50:tl=200:tt=te=expr ${tf} + ${tl} ;pf=$tf;pl=30:pt=expr ${pf} + ${pl} ;
16331 rsarsa:-1:0.7:1:20 k=9 N=N:33-33:1 mpmp=1:1:1 DW=DiffMode:0 H=Hosei:1 gsg:5e-3 w=w:0.2 T=100 ; to=
${trtl};date
16332 cmd=../tspredv3 $d/${sname}-${v}.dat ${tf} ${tl} ${tf} ${tl} ${pf} ${pl} ${pt} ${mp} ${DW} N:${N}-1:1 ib:0:0:0:0
${rsra} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vr:10"
16333 $cmd >/dev/null ;date
```

```
echo "## Done for $cmd ###"
16334 done done
16335 #####
16336 #####
16337 #####
16338 #####
16339 ### recognilton test
16340
16341 Result of 'vowelrecog te:yama tr:take k:9 N:33-33 m:poles4 dir:.../onsei07 T:100 tt:0:100:0:100:100 D
ISP:2'
16342 ### mean distance of poles of 'aiueo' of yama and take are as follows.
16343 # 0.134780* 0.154160 0.151998 0.145055 0.136471 #te:yama-a->tr:take-aiueo
16344 # 0.158979 0.141900* 0.142316 0.147571 #te:yama-i->tr:take-aiueo
16345 # 0.161908 0.159065 0.139856* 0.152872 0.148023 #te:yama-u->tr:take-aiueo
16346 # 0.176139 0.172353 0.140659 0.158774 0.140490* #te:yama-e->tr:take-aiueo
16347 # 0.114943 0.140118 0.106692 0.112553 0.095262* #te:yama-o->tr:take-aiueo
16348 ##te:yama-aiueo-t0+100 are recognized as tr:take-aiueo-t0+100 (4/5) via m:poles4N33-33.###
16349 Result of 'vowelrecog te:take tr:yama k:9 N:33-33 m:poles4 dir:.../onsei07 T:100 tt:0:100:0:100:100 D
ISP:2'
16350 ### mean distance of poles of 'aiueo' of take and yama are as follows.
16351 # 0.116436* 0.132415 0.126448 0.119123 0.147516 #te:take-a->tr:yama-aiueo
16352 # 0.166214 0.133440* 0.136465 0.136736 0.135882 #te:take-i->tr:yama-aiueo
16353 # 0.155907 0.139426 0.135933 0.122639* 0.134053 #te:take-u->tr:yama-aiueo
16354 # 0.151498 0.130018 0.127516 0.124365* 0.143236 #te:take-e->tr:yama-aiueo
16355 # 0.141291 0.147140 0.141551 0.125116* 0.131923 #te:take-o->tr:yama-aiueo
16356 ##te:take-aiueo-t0+100 are recognized as tr:yama-aiueo-t0+100 (3/5) via m:poles4N33-33.###
16357
16358 Result of 'vowelrecog te:yama tr:take k:9 N:1-1 m:M4 dir:.../onsei07 T:100 tt:0:100:0:100:100 DISP:2'
16359 ### mean distance of M4 (Associative Matrices) of 'aiueo' of yama and take are as follows.
16360 # 0.550908 1.028258 0.612155 0.878704 0.318913* #te:yama-a->tr:take-aiueo
16361 # 1.176888 0.348368* 0.851151 0.415153 1.119178 #te:yama-i->tr:take-aiueo
16362 # 0.761902 0.680035 0.299522* 0.570146 0.549299 #te:yama-u->tr:take-aiueo
16363 # 0.857762 0.431191 0.416846 0.324893* 0.671084 #te:yama-e->tr:take-aiueo
16364 # 0.595816 1.193588 0.712987 0.101756 0.303304* #te:yama-o->tr:take-aiueo
16365 ##te:yama-aiueo-t0+100 are recognized as tr:take-aiueo-t0+100 (4/5) via m:M4N1-1.###
16366 Result of 'vowelrecog te:take tr:yama k:9 N:1-1 m:M4 dir:.../onsei07 T:100 tt:0:100:0:100:100 DISP:2'
16367 ### mean distance of M4 (Associative Matrices) of 'aiueo' of take and yama are as follows.
16368 # 0.50908* 1.176888 0.761902 0.857762 0.595816 #te:take-a->tr:yama-aiueo
16369 # 1.028258 0.348368* 0.851151 0.415153 1.119178 #te:take-i->tr:yama-aiueo
16370 # 0.612155 0.851151 0.299522* 0.416846 0.712987 #te:take-u->tr:yama-aiueo
16371 # 0.878704 0.415153 0.570146 0.324893* 1.016756 #te:take-e->tr:yama-aiueo
16372 # 0.318913 1.119178 0.549299 0.671084 0.303304* #te:take-o->tr:yama-aiueo
16373 ##te:take-aiueo-t0+100 are recognized as tr:yama-aiueo-t0+100 (5/5) via m:M4N1-1.###
16374
16375 Result of 'vowelrecog te:s-Nit50-350p50-350-take tr:s-Nit50-350p50-350-yama k:9 N:1-1 m:M4 dir:.../on
sei07 T:100 tt:0:100:0:100:100 DISP:2'
16376 ### mean distance of M4 (Associative Matrices) of 'aiueo' of s-Nit50-350p50-350-take and s-Nit50-350
p50-350-yama are as follows.
16377 # 0.094494* 0.138795 0.138127 0.175290 0.155482 #te:s-Nit50-350p50-350-take-a->tr:s-Nit50-3
50p50-350-yama-aiueo
16378 # 0.154973 0.125215 0.115800* 0.157969 0.141700 #te:s-Nit50-350p50-350-take-i->tr:s-Nit50-3
50p50-350-yama-aiueo
16379 # 0.095586 0.094319 0.126152 0.091355 0.086106* #te:s-Nit50-350p50-350-take-u->tr:s-Nit50-3
50p50-350-yama-aiueo
16380 # 0.105042 0.093826 0.098109 0.137389 0.088958* #te:s-Nit50-350p50-350-take-e->tr:s-Nit50-3
50p50-350-yama-aiueo
16381 # 0.250826 0.254485 0.277581 0.234106* 0.269096 #te:s-Nit50-350p50-350-take-o->tr:s-Nit50-3
50p50-350-yama-aiueo
16382 ##te:s-Nit50-350p50-350-take-aiueo-t0+100 are recognized as tr:s-Nit50-350p50-350-yama-aiueo-t0+100
(1/5) via m:M4N1-1.###
16383 Result of 'vowelrecog te:s-Nit50-350p50-350-yama tr:s-Nit50-350p50-350-take k:9 N:1-1 m:M4 dir:.../on
sei07 T:100 tt:0:100:0:100:100 DISP:2'
16384 ## mean distance of M4 (Associative Matrices) of 'aiueo' of s-Nit50-350p50-350-yama and s-Nit50-350
p50-350-take are as follows.
16385 # 0.094494* 0.154973 0.095586 0.105042 0.250826 #te:s-Nit50-350p50-350-yama-a->tr:s-Nit50-3
50p50-350-take-aiueo
16386 # 0.138795 0.125215 0.094319 0.093826* 0.254485 #te:s-Nit50-350p50-350-yama-i->tr:s-Nit50-3
50p50-350-take-aiueo
16387 # 0.138127 0.115800 0.126152 0.098109* 0.277581 #te:s-Nit50-350p50-350-yama-u->tr:s-Nit50-3
50p50-350-take-aiueo
16388 # 0.175290 0.157969 0.091355* 0.137389 0.234106 #te:s-Nit50-350p50-350-yama-e->tr:s-Nit50-3
50p50-350-take-aiueo
16389 # 0.155482 0.141700 0.086106* 0.088958 0.269096 #te:s-Nit50-350p50-350-yama-o->tr:s-Nit50-3
50p50-350-take-aiueo
16390 ##te:s-Nit50-350p50-350-yama-aiueo-t0+100 are recognized as tr:s-Nit50-350p50-350-take-aeueu-t0+100
(1/5) via m:M4N1-1.###
16391 Result of 'vowelrecog te:s-Nit50-350p50-350-take tr:s-Nit50-350p50-350-yama k:9 N:33-33 m:poles4 dir
:.../onsei07 T:100 tt:0:100:0:100:100 DISP:2'
16392 ## mean distance of poles of 'aiueo' of s-Nit50-350p50-350-take and s-Nit50-350p50-350-yama are as
follows.
16393 # 0.148333 0.151575 0.134433* 0.151656 0.142001 #te:s-Nit50-350p50-350-take-a->tr:s-Nit50-3
50p50-350-yama-aiueo
16394 # 0.135644* 0.145564 0.137279 0.154281 0.138375 #te:s-Nit50-350p50-350-take-i->tr:s-Nit50-3
```

```
50p50-350-yama-aiueo
16395 # 0.124345* 0.137476 0.127496 0.139592 0.11818* #te:s-Nlt50-350p50-350-take-u->tr:s-Nlt50-3
50p50-350-yama-aiueo
16396 # 0.124858* 0.124702* 0.132550 0.149884 0.127172 #te:s-Nlt50-350p50-350-take-e->tr:s-Nlt50-3
50p50-350-yama-aiueo
16397 # 0.149671* 0.163591 0.156381 0.159846 0.156929 #te:s-Nlt50-350p50-350-take-o->tr:s-Nlt50-3
50p50-350-yama-aiueo
16398 ##te:s-Nlt50-350p50-350-take-aiueo-t0+100 are recognized as tr:s-Nlt50-350p50-350-yama-uaoia-t0+100
(0/5) via m:poles4N33-33.##
16399 Result of 'vowelrecog te:s-Nlt50-350p50-350-yama tr:s-Nlt50-350p50-350-take k:9 N:33-33 m:poles4 dir
.../onsei07 T:100 tt:0:100:0:100:100 DISP:2'
16400 ## mean distance of poles of 'aiueo' of s-Nlt50-350p50-350-yama and s-Nlt50-350p50-350-take are as
follows.
16401 # 0.138187* 0.149875 0.138501 0.155438 #te:s-Nlt50-350p50-350-yama-a->tr:s-Nlt50-3
50p50-350-take-aiueo
16402 # 0.137175 0.145110 0.141655 0.128297* 0.143231 #te:s-Nlt50-350p50-350-yama-i->tr:s-Nlt50-3
50p50-350-take-aiueo
16403 # 0.154698 0.148677* 0.153511 0.150732 0.169878 #te:s-Nlt50-350p50-350-yama-u->tr:s-Nlt50-3
50p50-350-take-aiueo
16404 # 0.130095* 0.138894 0.147033 0.147804 0.143434 #te:s-Nlt50-350p50-350-yama-e->tr:s-Nlt50-3
50p50-350-take-aiueo
16405 # 0.122024* 0.130610 0.137063 0.142155 0.143338 #te:s-Nlt50-350p50-350-yama-o->tr:s-Nlt50-3
50p50-350-take-aiueo
16406 ##te:s-Nlt50-350p50-350-yama-aiueo-t0+100 are recognized as tr:s-Nlt50-350p50-350-take-aeiaa-t0+100
(1/5) via m:poles4N33-33.##
16407
16408
16409 Result of 'vowelrecog te:yama tr:take k:9 N:1-1 m:poles4 dir:.../onsei07 T:100 tt:0:100:0:100:100 DIS
P:2'
16410 ## mean distance of poles of 'aiueo' of yama and take are as follows.
16411 # 0.168547* 0.394634 0.273702 0.311134 0.186710 #te:take-a->tr:take-aiueo
16412 # 0.367569 0.141527* 0.208922 0.209149 #te:yama-i->tr:take-aiueo
16413 # 0.375610 0.294139 0.172568* 0.248902 0.326930 #te:yama-u->tr:take-aiueo
16414 # 0.336071 0.233766 0.159652* 0.175180 0.261783 #te:yama-e->tr:take-aiueo
16415 # 0.243492 0.241423 0.259827 0.209097 0.178163* #te:yama-o->tr:take-aiueo
16416 ##te:yama-aiueo-t0+100 are recognized as tr:take-aiueo-t0+100 (4/5) via m:poles4N1-1.##
16417 Result of 'vowelrecog te:take k:9 N:1-1 m:poles4 dir:.../onsei07 T:100 tt:0:100:0:100:100 DIS
P:2'
16418 ## mean distance of poles of 'aiueo' of take and yama are as follows.
16419 # 0.257882* 0.375305 0.339055 0.349721 0.272217 #te:take-a->tr:yama-aiueo
16420 # 0.387992 0.339401 0.332496 0.362084 0.287283* #te:take-i->tr:yama-aiueo
16421 # 0.273702 0.220227 0.162460 0.159652* 0.347727 #te:take-u->tr:yama-aiueo
16422 # 0.276763 0.232398 0.126731 0.175180* 0.259335 #te:take-e->tr:yama-aiueo
16423 # 0.282764 0.174182 0.286546 0.284940 0.178163* #te:take-o->tr:yama-aiueo
16424 ##te:take-aiueo-t0+100 are recognized as tr:yama-aoeio-t0+100 (3/5) via m:poles4N1-1.##
16425 #####
16426 bagging predictions
16427 #####
16428 #for name in yama ; do for v in a i u e o ; do
16429 #for name in take ; do for v in a i u e o ; do
16430 #for name in take ; do for v in e ; do
16431 #rm -rf result-ensrs2ge/tmp;
16432 dm=""./onsei07"
16433 tf=0:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=30;pt="expr ${pf} + ${pl}"; # tl=150 is necessary for
pl=30 of take-e
16434 #tf=50:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=30;pt="expr ${pf} + ${pl}"; # tl=150 is necessary f
or pl=30 of take-e
16435 #tf=50:tl=100:tt="expr ${tf} + ${tl}";pf=$tt;pl=80;pt="expr ${pf} + ${pl}";
16436 rsarsa:2:0.7:1:20 k=45 N=N:6-6:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 l g=9:5e-3 ww=0.2 T=100 ,date
16437 cmd=""/tspredv3 $d/${name}=${v}.dat ${tf}=${tt}:[${pf}]-[${pt}] ${DW} ${H} ${N} M:1-1:1 ib:0:0:0:0
${rea} k:${k} y:0:0:0:0 ${g} ${w} T:${T} vt:0.5 vr:10"
16438 $cmd >/dev/null ,date
16439 echo ""## Done for $cmd ##"
16440 done done
16441 ##NSE=4.439577e+03(NMSE7.383852e-02)(NMSE30 0-160:160-190k45N6mp1:1:1.000000H1-y take-e
16442
16443 #for name in take ; do for v in e ; do
16444 #rm -rf result-ensrs2ge/tmp;
16445 dm=""./onsei07"
16446 tf=0:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=30;pt="expr ${pf} + ${pl}"; # tl=150 is necessary for
pl=30 of take-e
16447 #tf=50:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=30;pt="expr ${pf} + ${pl}"; # tl=150 is necessary f
or pl=30 of take-e
16448 #tf=50:tl=100:tt="expr ${tf} + ${tl}";pf=$tt;pl=80;pt="expr ${pf} + ${pl}";
16449 rsarsa:2:0.7:1:20 k=27 N=N:6-6:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 l g=9:5e-3 ww=0.2 T=100 ,date
16450 cmd=""/tspredv3 $d/${name}=${v}.dat ${tf}=${tt}:[${pf}]-[${pt}] ${DW} ${H} ${N} M:1-1:1 ib:0:0:0:0
${rea} k:${k} y:0:0:0:0 ${g} ${w} T:${T} vt:0.5 vr:10"
16451 $cmd >/dev/null ,date
16452 echo ""## Done for $cmd ##"
16453 done done
16454 ##NSE=1.254976e+05(NMSE4.757149e-01)(n90 0-150:150-240k27N6mp1:1:1.000000H1-y #k=27 N=N:6-6:1
16455
```

```
#MSE=1.998059e+04(NMSE9.558350e-02)(n30 0-150:150-180k27N6mp1:1:1.000000H1-y #k=27 N=N:6-6:1
16457 #NSE=4.370536e+04(NMSE2.09784e-01)(n30 0-150:150-180k54N3mp1:1:1.000000H1-y #k=54 N=N:3-3:1
16458 #MSE=3.942118e+04(NMSE1.885837e-01)(n30 0-150:150-180k54N6mp1:1:1.000000H1-y #k=54 N=N:6-6:1
16459 #####
16460 #####
16461 #MSE=3.1049512e+05(NMSE6.021903e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-a
16462 #MSE=1.447475e+05(NMSE7.060289e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-i
16463 #MSE=4.217961e+04(NMSE1.025929e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-u
16464 #MSE=3.225528e+04(NMSE9.023119e-01)(nMSE80) 50-150:150-230k26N6mp1:1:1.000000H1-y take-e
16465 #MSE=6.002331e+04(NMSE3.832286e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-o
16466 #####
16467 #MSE=6.008982e+06(NMSE5.64603e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y yama-a
16468 #MSE=1.332606e+05(NMSE2.64190e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y yama-i
16469 #MSE=2.123203e+05(NMSE3.681047e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y yama-u
16470 #MSE=2.132203e+05(NMSE3.681047e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y yama-e
16471 #MSE=6.256934e+05(NMSE2.761867e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y yama-o
16472 #####
16473 #tuning k and N
16474 #MSE=3.049512e+05(NMSE6.021903e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-a
16475 #MSE=3.427732e+05(NMSE6.768777e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-i
16476 #MSE=4.766506e+05(NMSE9.414266e-01)(nMSE80) 50-150:150-230k27N6mp1:1:1.000000H1-y take-u
16477 #MSE=3.809645e+05(NMSE7.52294e-01)(nMSE80) 50-150:150-230k26N6mp1:1:1.000000H1-y take-e
16478 #MSE=3.539924e+05(NMSE6.990323e-01)(nMSE80) 50-150:150-230k26N6mp1:1:1.000000H1-y take-a
16479 #MSE=3.539924e+05(NMSE6.990323e-01)(nMSE80) 50-150:150-230k26N6mp1:1:1.000000H1-y take-e
16480 #MSE=3.605057e+05(NMSE7.118942e-01)(nMSE80) 50-150:150-230k28N6mp1:1:1.000000H1-y take-a
16481 #####
16482 #single CAN2 predictions
16483 #####
16484 #for name in take yama ; do for v in a i u e o ; do
16485 #for name in take ; do for v in a i u e o ; do
16486 #for name in take ; do for v in a i u e o ; do
16487 #for name in take ; do for v in a i u e o ; do
16488 #for name in take ; do for v in a i u e o ; do
16489 #for name in take ; do for v in e ; do
16490 #rm -rf result-ensrs2ge/tmp;
16491 dm=""./onsei07"
16492 tf=50:tl=100:tt="expr ${tf} + ${tl}";pf=$tt;pl=80;pt="expr ${pf} + ${pl}";
16493 tf=50:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=80;pt="expr ${pf} + ${pl}";
16494 rsarsa:1:0.7:1:20 k=10 N=N:33-33:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 l g=9:5e-3 ww=0.2 T=100 ; to
=${tr}:/date
16495 cmd=""/tspredv3 $d/${name}=${v}.dat ${tf}=${tt}:[${pf}]-[${pt}] ${DW} ${H} ${N} M:1-1:1 ib:0:0:0:0
${rea} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vr:10"
16496 $cmd >/dev/null ,date
16497 echo ""## Done for $cmd ##"
16498 done done
16499 #####
16500 #MSE=6.890470e+04(NMSE1.360668e-01)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y take-a
16501 #MSE=8.634091e+03(NMSE5.345070e-01)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y take-i
16502 #MSE=6.278255e+03(NMSE1.526107e-02)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y take-u
16503 #MSE=9.322030e+04(NMSE2.607752e+00)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y take-e
16504 #MSE=1.538107e+05(NMSE9.797233e-01)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y take-o
16505 #####
16506 #MSE=2.520107e+07(NMSE2.368255e+00)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y yama-a
16507 #MSE=2.040071e+04(NMSE4.044467e-02)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y yama-i
16508 #MSE=6.956364e+04(NMSE1.206041e-01)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y yama-u
16509 #MSE=1.089247e+06(NMSE9.473174e-01)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y yama-e
16510 #MSE=2.375292e+04(NMSE1.048475e-02)(nMSE80) 50-150:150-230k9N3mp1:1:1.000000H1-y yama-o
16511 #####
16512 #MSE=6.487764e+05(NMSE1.281145e+00)(nMSE80) 50-150:150-230k10N3mp1:1:1.000000H1-y take-a
16513 #MSE=4.416668e+03(NMSE2.734206e-01)(nMSE80) 50-150:150-230k10N3mp1:1:1.000000H1-y take-i
16514 #MSE=7.533737e+03(NMSE1.831287e+00)(nMSE80) 50-150:150-230k10N3mp1:1:1.000000H1-y take-u
16515 #MSE=6.829932e+03(NMSE1.910611e-01)(nMSE80) 50-150:150-230k10N3mp1:1:1.000000H1-y take-e
16516 #MSE=2.493068e+05(NMSE1.588001e+00)(nMSE80) 50-150:150-230k10N3mp1:1:1.000000H1-y take-o
16517 #####
16518 #NSE=4.439577e+03(NMSE7.383852e-02)(NMSE30 0-160:160-190k45N6mp1:1:1.000000H1-y take-e
16519
16520 #for name in take ; do for v in e ; do
16521 #rm -rf result-ensrs2ge/tmp;
16522 dm=""./onsei07"
16523 tf=0:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=30;pt="expr ${pf} + ${pl}"; # tl=150 is necessary for
pl=30 of take-e
16524 #tf=50:tl=150:tt="expr ${tf} + ${tl}";pf=$tt;pl=30;pt="expr ${pf} + ${pl}"; # tl=150 is necessary f
or pl=30 of take-e
16525 #tf=50:tl=100:tt="expr ${tf} + ${tl}";pf=$tt;pl=80;pt="expr ${pf} + ${pl}";
16526 rsarsa:2:0.7:1:20 k=45 N=N:6-6:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 l g=9:5e-3 ww=0.2 T=100 ,date
16527 cmd=""/tspredv3 $d/${name}=${v}.dat ${tf}=${tt}:[${pf}]-[${pt}] ${DW} ${H} ${N} M:1-1:1 ib:0:0:0:0
${rea} k:${k} y:0:0:0:0 ${g} ${w} T:${T} vt:0.5 vr:10"
16528 $cmd >/dev/null ,date
16529 echo ""## Done for $cmd ##"
16530 done done
16531 ##NSE=1.254976e+05(NMSE4.757149e-01)(n90 0-150:150-240k27N6mp1:1:1.000000H1-y #k=27 N=N:6-6:1
16532
```



```
16536 time ./tspredv3 $d)/$(name)-$(v).dat $(tf)-$(t):$(pf)-$(p):$(mp) ${DM} ${H} N:${N}-(N)-1 M:1-1:1
16537 ssp:1 ${rsa} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vz:10 >/dev/null
16538 cd result-ensrs2ge;
16539 f="./$(d)/s-$(name)-N${N}t-$(tf)-$(t):$(pf)-$(p):$(mp) ${DM} ${H} N:${N}-(N)-1 M:1-1:1
16540 p="predictDM0:$(fr)-$(fr)-$(t).dat"
16541 cat $(p) |awk '{print $1-$3}' > ${f}.dat
16542 cat > disp.plt <<EOF
16543 #plot "${f}.dat" using 0:($3-$1) t "${f}" w lp; pause -1 "Hit return key to quit"
16544 plot "${f}.dat" using 0:1 t "${f}" w lp; pause -1 "Hit return key to quit"
16545 EOF
16546 xterm -geometry 50x5-0+0 -e gnuplot -geometry 300x210 disp.plt&
16547 cd ../echo "### Done for ${f} ###"
16548 done ; done
16549 #####
16550 #te:take-aiueo-t200-100 are recognized as tr:take-aiueo-t100+100 (5/5) via m:M4N1-1.#
16551 vowelrecog te:take tr:yama k:9 N:1-1 m:M4 dir:$(d) T:100 tt:100:100:200:100:100 DISP:2 >/dev/null
16552 # 0.563423* 1.131986 0.568536 0.863718 0.326062* #tr:yama-a
16553 # 1.153948 0.295958* 0.853964 0.459469 1.088103 #tr:yama-i
16554 # 1.730116 0.772451* 0.263415* 0.529942 0.521324 #tr:yama-u
16555 # 0.821061 0.511239 0.407770 0.312192* 0.679685 #tr:yama-e
16556 # 0.921208 1.1556293 1.1009119 1.314809 0.791130 #tr:yama-o
16557 vowelrecog te:yama tr:take k:9 N:1-1 m:M4 dir:$(d) T:100 tt:100:100:200:100:100 DISP:2 >/dev/null
16558 # 0.656710 1.131223 0.777335 0.855525 1.063375 #tr:take-a
16559 # 1.157995 0.372779* 0.843944 0.543795 1.598255 #tr:take-i
16560 # 0.542737 0.815621 0.302981* 0.395307 1.017582 #tr:take-u
16561 # 0.846555 0.450016 0.580405 0.287323* 1.304721 #tr:take-e
16562 # 0.291585* 1.133913 0.616411 0.761041 0.549317* #tr:take-o
16563 #te:yama-aiueo-t200+100 are recognized as tr:take-aiueo-t100+100 (4/5) via m:M4N1-1.#
16564 vowelrecog te:take tr:take k:9 N:1-1 m:M4 dir:$(d) T:100 tt:100:100:200:100:100 DISP:2 >/dev/null
16565 # 1.61366* 1.246872 0.820082 0.988661 0.766090 #tr:take-a
16566 # 1.278183* 0.926111* 0.837960 0.403813 1.094997 #tr:take-i
16567 # 0.943729 0.808820 0.695259 0.517327 0.532643 #tr:take-u
16568 # 0.983702 0.379639 0.535969 0.049177* 0.817323 #tr:take-e
16569 # 0.681487 1.178867 0.668663 0.919566 0.309555* #tr:take-o
16570 vowelrecog te:yama tr:yama k:9 N:1-1 m:M4 dir:$(d) T:100 tt:100:100:200:100:100 DISP:2 >/dev/null
16571 #te:yama-a #te:take-i #te:yama-u #te:yama-o #te:take-a
16572 # 0.021793* 1.041196 0.600036 0.661662 0.635577 #tr:yama-a
16573 # 1.077582 0.606946* 0.899456 0.521569 1.521569 #tr:yama-i
16574 # 0.575709 0.819426 0.149558* 0.393634 1.067111 #tr:yama-u
16575 # 0.647710 0.496562 0.417279 0.045915* 1.111449 #tr:yama-e
16576 # 0.596230 1.478404 0.965302 1.114737 0.072195* #tr:yama-o
16577 #te:yama-aiueo-t200+100 are recognized as tr:yama-aiueo-t100+100 (5/5) via m:M4N1-1.#
16578 #
16579 #
16580 #
16581 vowelrecog te:take tr:take k:9 N:32-32 m:poles4 dir:$(d) T:100 tt:100:100:200:100:100 DISP:2 >/dev/
null
16582 # 0.116909* 0.121043 0.130291 0.143333 0.138339 #tr:take-a
16583 # 0.146494 0.104968* 0.132648 0.148425 0.153534 #tr:take-i
16584 # 0.137152 0.126375 0.117118* 0.143906 0.137041* #tr:take-u
16585 # 0.126502 0.117302 0.137926 0.122459* 0.137568 #tr:take-e
16586 # 0.144996 0.136771 0.133920 0.141247 0.140629 #tr:take-o
16587 vowelrecog te:take tr:yama k:9 N:32-32 m:poles4 dir:$(d) T:100 tt:100:100:100:100:100 DISP:2 >/dev
null
16588 #te:take-a #te:take-i #te:take-u #te:take-e #te:take-o
16589 # 0.151727 0.101129 0.176004 0.172104 0.168093 #tr:yama-a
16590 # 0.154508 0.130615 0.136942 0.133971* 0.142230 #tr:yama-i
16591 # 0.143086* 0.114126* 0.116308 0.136856 #tr:yama-u
16592 # 0.150221 0.128305 0.114288* 0.134080 0.137833 #tr:yama-e
16593 # 0.143813 0.136197 0.135274 0.137220 0.128997* #tr:yama-o
16594 #te:take-aiueo-t100+100 are recognized as tr:yama-aiueo-t100+100 (1/5) via m:poles4N32-32.#
16595 vowelrecog te:yama tr:take k:9 N:32-32 m:poles4 dir:$(d) T:100 tt:0:100:100:100:100 DISP:2 >/dev/nu
11
16596 #te:yama-a #te:yama-i #te:yama-u #te:yama-e #te:yama-o
16597 # 0.117026* 0.159062 0.162957 0.188698 0.143003 #tr:take-a
16598 # 0.150160 0.137472 0.148996 0.185365 0.163551 #tr:take-i
16599 # 0.135939 0.129713* 0.125451* 0.154459 0.140135 #tr:take-u
16600 # 0.145534 0.140538 0.152118 0.140252 #tr:take-e
16601 # 0.123885 0.138226 0.149765 0.154351* 0.133097* #tr:take-o
16602 #te:yama-aiueo-t100+100 are recognized as tr:take-aiueo-t0+100 (3/5) via m:poles4N32-32.#
16603 vowelrecog te:take tr:yama k:9 N:32-32 m:poles4 dir:$(d) T:100 tt:0:100:100:100:100 DISP:2 >/dev/nu
11
16604 #te:take-a #te:take-i #te:take-u #te:take-e #te:take-o
16605 # 0.131173 0.168734 0.151125 0.149075 0.150487 #tr:yama-a
16606 # 0.146572 0.122752 0.136898 0.139767 0.137517 #tr:yama-i
16607 # 0.146291 0.110913 0.117713 0.130374 0.129852 #tr:yama-u
16608 # 0.127556* 0.120103 0.113849* 0.120596* 0.116984* #tr:yama-e
16609 # 0.148701 0.146551 0.133550 0.134591 0.133270 #tr:yama-o
16610 #te:take-aiueo-t100+100 are recognized as tr:yama-aiueo-t0+100 (1/5) via m:poles4N32-32.#
16611 #
16612 #
```

```
16613 time ./tspredv3 $d)/$(name)-$(v).dat $(tf)-$(t):$(pf)-$(p):$(mp) ${DM} ${H} N:${N}-(N)-1 M:1-1:1
16614 ssp:1 ${rsa} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vz:10 >/dev/null
16615 cd result-ensrs2ge;
16616 te:yama-a te:yama-i te:yama-u te:yama-e te:yama-o
16617 # 0.135603* 0.160961 0.163971 0.177916 0.124141 #tr:take-a
16618 # 0.157359 0.143948* 0.159693 0.167628 0.136737 #tr:take-i
16619 # 0.153375 0.145051 0.139545* 0.141245* 0.114194 #tr:take-u
16620 # 0.147347 0.146818 0.152970 0.145547 0.120908 #tr:take-e
16621 # 0.137306 0.161887 0.155888 0.143734 0.103554* #tr:take-o
16622 #te:yama-aiueo-t0+100 are recognized as tr:take-aiueo-t0+100 (4/5) via m:poles4N32-32.#
16623 vowelrecog te:take tr:yama k:9 N:32-32 m:poles4 dir:$(d) T:100 tt:0:100:0:100:100 DISP:2 >/dev/null
16624 #te:take-a te:take-i te:take-u te:take-e te:take-o
16625 # 0.117247* 0.164887 0.155123 0.159196 0.138829 #tr:yama-a
16626 # 0.135620 0.141590 0.150107 0.135422 0.150593 #tr:yama-i
16627 # 0.128145 0.134726* 0.137770 0.127985 0.145195 #tr:yama-u
16628 # 0.121051 0.139855 0.118954* 0.123648* 0.112976* #tr:yama-e
16629 # 0.148171 0.139466 0.137180 0.150252 0.130268 #tr:yama-o
16630 #te:take-aiueo-t0+100 are recognized as tr:yama-aiueo-t0+100 (2/5) via m:poles4N32-32.#
16631 vowelrecogv2 te:yama tr:take k:9 N:32-32 m:poles4 dir:$(d) T:100 tt:500:500:500:100 DISP:2 >/de
v/null
16632 #####
16633 for name in yama ; do for v in a i u e o ; do
16634 cd result-ensrs2ge;
16635 rm -rf result-ensrs2ge/tmp;
16636 ft=800;fr=$(ft);tl=120;frtl=1 expr ${fr} + ${tl}` ;
16637 rsa=rsa:2:0.7:1:20 k=9 N=3 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=$(ft);d
ate
16640 time ./tspredv3 ../onsei07/${name}-$(v).dat 0-$(ft):$(fr)-$(to) ${mp} ${DM} ${H} N:${N}-(N)-1 M:1-1
1 ssp:1 ${rsa} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vz:10 >/dev/null
16641 ##
16642 cd result-ensrs2ge;
16643 f=$(name)-$(v)-N${N}t-$(fr)-$(tl)
16644 cp predictDM0:$(fr)-$(fr)-$(t).dat
16645 cat > disp.plt <<EOF
16646 plot "${f}.dat" using 0:($1-$3) t "${f}" w lp; pause -1 "Hit return key to quit"
16647 EOF
16648 xterm -geometry 50x5-0+0 -e gnuplot -geometry 300x210 disp.plt& red ../
16649 ##
16650 echo "### Done for ${f} ###"
16651 done ; done
16652 ###
16653 #for name in take ; do for v in a i u e o ; do
16654 rm -rf result-ensrs2ge/tmp;
16655 rsa=rsa:2:0.7:1:20 k=27 N=3 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ;
16656 #fr=1600;tl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16657 #ft=1600;fr=100;frtl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16658 #t=1600;fr=100;frtl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16659 #t=1600;fr=100;frtl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16660 #t=1600;fr=100;frtl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16661 #t=1600;fr=100;frtl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16662 #t=1600;fr=100;frtl=160;frtl=1 expr ${fr} + ${tl}` ; to=$(fr);tl` ;
16663 ##
16664 cd result-ensrs2ge;
16665 f=$(name)-$(v)-N${N}t-$(fr)-$(tl)
16666 cp predictDM0:$(fr)-$(fr)-$(t).dat
16667 cat > disp.plt <<EOF
16668 plot "${f}.dat" using 0:($1-$3) t "${f}" w lp; pause -1 "Hit return key to quit"
16669 EOF
16670 xterm -geometry 50x5-0+0 -e gnuplot -geometry 300x210 disp.plt&
16671 cd ../echo "### Done for ${f} ###"
16672 done ; done
16673 #####
16674 #
16675 #
16676 #
16677 (1) y:0:0:0:1 飛行
16678 #for name in take yama ; do for v in a i u e o ; do
16679 for name in yama ; do for v in a i u e o ; do
16680 rm -rf result-ensrs2ge/tmp;
16681 fr=200 tl=80; frtl=1 expr ${fr} + ${tl}`
16682 rsa=rsa:1:0.7:1:20 k=27 N=N:27-27:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to
=$(fr);tl);date
16683 #rsa=rsa:2:0.7:1:20 k=27 N=N:11-11:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to
=$(fr);tl);date
16684 time ./tspredv3 ../onsei07/${name}-$(v).dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} N:${N}-(N)-1 M:1-1
1 ssp:1 ${rsa} k:${k} y:0:0:0:1 ${g} ${w} T:${T} vt:0.5 vz:10 >/dev/null
16685 echo "### Done for $(name)-$(v) ###"
```



```
16834
16835 #MSB=7.47419e+02(NMSE8.350972e-01)(t:2000-2080) 0-2000:2000-2080k9N10mp1:1:1.000000H1-y eguti-1
16836 suser:3ml5.175s
16837
16838 () DiffMode:1
16839 for name in eguti ; do ; for v in a ; do
16840   rm -rf result-ensrs2ge/tmp;
16841   fr=2000 tl=80; fctl=expr ${fr} + ${ctl} \
16842   rsarsa=-1:0.7:1:20 k=28 N=36 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 / to=${fctl}
16843   }NN=N:${N}:-${N}:1:date
16844   0 $[rsa] k:${k} y:0:255:0:1 ${g} ${w} T:${T} vt:0.5 vr:1:0 >/dev/null:date
16845   echo "## Done for ${name}-${v}" ##"
16846 done ; done
16847
16848 #NSE=2.024968e+01(NMSE2.273684e-02) MSBdy=1.704627e+01(NMSEBdy5.944871e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y eguti-a
16849 #NSE=1.097755e+03(NMSE4.41733e-01) MSBdy=2.740830e+02(NMSEBdy1.282771e+00)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y eguti-1
16848 #NSE=8.766312e+01(NMSE2.590593e-02) MSBdy=5.273546e+01(NMSEBdy1.266356e-01)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y eguti-a
16849 #NSE=2.184390e+02(NMSE1.802829e-01) MSBdy=1.644272e+02(NMSEBdy5.883234e-01)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y eguti-e
16850 #NSE=2.229200e+01(NMSE1.403534e-02) MSBdy=7.525847e+00(NMSEBdy1.933243e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y eguti-0
16851 #NSE=3.906478e+00(NMSE7.657148e-02) MSBdy=1.751304e+00(NMSEBdy8.892970e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y sawa-a
16852 #NSE=5.008910e+02(NMSE1.581059e-01) MSBdy=1.757534e+02(NMSEBdy8.934986e-01)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y sawa-1
16853 #NSE=6.733366e+01(NMSE2.604202e-02) MSBdy=2.790906e+01(NMSEBdy9.394909e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y sawa-u
16854 #NSE=3.010935e+01(NMSE1.307312e-02) MSBdy=2.896697e+01(NMSEBdy6.410817e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y sawa-e
16855 #NSE=1.542055e+01(NMSE7.277826e-03) MSBdy=5.531442e+00(NMSEBdy1.236006e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y sawa-0
16856
16857 #NSE=2.024968e+01(NMSE2.273684e-02) MSBdy=1.704627e+01(NMSEBdy5.944871e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y eguti-a
16858 #NSE=3.162893e+01(NMSE3.533921e-02) MSBdy=1.963809e+01(NMSEBdy6.918518e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y
16859 #NSE=6.676905e+01(NMSE7.460151e-02) MSBdy=2.333967e+01(NMSEBdy8.139692e-02)(t:2000-2080) 0-2000:2000-
2080k27N36mp1:1:1.000000H1-y
16860 #NSE=2.241226e+01(NMSE3.504137e-02) MSBdy=1.449823e+01(NMSEBdy5.056246e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y
16861 #NSE=2.916421e+00(NMSE3.258537e-02) MSBdy=1.736472e+01(NMSEBdy6.055933e-02)(t:2000-2080) 0-2000:2000-
2080k28N36mp1:1:1.000000H1-y
16862 #NSE=3.064337e+01(NMSE3.423805e-02) MSBdy=2.036636e+01(NMSEBdy7.102750e-02)(t:2000-2080) 0-2000:2000-
2080k29N36mp1:1:1.000000H1-y
16863 #NSE=4.794899e+01(NMSE3.357373e-02) MSBdy=1.977626e+01(NMSEBdy6.896953e-02)(t:2000-2080) 0-2000:2000-
2080k27N36mp1:1:1.000000H1-y
16864 #NSE=4.920380e+01(NMSE5.497574e-02) MSBdy=2.037126e+01(NMSEBdy7.104446e-02)(t:2000-2080) 0-2000:2000-
2080k27N36mp1:1:1.000000H1-y
16865 #NSE=5.006442e+01(NMSE5.593731e-02) MSBdy=1.893499e+01(NMSEBdy6.603561e-02)(t:2000-2080) 0-2000:2000-
2080k27N36mp1:1:1.000000H1-y
16866 #NSE=7.023986e+01(NMSE7.847946e-02) MSBdy=3.446827e+01(NMSEBdy1.202078e-01)(t:2000-2080) 0-2000:2000-
2080k26N36mp1:1:1.000000H1-y
16867
16868 #####
16869 061129
16870 (1) CAN2を用いる時系列予測のユーティリティソフトtspredv3の機能を整備してきた。
```

16871 y:<ym1n0><ymax0><ym1n><ymax>は、基本的に y<ym1n0><ymax0>の範囲の信号を
16872 y<ym1n><ymax>の範囲に正規化して学習するが、 061129のバージョンでは
16873 y:0:0:<ym1n><ymax>とすると、訓練時系列の最小値と最大値をそれぞれ自動的に
16874 求め y<ym1n0><ymax0>に設定する。

(1) 以前は、bestnsp.net 再理していたが、これは予測値が既知でないとき
16875 ない。また学習パラメータもデフォルトに応じて変えていた。最近
16876 last.netでも良い予測ができるパラメータがあるようなので結果を示す。
(相し、以下の結果は予測ステップ数を100にしているから良い?)

16877 (2) DiffMode:0 == DirectMode
16881 (2-1) single CAN2の結果 (using rsa=-1:0.7:1:20)

```
16882 for name in eguti sawa ; do
16883   for v in a i u e o ; do
16884     rm -rf result-ensrs2ge/tmp;
16885     fr=2000 ts=100 tl=100; fctl=expr ${fr} + ${ctl} \ ; fcts='expr ${fr} + ${cts}' ;
16886     fr=2000 tl=100; fctl=expr ${fr} \ ; fcts='';
16887     f=2000 tl=100; fctl=expr ${fr} \ ; fcts='';
16888     rsarsa=-1:0.7:1:20 k=27 N=39-39:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 / to
=$[fctl]:date
16889 time ./tspredv3 ../data/${name}-${v}.dat 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to]
0 $[rsa] k:${k} y:0:255:0:1 ${g} ${w} T:${T} vt:0.5 vr:1:0 >/dev/null:date
16890 echo "## Done for ${name}-${v}" ##"
```

```
16891 done ; done
16892 #NSE=2.963505e+01(NMSE2.927283e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y eguti-a
16893 #NSE=6.696176e+02(NMSE2.375721e-01)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y eguti-1
16894 #NSE=6.984699e+02(NMSE2.092091e-01)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y eguti-u
16895 #NSE=6.689679e+01(NMSE5.413557e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y eguti-e
16896 #NSE=1.526795e+01(NMSE9.362253e-03)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y sawa-a
16897 #NSE=1.456017e+01(NMSE2.705517e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y sawa-1
16898 #NSE=6.432682e+01(NMSE2.098096e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y sawa-u
16899 #NSE=1.543810e+02(NMSE6.245215e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y sawa-e
16900 #NSE=3.276432e+01(NMSE1.391842e-01)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y sawa-0
16901 #NSE=3.449691e+01(NMSE1.532200e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y sawa-0
16902 #fortuningParameters#MSE=1.518723e+02(NMSE1.500160e-01)(t:2000-2100) 0-2000:2000-2100k38N39mp1:1:1.0
00000H1-y eguti-a
16903 #fortuningParameters#MSE=2.963505e+01(NMSE2.927283e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.0
00000H1-y eguti-a
16904 #fortuningParameters#MSE=4.204619e+01(NMSE4.153227e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.0
0000H1-y eguti-a
16905 #fortuningParameters#MSE=6.823106e+01(NMSE6.739708e-02)(t:2000-2100) 0-2000:2000-2100k27N40mp1:1:1.0
0000H1-y eguti-a
16906 #fortuningParameters#MSE=7.518025e+01(NMSE7.426134e-02)(t:2000-2100) 0-2000:2000-2100k25N39mp1:1:1.0
0000H1-y eguti-a
16907 #fortuningParameters#MSE=1.044864e+02(NMSE1.032039e-01)(t:2000-2100) 0-2000:2000-2100k26N39mp1:1:1.0
0000H1-y eguti-a
16908 #fortuningParameters#MSE=1.756519e+02(NMSE1.735050e-01)(t:2000-2100) 0-2000:2000-2100k24N38mp1:1:1.0
0000H1-y eguti-a
16909 #fortuningParameters#MSE=1.651647e+02(NMSE1.631459e-01)(t:2000-2100) 0-2000:2000-2100k17N40mp1:1:1.0
0000H1-y eguti-a
16910 #fortuningParameters#MSE=1.659229e+02(NMSE1.638949e-01)(t:2000-2100) 0-2000:2000-2100k17N41mp1:1:1.0
0000H1-y eguti-a
16911 #fortuningParameters#MSE=1.669030e+02(NMSE1.648630e-01)(t:2000-2100) 0-2000:2000-2100k17N39mp1:1:1.0
0000H1-y eguti-a
16912 #fortuningParameters#MSE=1.765225e+02(NMSE1.743649e-01)(t:2000-2100) 0-2000:2000-2100k17N43mp1:1:1.0
0000H1-y eguti-a
16913 #fortuningParameters#MSE=1.681765e+02(NMSE1.661209e-01)(t:2000-2100) 0-2000:2000-2100k17N45mp1:1:1.0
0000H1-y eguti-a
16914 #fortuningParameters#MSE=1.969462e+02(NMSE1.945389e-01)(t:2000-2100) 0-2000:2000-2100k17N35mp1:1:1.0
0000H1-y eguti-a
16915 #fortuningParameters#MSE=2.080792e+02(NMSE2.055359e-01)(t:2000-2100) 0-2000:2000-2100k17N33mp1:1:1.0
0000H1-y eguti-a
16916 #fortuningParameters#MSE=2.124515e+02(NMSE2.098548e-01)(t:2000-2100) 0-2000:2000-2100k17N32mp1:1:1.0
0000H1-y sawa-a
16917
```

(2-2) バギングCAN2の結果 (using rsa:2:0.7:1:20) → eguti-a を除いて上の結果 (singleCAN2) より良い。

```
16918 for name in eguti sawa ; do
16919   for v in a i u e o ; do
16920     rm -rf result-ensrs2ge/tmp;
16921     fr=2000 ts=100 tl=100; fctl=expr ${fr} + ${ctl} \ ; fcts='expr ${fr} + ${cts}' ;
16922     rsarsa=-2:0.7:1:20 k=27 N=N-11-1:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 / to=
16923     $[fctl]:date
16924     time ./tspredv3 ../data/${name}-${v}.dat 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to]
0 $[rsa] k:${k} y:0:255:0:1 ${g} ${w} T:${T} vt:0.5 vr:1:0 >/dev/null:date
16925     echo "## Done for ${name}-${v}" ##"
16926   done ; done
16927   #MSE=6.941099e+01(NMSE6.856260e-02)(t:2000-2100) 0-2000:2000-2100k27N39mp1:1:1.000000H1-y eguti-a y:
0:10:1
16928   #NSE=1.536815e+02(NMSE1.518031e-01)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-a y:
0:10:1
16929   #NSE=1.342190e+02(NMSE1.325784e-01)(t:2000-2100) 0-2000:2000-2100k27N20mp1:1:1.000000H1-y eguti-a y:
0:10:1
16930   #NSE=1.229033e+03(NMSE1.214011e+00)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-a y:
0:10:1
16931   #NSE=1.747958e+02(NMSE1.726593e-01)(t:2000-2100) 0-2000:2000-2100k27N10mp1:1:1.000000H1-y eguti-a
16932   #NSE=1.624615e+02(NMSE8.604757e-01)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-1
16933   #NSE=2.377505e+02(NMSE8.405097e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-i
16934   #NSE=1.795480e+02(NMSE5.377911e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-u
16935   #NSE=1.184810e+01(NMSE9.587954e-03)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-e
16936   #NSE=2.498368e+00(NMSE1.531991e-03)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y eguti-o
16937   #NSE=8.899648e-01(NMSE1.653700e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y sawa-1
16938   #NSE=7.522209e+01(NMSE2.453458e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y sawa-u
16939   #NSE=8.547527e+01(NMSE3.457753e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y sawa-i
16940   #NSE=7.878061e+01(NMSE3.346634e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y sawa-e
16941   #NSE=3.562700e+01(NMSE1.582394e-02)(t:2000-2100) 0-2000:2000-2100k27N11mp1:1:1.000000H1-y sawa-0
16942
```

(2-3) eguti-aだけプースティングしてみる (using rsa:2:0.7:1:20 and Tbst=10)

```
16943 for name in eguti ; do
16944   for v in a i ; do
16945     rm -rf result-ensrs2ge/tmp;
16946     fr=2000 ts=100 tl=100; fctl=expr ${fr} + ${ctl} \ ; fcts='expr ${fr} + ${cts}' ;
16947     fr=2000 tl=100 k=27 N=N-11-1:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 / to=
16948     $[fctl]:date
16949     time ./tspredv3 ../data/${name}-${v}.dat 0-${fr}:${fr}.$[to] 0-${fr}:${fr}.$[to] Tbst:10 ${mp} ${H} ${N} M:1-1:1 i
b:0:0:0:0 ${rsa} k:${k} y:0:255:0:1 ${g} ${w} T:${T} vt:0.5 vr:1:0 >/dev/null:date
```

```
16950 echo "## Done for ${name}-${v}" ##"
16951 done ; done
16952 #MSE=1.698668e+02(NMSE1.677906e-01)(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000000H1-y eguti-a
16953
16954 (注意) 下記の 071126e の 時間差分時系列 dy(t)=y(t)-y(t-1) による
16955 多段予測は結構安定しているが、DiffMode:0 ではうまく行かない場合がある、
16956 DiffMode:1ではすべてうまくいく(NMSE<1)より精度は悪い？
```

```
16957 #####
16958 061126
16959 (1) 時間差分時系列 dy(t)=y(t)-y(t-1)による多段予測← Seems good! Why??
16960 (1-1) 以前は、bestnsp.net で再確認していたが、これは予測値が既知でないときでない。
16961 (1-2) laet.netを用いると、DiffMode:0 ではうまく行かない場合がある、
16962 DiffMode:1ではすべてうまくいく(NMSE<1)より Why? Analyse it!!!!
16963
16964 for name in eguti sawa ; do
16965   for v in a i u e o ; do
16966     rm -rf result-ensrs2ge/tmp;
16967     fr=2000 ts=100 tl=100; frtl='expr ${fr} + ${tl}\' ; frts='expr ${fr} + ${ts}\' ;
16968     rsarsa='1.0.7:1:20 k=9 N=132-32:1 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=$
16969     ${frtl}:date
16970     time /tspredv3 ../data/${name}-${v}.dat 0-${fr} :${fr}-${to} ${mp} ${DM} ${N} M:1-1:1 lb:0:0:0:
16971     0 ${rsaa} k:${k} y:-65.65:0:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
16972     echo "## Done for ${name}-${v}" ##"
16973     done ; done
16974     for y:0:0:0:1
16975       #MSE=6.263483e+02(NMSE6.186926e-01) MSEdy=2.928036e+02(NMSEdy8.879226e-01)(t:2000-2100) 0-2000:2000-
16976       2100k9N32mp1:1.1.000000H1-dy eguti-a
16977       #MSE=3.988064e+02(NMSE1.414916e-01) MSEdy=4.741196e+01(NMSEdy2.338768e-01)(t:2000-2100) 0-2000:2000-
16978       2100k9N32mp1:1.1.000000H1-dy eguti-i
16979       #MSE=2.926719e+02(NMSE7.766253e-02) MSEdy=1.043423e+02(NMSEdy2.617765e-01)(t:2000-2100) 0-2000:2000-
16980       2100k9N32mp1:1.1.000000H1-dy eguti-u
16981       #MSE=1.501092e+02(NMSE1.214744e-01) MSEdy=2.595432e+01(NMSEdy9.663073e-02)(t:2000-2100) 0-2000:2000-
16982       2100k9N32mp1:1.1.000000H1-dy eguti-e
16983       #MSE=1.045830e+02(NMSE6.412997e-02) MSEdy=2.961121e+01(NMSEdy7.831467e-02)(t:2000-2100) 0-2000:2000-
16984       2100k9N32mp1:1.1.000000H1-dy eguti-o
16985       #MSE=3.138929e+00(NMSE5.832643e-02) MSEdy=1.440558e+00(NMSEdy7.424871e-02)(t:2000-2100) 0-2000:2000-
16986       2100k9N32mp1:1.1.000000H1-dy sawa-a
16987       #MSE=3.81040600H1-dy sawa-u
16988       #MSE=3.18100000H1-dy sawa-i
16989       #MSE=1.292831e+02(NMSE5.229922e-02) MSEdy=6.553375e+01(NMSEdy3.145143e-01)(t:2000-2100) 0-2000:2000-
16990       2100k9N32mp1:1.1.000000H1-dy sawa-o
16991       #MSE=1.624228e+02(NMSE6.899793e-02) MSEdy=4.825326e+01(NMSEdy1.011072e-01)(t:2000-2100) 0-2000:2000-
16992       2100k9N32mp1:1.1.000000H1-dy sawa-e
16993       #MSE=1.445319e+02(NMSE6.419470e-02) MSEdy=3.292327e+01(NMSEdy7.298104e-02)(t:2000-2100) 0-2000:2000-
16994       2100k9N32mp1:1.1.000000H1-dy sawa-o
16995       y:-65:65:0:1
```

```
16986 #####
16987 #MSE=6.355390e+02(NMSE6.2777709e-01) MSEdy=2.962713e+02(NMSEdy8.984385e-01)(t:2000-2100) 0-2000:2000-
16988 2100k9N32mp1:1.1.000000H1-dy eguti-a dy:-56.866664:41.866666
16989 #MSE=3.434669e+02(NMSE1.218579e-01) MSEdy=4.729768e+01(NMSEdy2.333130e-01)(t:2000-2100) 0-2000:2000-
16990 2100k9N32mp1:1.1.000000H1-dy eguti-i dy:-38.808000:48.888000
16991 #MSE=2.958680e+02(NMSE8.861983e-02) MSEdy=1.056234e+02(NMSEdy2.649506e-01)(t:2000-2100) 0-2000:2000-
16992 2100k9N32mp1:1.1.000000H1-dy eguti-u dy:-49.115000:58.905000
16993 #MSE=1.112579e+02(NMSE9.003432e-01) MSEdy=2.497909e+01(NMSEdy9.2995987e-02)(t:2000-2100) 0-2000:2000-
16994 2100k9N32mp1:1.1.000000H1-dy eguti-e dy:-50.826667:42.453333
16995 #MSE=2.754814e+02(NMSE1.689243e-01) MSEdy=7.350178e+01(NMSEdy1.943949e-01)(t:2000-2100) 0-2000:2000-
16996 2100k9N32mp1:1.1.000000H1-dy eguti-o dy:-53.194186:45.756977
16997 #MSE=3.945766e+00(NMSE7.331878e-02) MSEdy=1.539081e+00(NMSEdy7.932677e-02)(t:2000-2100) 0-2000:2000-
16998 2100k9N32mp1:1.1.000000H1-dy sawa-a dy:-29.156250:21.381250
16999 #MSE=2.701742e+02(NMSE7.507406e-02) MSEdy=6.279975e+01(NMSEdy3.013931e-01)(t:2000-2100) 0-2000:2000-
17000 2100k9N32mp1:1.1.000000H1-dy sawa-i dy:-54.697500:41.973750
17001 #MSE=1.249554e+02(NMSE5.054852e-02) MSEdy=4.343387e+01(NMSEdy1.533455e-01)(t:2000-2100) 0-2000:2000-
17002 2100k9N32mp1:1.1.000000H1-dy sawa-u dy:-61.444444:47.379629
17003 #MSE=1.036524e+02(NMSE4.403197e-02) MSEdy=3.282246e+01(NMSEdy6.877434e-02)(t:2000-2100) 0-2000:2000-
17004 2100k9N32mp1:1.1.000000H1-dy sawa-e dy:-58.155488:43.216463
17005 #MSE=1.662462e+02(NMSE7.383921e-02) MSEdy=3.715970e+01(NMSEdy8.237192e-02)(t:2000-2100) 0-2000:2000-
17006 2100k9N32mp1:1.1.000000H1-dy sawa-o dy:-47.221622:38.038176
17007
17008 #####
17009 #MSE=6.315565e+02(NMSE6.238372e-01) MSEdy=2.942300e+02(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17010 00H1-dy eguti-a dy:-56.866666:41.866666
17011 #MSE=2.627844e+02(NMSE9.323271e-02) MSEdy=4.903671e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17012 00H1-dy eguti-i dy:-38.808000:48.888000
17013 #MSE=2.955944e+02(NMSE8.853789e-02) MSEdy=1.053394e+02(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17014 00H1-dy eguti-u dy:-49.115000:58.905000
17015 #MSE=1.144599e+02(NMSE9.262551e-02) MSEdy=2.511225e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17016 00H1-dy eguti-e dy:-50.826667:42.453333
17017 #MSE=2.801220e+02(NMSE1.717698e-01) MSEdy=7.428013e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17018 00H1-dy eguti-o dy:-53.194186:45.756977
17019 #MSE=4.074552e+00(NMSE7.571181e-02) MSEdy=1.539785e+00(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17020 00H1-dy sawa-a dy:-29.156250:21.381250
17021 #MSE=2.272529e+02(NMSE7.412125e-02) MSEdy=6.301444e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
```

```
000H1-dy sawa-i dy:-54.697500:41.973750
17004 #MSE=1.395245e+02(NMSE5.644218e-02) MSEdy=4.910946e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17005 00H1-dy sawa-u dy:-61.444444:47.379629
17006 #MSE=1.412905e+02(NMSE6.002080e-02) MSEdy=4.457464e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17007 00H1-dy sawa-e dy:-58.155488:43.216463
17008 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17009 00H1-dy sawa-o dy:-47.221622:38.038176
17010
17011 (2) 時間差分時系列 dy(t)=y(t)-y(t-1)による多段予測+バギング → eguti-eが悪くなる
```

```
17008 for name in eguti sawa ; do
17009   for v in a i u e o ; do
17010     rm -rf result-ensrs2ge/tmp;
17011     fr=2000 ts=100 tl=100; frtl='expr ${fr} + ${tl}\' ; frts='expr ${fr} + ${ts}\' ;
17012     rrsaa='2:0.7:1:20 k=9 N=10-10:1 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=$
17013     ${frtl}:date
17014     time /tspredv3 ../data/${name}-${v}.dat 0-${fr} :${fr}-${to} ${mp} ${DM} ${N} M:1-1:1 lb:0:0:0:
17015     0 ${rsaa} k:${k} y:-65.65:0:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17016     done ; done
17017     y:0:0:0:1
```

```
17018 #MSE=1.989444e+02(NMSE1.965127e-01) MSEdy=7.111561e+01(NMSEdy2.156570e-01)(t:2000-2100) 0-2000:2000-
17019 2100k9N32mp1:1.1.000000H1-dy eguti-a
17020 #MSE=1.414866e+02(NMSE5.019773e-02) MSEdy=3.695213e+01(NMSEdy1.822799e-01)(t:2000-2100) 0-2000:2000-
17021 2100k9N32mp1:1.1.000000H1-dy eguti-i
17022 #MSE=2.949033e+02(NMSE8.833087e-02) MSEdy=1.051311e+02(NMSEdy2.637556e-01)(t:2000-2100) 0-2000:2000-
17023 2100k9N32mp1:1.1.000000H1-dy eguti-u
17024 #MSE=4.014339e+01(NMSE3.248564e+00) MSEdy=3.767509e+02(NMSEdy1.402684e+00)(t:2000-2100) 0-2000:2000-
17025 2100k9N32mp1:1.1.000000H1-dy eguti-e NG
17026 #MSE=1.517007e+02(NMSE9.302236e-02) MSEdy=1.599766e+01(NMSEdy4.231003e-02)(t:2000-2100) 0-2000:2000-
17027 2100k9N32mp1:1.1.000000H1-dy eguti-o
17028 #MSE=8.308334e+00(NMSE1.543824e-01) MSEdy=1.439079e+00(NMSEdy7.417250e-02)(t:2000-2100) 0-2000:2000-
17029 2100k9N32mp1:1.1.000000H1-dy sawa-a
17030 #MSE=7.477163e+02(NMSE2.438766e-01) MSEdy=4.689204e+01(NMSEdy2.250476e-01)(t:2000-2100) 0-2000:2000-
17031 2100k9N32mp1:1.1.000000H1-dy sawa-i
17032 #MSE=1.049538e+02(NMSE4.245724e-02) MSEdy=2.185734e+01(NMSEdy7.716843e-02)(t:2000-2100) 0-2000:2000-
17033 2100k9N32mp1:1.1.000000H1-dy sawa-u
17034 #MSE=4.797429e+01(NMSE2.037069e-02) MSEdy=1.910645e+01(NMSEdy4.003458e-02)(t:2000-2100) 0-2000:2000-
17035 2100k9N32mp1:1.1.000000H1-dy sawa-e
17036 #MSE=1.630154e+02(NMSE7.240425e-02) MSEdy=3.320778e+01(NMSEdy7.361170e-02)(t:2000-2100) 0-2000:2000-
17037 2100k9N32mp1:1.1.000000H1-dy sawa-o
17038 y:-65:65:0:1
17039 #MSE=1.732153e+02(NMSE1.710982e-01) MSEdy=6.620125e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17040 00H1-dy eguti-a
17041 #MSE=1.534311e+02(NMSE5.443549e-02) MSEdy=4.366775e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17042 00H1-dy eguti-i
17043 #MSE=2.983827e+02(NMSE8.937305e-02) MSEdy=1.059436e+02(NMSEdy2.657939e-01)(t:2000-2100) 0-2000:2000-
17044 2100k9N32mp1:1.1.000000H1-dy eguti-u
17045 #MSE=5.161555e+03(NMSE4.176937e+00) MSEdy=4.799294e+02(NMSEdy1.786829e+00)(t:2000-2100) 0-2000:2000-
17046 2100k9N32mp1:1.1.000000H1-dy eguti-e NG
17047 #MSE=1.315890e+02(NMSE8.068996e-02) MSEdy=1.484620e+01(NMSEdy3.926471e-02)(t:2000-2100) 0-2000:2000-
17048 2100k9N32mp1:1.1.000000H1-dy eguti-o
17049 #MSE=2.500633e+00(NMSE4.646584e-02) MSEdy=1.175532e+00(NMSEdy6.058885e-02)(t:2000-2100) 0-2000:2000-
17050 2100k9N32mp1:1.1.000000H1-dy sawa-a
17051 #MSE=3.812440e+02(NMSE1.243473e-01) MSEdy=3.675614e+01(NMSEdy1.764027e-01)(t:2000-2100) 0-2000:2000-
17052 2100k9N32mp1:1.1.000000H1-dy sawa-i
17053 #MSE=9.918936e+01(NMSE4.012532e-02) MSEdy=2.491496e+01(NMSEdy8.796354e-02)(t:2000-2100) 0-2000:2000-
17054 2100k9N32mp1:1.1.000000H1-dy sawa-u
17055 #MSE=6.007548e+01(NMSE2.552032e-02) MSEdy=2.261588e+01(NMSEdy4.738805e-02)(t:2000-2100) 0-2000:2000-
17056 2100k9N32mp1:1.1.000000H1-dy sawa-e
17057 #MSE=1.574827e+02(NMSE6.994685e-02) MSEdy=3.289021e+01(NMSEdy7.290775e-02)(t:2000-2100) 0-2000:2000-
17058 2100k9N32mp1:1.1.000000H1-dy sawa-o
17059
17060 #####
17061 rm -rf result-ensrs2ge/tmp;
17062 #MSE=6.125000H1-dy sawa-a
17063 #MSE=2.700000H1-dy sawa-i
17064 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17065 00H1-dy sawa-u
17066 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17067 00H1-dy sawa-e
17068 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17069 00H1-dy sawa-o
17070 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17071 00H1-dy sawa-a
17072 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17073 00H1-dy sawa-i
17074 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17075 00H1-dy sawa-u
17076 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17077 00H1-dy sawa-e
17078 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17079 00H1-dy sawa-o
17080 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17081 00H1-dy sawa-a
17082 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17083 00H1-dy sawa-i
17084 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17085 00H1-dy sawa-u
17086 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17087 00H1-dy sawa-e
17088 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17089 00H1-dy sawa-o
17090 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17091 00H1-dy sawa-a
17092 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17093 00H1-dy sawa-i
17094 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17095 00H1-dy sawa-u
17096 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17097 00H1-dy sawa-e
17098 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17099 00H1-dy sawa-o
17100 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17101 00H1-dy sawa-a
17102 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17103 00H1-dy sawa-i
17104 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17105 00H1-dy sawa-u
17106 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17107 00H1-dy sawa-e
17108 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17109 00H1-dy sawa-o
17110 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17111 00H1-dy sawa-a
17112 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17113 00H1-dy sawa-i
17114 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17115 00H1-dy sawa-u
17116 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17117 00H1-dy sawa-e
17118 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17119 00H1-dy sawa-o
17120 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17121 00H1-dy sawa-a
17122 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17123 00H1-dy sawa-i
17124 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17125 00H1-dy sawa-u
17126 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17127 00H1-dy sawa-e
17128 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17129 00H1-dy sawa-o
17130 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17131 00H1-dy sawa-a
17132 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000-2100k9N32mp1:1.1.000
17133 00H1-dy sawa-i
17134 #MSE=1.454522e+02(NMSE6.460345e-02) MSEdy=3.342463e+01(t:2000-2100) 0-2000:2000
```

```
17053 for name in eguti sawa ; do
17054   for v in a i u e o ; do
17055     rm -rf result-ensrs2ge/tmp;
17057     fr=2000 ts=100 tli=100; ftrl= `expr ${#MSE}*.878061e-01(NMSE3.346634e-02)(t:2000-2100) 0-2000:2000-2100
0k27N1lmp:l:1:1.000000H1-y
17058 fr` + ${tcl} ; :frts=`expr ${fr} + ${ts}` ;
17059 rsarsa=-1.0:7:1:20 k=9 N=N132-32:1 mp=mp:1:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=
${ftrl}:date
17060 time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
0 ${rsa} k:${k} y:0:0:0:1:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17061 echo `## Done for ${name}:${v}` `##`
17062 done ; done
17063 ##for y:0:0:0:1:1
17064 ##SE=3.450765e+03(NMSE3.408598e-01)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-a
17065 ##SE=7.642637e+01(NMSE2.711515e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-i
17066 ##SE=3.976197e+02(NMSE1.190970e-01)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-u
17067 ##SE=2.159474e+02(NMSE2.067180e-01)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-e
17068 ##SE=7.454342e+01(NMSE1.4807759e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-o
17069 ##SE=7.968937e-01(NMSE1.4807759e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-i
17070 ##SE=1.337820e+02(NMSE4.482690e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-u
17071 ##SE=1.133720e+02(NMSE4.586266e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-l
17072 ##SE=7.422204e+01(NMSE3.152985e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-e
17073 ##SE=9.626804e+01(NMSE4.275801e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-o
17074 ##for y:0:255:0:1:1
17075 ##SE=1.757723e+03(NMSE1.775750e+00)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-a
17076 ##SE=7.454610e+01(NMSE2.644805e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-i
17077 ##SE=1.243486e+02(NMSE3.725130e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-u
17078 ##SE=8.219200e+01(NMSE6.651306e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-e
17079 ##SE=6.884851e+01(NMSE4.221767e-03)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-o
17080 ##SE=8.684851e+01(NMSE4.221767e-03)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-i
17081 ##SE=8.629766e-01(NMSE1.603552e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-l
17082 ##SE=1.361356e+02(NMSE4.440226e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-u
17083 ##SE=1.205194e+02(NMSE4.875401e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-l
17084 ##SE=7.602032e+01(NMSE3.229376e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-e
17085 ##SE=1.096347e+02(NMSE4.869489e-02)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y sawa-o
17086 for name in eguti sawa ; do
17087   for v in a i u e o ; do
17088     rm -rf result-ensrs2ge/tmp;
17089     fr=2000 ts=100 tli=100; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17090     fr=2000 ts=100 tli=100; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17091     rsarsa=2:0.7:1:20 k=9 N=N10-10:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:5e-3 w=w:0.2 T=100 ; to=
${ftrl}:date
17092 time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
0 ${rsa} k:${k} y:0:255:0:1:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17093 echo `## Done for ${name}:${v}` `##`
17094 done ; done
17095 ##SE=1.259262e+03(NMSE1.243871e+00)(t:2000-2100) 0-2000:2000-2100k9N10mp:l:1:1.000000H1-y eguti-a
17096
17097 ##NG#rm -rf result-ensrs2ge/;
17098 ##NG#fr=2000 ts=100 tli=100; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17099 ##NG#rsa=rsa:-1:0.7:1:20 k=9 N=N1=32-32:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:3.8e-4 w=w:0.2 T=100 ;
to=${ftrl}:date
17100 ##NG#time ./tspredv3 ../data/eguti-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
17101 k:${k} y:0:255:0:1:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17102 ##NG#MSE=1.797723e+03(NMSE1.775750e+00)(t:2000-2100) 0-2000:2000-2100k9N32mp:l:1:1.000000H1-y eguti-a
17103 ##NG#
17104 ##NG#(2)
17105 ##NG#rm -rf result-ensrs2ge/;
17106 ##NG#fr=2000 ts=100 tli=100; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17107 ##NG#rsa=rsa:2:0.7:1:20 k=9 N=N=14-14:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:3.8e-4 w=w:0.2 T=100 ;
to=${ftrl}:date
17108 ##NG#time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
17109 k:${k} y:0:255:0:1:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17110 ##NG#MSE=7.275748e-01(NMSE1.351953e-02)(t:2000-2100) 0-2000:2000-2100k9N14mp:l:1:1.000000H1-y
17111 ##NG#
17112 ##NG#(1) single CAN2(rsa:-1:0.7:1:20) で 小さなts(=100) で g を求める。
17113 ##NG#rm -rf result-ensrs2ge/;
17114 ##NG#fr=2000 ts=100 tli=200; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17115 ##NG#rsa=rsa:-1:0.7:1:20 k=8 N=N=40-40:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:3.8e-4 w=w:0.2 T=100 ;
to=${ftrts}:date
17116 ##NG#time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
17117 k:${k} y:0:255:0:1:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17118 ##NG#rsa=rsa:-1:1:1:1 k=8 N=N=34-34:1 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:1 g=g:1.4e-3 w=w:0.2 T=100 ;
to=${ftrl}:date
17119 ##NG#MSE=9.592797e-01(NMSE9.532232e-05)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:3.8e-4
17120 ##NG#MSE=9.600741e-01(NMSE9.540217e-05)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:3.9e-4
17121 ##NG#MSE=9.642634e-01(NMSE9.581846e-05)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:4e-4
17122 ##NG#MSE=9.762869e-01(NMSE9.701323e-05)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:3.7e-4
17123 ##NG#MSE=9.820758e-01(NMSE9.758847e-05)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:3.6e-4
```

```
17121 ##NG#MSE=9.949501e-01(NMSE9.8867778e-05)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:5e-4
17122 ##NG#MSE=1.975883e+00(NMSE1.963427e-04)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:3e-4
17123 ##NG#MSE=1.958652e+00(NMSE1.946305e-04)(t:2000-2200) 0-2000:2000-2200k8N40mp:l:1:1.000000H1-y g:3.8e-4
17124 ##NG#
17125 ##NG#
17126 ##NG#(2)
17127 ##NG#rm -rf result-ensrs2ge/;
17128 ##NG#fr=2000 ts=200 tli=200; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17129 ##NG#rsa=rsa:2:0.7:1:20 k=8 N=N=14-14:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:3.8e-4 w=w:0.2 T=100
; to=${ftrl}:date
17130 ##NG#time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
17131 k:${k} y:0:255:0:1:1 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17132 ##NG#MSE=3.843643e+02(NMSE1.244399e-01)(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y sawa-i
17133 ##NG#MSE=3.714972e+02(NMSE1.202741e-01)(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y sawa-l
with x:0:0:0:0
17134 ##NG#
17135 ##NG#MSE=1.985315e+03(NMSE1.963331e+00)(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y eguti-a
???
17136 ##NG#MSE=3.461041e+02(NMSE1.306900e-01)(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y eguti-i
17137 ##NG#MSE=6.825194e+02(NMSE2.041020e-01)(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y eguti-u
17138 ##NG#
17139 ##NG#MSE=3.926423e+02(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y (sawa-i y:14.722500:199.7
77500)g:1.3e-3
17140 ##NG#MSE=3.852147e+02(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y (sawa-i y:14.722500:199.7
77500)g:0.4e-3
17141 ##NG#y:0:255:0:1 g:0.4e-3
17142 ##NG#MSE=6.072109e-01(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y (sawa-a y:74.700000:153.4
25000)
17143 ##NG#y:74.700000:153.425000:0:1 g:1.4e-3
17144 ##NG#MSE=5.883401e-01(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y (sawa-a y:74.700000:153.4
25000)
17145 ##NG#y:0:255:0:1:4
17146 ##NG#MSE=7.965950e-01(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y
17147 ##NG#y:0:0:0:1:1 g:1.4e-3
17148 ##NG#MSE=1.283745e+00(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y
17149 ##NG#y:0:0:0:1:1 g:1.5e-3
17150 ##NG#MSE=1.298515e+00(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y
17151 ##NG#y:0:0:0:1:1 g:1.3e-3
17152 ##NG#MSE=1.397569e+00(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y
17153 ##NG#y:0:0:0:1:1
17154 ##NG#MSE=1.552791e+00(t:2000-2200) 0-2000:2000-2200k8N13mp:l:1:1.000000H1-y
17155 ##NG#y:0:250
17156 ##NG#MSE=1.457073e+00(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y
17157 ##NG#
17158 ##NG#rm -rf result-ensrs2ge/;fr=2000 ts=200 tli=200; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}
s` ;
17159 ##NG#rsa=rsa:2:0.7:1:20 k=8 N=N=15-15:1 mp=mp:1:1:1 DM=DiffMode:0 H=Hosei:1 g=g:1.4e-3 w=w:0.2 T=100
; to=${ftrl}:date
17160 ##NG#time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
17161 k:${k} y:74.700000:153.425000 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17162 ##NG#rsa=2:0.7:1:1:20 k=8 N=N=14-14:1
17163 ##NG#MSE=6.181629e-01(t:2000-2200) 0-2000:2000-2200k8N14mp:l:1:1.000000H1-y
17164 ##NG#MSE=6.201649e-01(t:2000-2200) 0-2000:2000-2200k8N15mp:l:1:1.000000H1-y
17165 ##NG#rsa:2:0.7:1:1:20 k=8 N=N=8-8:1
17166 ##NG#MSE=5.650037e+01(t:2000-2200) 0-2000:2000-2200k8N8mp:l:1:1.000000H1-y
17167 ##NG#rsa:2:0.7:1:1:20 k=8 N=N=12-12:1
17168 ##NG#MSE=3.806061e+00(t:2000-2200) 0-2000:2000-2200k8N12mp:l:1:1.000000H1-y
17169 ##NG#rsa:2:0.7:1:1:20 k=8 N=N=17-17:1
17170 ##NG#MSE=9.665671e-01(t:2000-2200) 0-2000:2000-2200k8N17mp:l:1:1.000000H1-y
17171 ##NG#
17172 ##NG#MSE=3.434110e+00(t:2000-2200) 0-2000:2000-2200k8N34mp:l:1:1.000000H1-y
17173 ##NG#y:74.700000:153.425000 rsa:-1:1:1:1
17174 ##NG#MSE=1.465435e+00(t:2000-2200) 0-2000:2000-2200k8N34mp:l:1:1.000000H1-y
17175 ##NG#y:74.700000:153.425000 rsa:-2:1:1:1
17176 ##NG#MSE=3.317997e+00(t:2000-2200) 0-2000:2000-2200k8N34mp:l:1:1.000000H1-y
17177 ##NG#rsa:2:0.7:1:1:20 k=8 N=N=10-10:1
17178 ##NG#MSE=1.029566e+01(t:2000-2200) 0-2000:2000-2200k8N10mp:l:1:1.000000H1-y
17179 ##NG#
17180 ##NG#(2) dy
17181 ##NG#fr=2000 ts=200 tli=200; ftrl= `expr ${fr} + ${tcl}` ;frts=`expr ${fr} + ${ts}` ;
17182 ##NG#rsa=rsa:-1:1:1:1 k=8 N=N=34-34:1 mp=mp:1:1:1 DM=DiffMode:1 H=Hosei:1 g=g:1.4e-3 w=w:0.2 T=100 ;
to=${ftrl}:date
17183 ##NG#time ./tspredv3 ../data/sawa-a.dat 0-$(fr):$(fr)-$(to) ${mp} ${DM} ${H} ${N} M:1-1:1 ib:0:0:0:0
17184 k:${k} y:0:0:0:0:1:10 ${g} ${w} T:${T} vt:0.5 vr:10 >/dev/null:date
17185 ##NG#MSE=1.55575e+01 MSBEy:6.996774e+00(t:2000-2200) 0-2000:2000-2200k8N34mp:l:1:1.000000H1-y dy
17186 ##NG#rsa:-1:1:1:1 k=8 N=N=34-34:1 y:-29.156250:21.381250
17187 ##NG#MSE=2.924841e+00 MSBEy:1.275380e+00(t:2000-2200) 0-2000:2000-2200k8N34mp:l:1:1.000000H1-y dy
17188 ##NG#rsa:-2:1:1:1 k=8 N=N=34-34:1 y:-29.156250:21.381250 x:0:0 r:1:10
```

```
17188 #N#MSE=4.713504e+00 MSBdy=1.730549e+00(t:2000-2200) 0-2000:2000-2200k8N34mp1:1:1.000000H1-dy
17189 #N#MSE=-2.1:1:1 k=8 N=N:34-34:1 y:-29.156250:21.381250 x:0:0 r:1:100
17190 #N#MSE=1.861181e+01 MSBdy=8.641334e+00(t:2000-2200) 0-2000:2000-2200k8N34mp1:1:1.000000H1-dy
17191
17192 060120pm
17193 ##### do from here for ensemble
17194 for dofromhere in 1 ; do
17195   dname=fuchi-a ;K=9 ;T=100 ;g=5e-3
17196   dn_timeseries=./data/${dname}.dat;
17197   dn_regressions=./tmp/${dname}-fa.dat
17198   N1=32 ;N2=60 ;ens= #>NMB=--:5.078947e+02 NMB=--:5.022706e-01
17199   N=${N1}
17200   t0=3000
17201   t1=200
17202   t4=1000
17203   T0=${t0}
17204   T1=expr ${t0} + ${t1} \
17205   TOFFS=t4
17206   while [ ${N} -le ${N2} ] ; do
17207     file=tmp/bestmpN${N}.net
17208     predfile=tmp/predictN${N}.dat
17209     if [ -e ${file} ] ; then
17210       echo $file exists. Omit calculation.
17211     else
17212       ##
17213       cat > param.dat << EOF
17214       0 #0:timeseries:1:chaos prepare_data() in my_function.c
17215       9 0 #channels
17216       ${dn_timeseries}
17217       $T0 $T1 $TOFFS #Ttrain,Ttotal: points in time of training and total data
17218       0 0 0 0 #y0min y0max y1min y1max for normalization
17219       in #
17220       ${N} #n_cells storing vectors
17221       20 #n_compare
17222       0 5 3 #v_thresh v_min
17223       1.0 #v_ratio
17224       0.2 #width
17225       ex #execute
17226       1 5e-3 0.7 #l=0:online,i=1:batch, gamma0, entropy_thresh
17227       100 #display
17228       10 #iterations to execute
17229       quit
17230       EOF
17231       echo "Executing can2 for N=${N}"
17232       can2 <param.dat > /dev/null
17233       cp bestmp.net ${file}
17234       cp predict.dat ${predfile}
17235       ##
17236       fi
17237       export ens=${ens} "${file}"
17238       N=`expr ${N} + 1`.
17239       done
17240       #####
17241       cat > param.dat << EOF
17242       0 #0:timeseries:1:chaos prepare_data() in my_function.c
17243       9 0 #channels
17244       ${dn_timeseries}
17245       $T0 $T1 $TOFFS #Ttrain,Ttotal: points in time of training and total data
17246       0 0 0 0 #y0min y0max y1min y1max for normalization
17247       nls
17248       ${ens}
17249       mepe
17250       gu
17251       EOF
17252       ./can2 < param.dat
17253       done
17254       ##
17255       ## do to here for ensemble
17256       dname=fuchi-a
17257       dn_timeseries=./data/${dname}.dat
17258       dn_regressions=./tmp/${dname}-cg.dat
17259       cat >param.dat << EOF ##### save parameters
17260       0 #0:timeseries:1:chaos prepare_data() in my_function.c
17261       9 0 #channels
17262       ${dn_timeseries} #training file
17263       2000 2200 1000 #Ttrain,Ttotal: points in time of training and total data
17264       0 0 0 0 #y0min y0max y1min y1max for normalization
17265       gu
17266       EOF
17267       #####
17269       ./can2 <param.dat
```

```
17270 echo cp tmp/train+test.dat ${dn_regression} ##save the file for regression(function approximation)
17271 cp tmp/train+test.dat ${dn_regression} ##save the file for regression(function approximation)
17272 ###(3) search optimal N by ens2ge for checking generalization ability
17273 rm -rf result-ensrs2ge/
17274 ./ens2ge ${dn_regression} ${dn_regression} N:20-40:1 ib:0:0:0:1 M:1-1:1 k:${K} g:${g} T:${T} >/dev/n
ull #最適ユニット数探索
17275 #40: 3(N:40-42) Lhat=1.481e+04 Lvarmin 2=1.157e-25 Lvar0=1.157e-25 Lval=5.680382e+05*N:41-41
17276 #39: 7(N:39-45) Lhat=2.567e+04 Lvarmin 4=4.720e-26 Lvar0=4.720e-26 Lval=5.620540e+05*N:42-42
17277 #25: 7(N:25-31) Lhat=2.210e+04 Lvarmin12=5.672e-26 Lvar0=5.672e-26 Lval=7.162319e+05*N:28-28
17278
17279
17280 rm -rf tmp
17281 export T=100 N1=32 method=poles4 t0=1000 t1=2000 t2=1000 t3=2000 t4=200; export N2=${N1} DISP=2 #
17282 for testname in fuchi kitayama nechi ryotarou shingo takemura tomisaki yusuke ; do
17283   trainname=${testname}
17284   t2=1000
17285   for N1 in 30 35 40 45 50 55 ; do
17286     N2=expr ${N1} + 5.
17287     echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}:${t4} DISP:${Disp}"
17288     vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}:${t2}
:${t3}:${t4} DISP:${Disp} >/dev/null
17289     done
17290     done
17291   done
17292
17293 vowelrecog te:fuchi tr:fuchi k:9 N:30-30 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2
>>NMB=--:3.082661e+07 NMB=--:1.120039e+00
17294
>>NMB=--:1.987014e+06 NMB=--:3.936081e-01
17295
>>NMB=--:1.4.962062e+07 NMB=--:1.153329e+00
17296
>>NMB=--:14.643559e+06 NMB=--:5.533977e-01
17297
>>NMB=--:1.861256e+06 NMB=--:3.957271e-02
17298
17299
17300
17301
17302
17303
17304
17305
17306 DISP=0 for no display
17307 DISP=1 for poles display
17308 DISP=2 for msp (multi-step-prediction) display
17309 サンプリング周波数は約45kHz.8kHz程度になるようデータを間引きしてみました。
17310 #####
17311 export PWD0=${PWD}
17312 cd ../data
17313 for f in fuchi kitayama nechi ryotarou shingo takemura tomisaki yusuke ; do
17314   for vowel in a i u e o ; do
17315     echo "${PWD0}/mabiki ${f}-${vowel}.txt 6 0 > ${f}-${vowel}.dat"
17316     ${PWD0}/mabiki ${f}-${vowel}.txt 6 0 > ${f}-${vowel}.dat
17317     done
17318     done
17319     cd ${PWD0}
17320     #####
17321     /home/kuro/sotu/2006/can2b/mabiki fuchi-a.txt 6 0 > fuchi-a.dat
17322     range of x0:-17422.000000:17186.000000
17323     dim1 num.data=72796 (<436774original)
17324     /home/kuro/sotu/2006/can2b/mabiki fuchi-i.txt 6 0 > fuchi-i.dat
17325     range of x0:-6423.000000:6419.000000
17326     dim1 num.data=76706 (<460236original)
17327     /home/kuro/sotu/2006/can2b/mabiki fuchi-u.txt 6 0 > fuchi-u.dat
17328     range of x0:-32768.000000:32767.000000
17329     dim1 num.data=82661 (<495963original)
17330     /home/kuro/sotu/2006/can2b/mabiki fuchi-e.txt 6 0 > fuchi-e.dat
17331     range of x0:-8264.000000:8186.000000
17332     dim1 num.data=76029 (<456172original)
17333     /home/kuro/sotu/2006/can2b/mabiki fuchi-o.txt 6 0 > fuchi-o.dat
17334     range of x0:-18965.000000:16409.000000
17335     dim1 num.data=76474 (<458844original)
17336     /home/kuro/sotu/2006/can2b/mabiki kitayama-a.txt 6 0 > kitayama-a.dat
17337     range of x0:-7408.000000:6282.000000
17338     dim1 num.data=81869 (<49121original)
17339     /home/kuro/sotu/2006/can2b/mabiki kitayama-i.txt 6 0 > kitayama-i.dat
17340     range of x0:-3896.000000:3505.000000
17341     dim1 num.data=106170 (<637016original)
17342     /home/kuro/sotu/2006/can2b/mabiki kitayama-u.txt 6 0 > kitayama-u.dat
17343     range of x0:-9251.000000:10652.000000
17344     dim1 num.data=79157 (<474939original)
17345     /home/kuro/sotu/2006/can2b/mabiki kitayama-e.txt 6 0 > kitayama-e.dat
17346     range of x0:-5777.000000:6491.000000
17347     dim1 num.data=72445 (<434665original)
17348     /home/kuro/sotu/2006/can2b/mabiki kitayama-o.txt 6 0 > kitayama-o.dat
```

```
17349 range of x0:-13610.000000:14907.000000
17350 d1m1 num_data=67461 (<404766original)
17351 /home/kuro/sotu/2006/can2b/mabiki nech-i-a.txt 6 0 > nech-i-a.dat
17352 range of x0:-8480.000000:9992.000000
17353 d1m1 num_data=71651 (<429904original)
17354 /home/kuro/sotu/2006/can2b/mabiki nech-i-i.txt 6 0 > nech-i-i.dat
17355 range of x0:-51116.000000:6954.000000
17356 d1m1 num_data=75936 (<455616original)
17357 /home/kuro/sotu/2006/can2b/mabiki nech-i-u.txt 6 0 > nech-i-u.dat
17358 range of x0:-10559.000000:12435.000000
17359 d1m1 num_data=74167 (<444997original)
17360 /home/kuro/sotu/2006/can2b/mabiki nech-i-e.txt 6 0 > nech-i-e.dat
17361 range of x0:-5246.000000:6804.000000
17362 d1m1 num_data=74580 (<447480original)
17363 /home/kuro/sotu/2006/can2b/mabiki nech-i-o.txt 6 0 > nech-i-o.dat
17364 range of x0:-16757.000000:17723.000000
17365 d1m1 num_data=74844 (<449061original)
17366 /home/kuro/sotu/2006/can2b/mabiki ryotarou-a.txt 6 0 > ryotarou-a.dat
17367 range of x0:-7196.000000:6582.000000
17368 d1m1 num_data=71916 (<431495original)
17369 /home/kuro/sotu/2006/can2b/mabiki ryotarou-i.txt 6 0 > ryotarou-i.dat
17370 range of x0:-2992.000000:3348.000000
17371 d1m1 num_data=74241 (<445446original)
17372 /home/kuro/sotu/2006/can2b/mabiki ryotarou-u.txt 6 0 > ryotarou-u.dat
17373 range of x0:-32767.000000:32767.000000
17374 d1m1 num_data=71699 (<430191original)
17375 /home/kuro/sotu/2006/can2b/mabiki ryotarou-e.txt 6 0 > ryotarou-e.dat
17376 range of x0:-4296.000000:6738.000000
17377 d1m1 num_data=76275 (<457650original)
17378 /home/kuro/sotu/2006/can2b/mabiki ryotarou-o.txt 6 0 > ryotarou-o.dat
17379 range of x0:-32767.000000:29810.000000
17380 d1m1 num_data=71360 (<428157original)
17381 /home/kuro/sotu/2006/can2b/mabiki shingo-a.txt 6 0 > shingo-a.dat
17382 range of x0:-8642.000000:6923.000000
17383 d1m1 num_data=75614 (<453682original)
17384 /home/kuro/sotu/2006/can2b/mabiki shingo-i.txt 6 0 > shingo-i.dat
17385 range of x0:-8555.000000:14977.000000
17386 d1m1 num_data=74599 (<447593original)
17387 /home/kuro/sotu/2006/can2b/mabiki shingo-u.txt 6 0 > shingo-u.dat
17388 range of x0:-17573.000000:19426.000000
17389 d1m1 num_data=70780 (<424677original)
17390 /home/kuro/sotu/2006/can2b/mabiki shingo-e.txt 6 0 > shingo-e.dat
17391 range of x0:-17915.000000:19351.000000
17392 d1m1 num_data=72546 (<435276original)
17393 /home/kuro/sotu/2006/can2b/mabiki shingo-o.txt 6 0 > shingo-o.dat
17394 range of x0:-19099.000000:18581.000000
17395 d1m1 num_data=72716 (<436293original)
17396 /home/kuro/sotu/2006/can2b/mabiki takemura-a.txt 6 0 > takemura-a.dat
17397 range of x0:-11997.000000:14362.000000
17398 d1m1 num_data=71893 (<431353original)
17399 /home/kuro/sotu/2006/can2b/mabiki takemura-i.txt 6 0 > takemura-i.dat
17400 range of x0:-15871.000000:14402.000000
17401 d1m1 num_data=71554 (<429323original)
17402 /home/kuro/sotu/2006/can2b/mabiki takemura-u.txt 6 0 > takemura-u.dat
17403 range of x0:-32767.000000:32767.000000
17404 d1m1 num_data=72400 (<434398original)
17405 /home/kuro/sotu/2006/can2b/mabiki takemura-e.txt 6 0 > takemura-e.dat
17406 range of x0:-5823.000000:7472.000000
17407 d1m1 num_data=77292 (<463759original)
17408 /home/kuro/sotu/2006/can2b/mabiki takemura-o.txt 6 0 > takemura-o.dat
17409 range of x0:-25010.000000:19162.000000
17410 d1m1 num_data=73923 (<443533original)
17411 /home/kuro/sotu/2006/can2b/mabiki tomisaki-a.txt 6 0 > tomisaki-a.dat
17412 range of x0:-4780.000000:4417.000000
17413 d1m1 num_data=76368 (<458205original)
17414 /home/kuro/sotu/2006/can2b/mabiki tomisaki-i.txt 6 0 > tomisaki-i.dat
17415 range of x0:-4202.000000:5107.000000
17416 d1m1 num_data=81786 (<490716original)
17417 /home/kuro/sotu/2006/can2b/mabiki tomisaki-u.txt 6 0 > tomisaki-u.dat
17418 range of x0:-15781.000000:16539.000000
17419 d1m1 num_data=72400 (<434398original)
17420 /home/kuro/sotu/2006/can2b/mabiki tomisaki-e.txt 6 0 > tomisaki-e.dat
17421 range of x0:-8818.000000:12976.000000
17422 d1m1 num_data=75369 (<452109original)
17423 /home/kuro/sotu/2006/can2b/mabiki tomisaki-o.txt 6 0 > tomisaki-o.dat
17424 range of x0:-14451.000000:12091.000000
17425 d1m1 num_data=74675 (<448045original)
17426 /home/kuro/sotu/2006/can2b/mabiki yusuke-a.txt 6 0 > yusuke-a.dat
17427 range of x0:-6712.000000:5109.000000
17428 d1m1 num_data=75183 (<451093original)
17429 /home/kuro/sotu/2006/can2b/mabiki yusuke-i.txt 6 0 > yusuke-i.dat
17430 range of x0:-6633.000000:7812.000000
```

```
17431 d1m1 num_data=81786 (<490716original)
17432 /home/kuro/sotu/2006/can2b/mabiki yusuke-u.txt 6 0 > yusuke-u.dat
17433 range of x0:-31624.000000:32767.000000
17434 d1m1 num_data=77462 (<464769original)
17435 /home/kuro/sotu/2006/can2b/mabiki yusuke-e.txt 6 0 > yusuke-e.dat
17436 range of x0:-17334.000000:19034.000000
17437 d1m1 num_data=78648 (<471888original)
17438 /home/kuro/sotu/2006/can2b/mabiki yusuke-o.txt 6 0 > yusuke-o.dat
17439 range of x0:-32767.000000:32767.000000
17440 d1m1 num_data=75089 (<450531original)
17441
17442 (2)学習能力(訓練＝テスト)のチェック
17443 ###
17444 rm -rf tmp
17445 export T=100 N1=32 method=poles4 t0=1000 t1=2000 t2=1000 t3=2000 t4=200: export N2=${N1} DISP=2 #
17446 for testname in fuchi kicayama nech ryotarou shingo takemura tomisaki yusuke ; do
17447   trainname=${testname}
17448   for c2 in 1000 ; do
17449     echo `vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}-${t1}
17450     `:${c2}:${t3}:${t4} DISP:${DISP}`
17451     vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}-${t1}:${t2}
17452     `:${c3}:${t4} DISP:${DISP} >/dev/null
17453     done
17454     vowelrecog te:fuchi tr:fuchi k:9 N:40-40 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2
17455     >>NSE---f2.888884e-07 NMSE---f1.049632e+00
17456     vowelrecog te:fuchi tr:fuchi k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17457     ###
17458     vowelrecog te:fuchi tr:fuchi k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17459     >>NSE---f3.685650e+07 NMSE---f1.339126e+00
17460     >>NSE---f4.119510e+06 NMSE---f8.160347e-01
17461     >>NSE---f6.645106e+07 NMSE---f1.544517e+00
17462     >>NSE---f5.021356e+06 NMSE---f5.984218e-01
17463     >>NSE---f2.692287e+06 NMSE---f5.724151e-02
17464     #te:fuchi-alueo-tl000+2000 are recognized as tr:fuchi-alueo-tl000+2000 (5/5) via m:poles4N32-32. #
17465     vowelrecog te:kicayama tr:kicayama k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17466     >>NSE---f1.582444e+06 NMSE---f6.660982e-01
17467     >>NSE---f4.642344e+06 NMSE---f8.743389e-01
17468     >>NSE---f2.811613e+06 NMSE---f7.309868e-01
17469     >>NSE---f1.798817e+06 NMSE---f4.892913e-01
17470     >>NSE---f1.024068e+07 NMSE---f3.557695e-01
17471     #te:kityama-alueo-tl000+2000 are recognized as tr:kityama-alueo-tl000+2000 (5/5) via m:poles4N32-3
17472     2. #
17473     vowelrecog te:nechi tr:nechi k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17474     >>NSE---f2.127896e+06 NMSE---f4.604267e-01
17475     >>NSE---f1.585350e+05 NMSE---f2.028322e-01
17476     >>NSE---f1.012822e+06 NMSE---f1.468301e-01
17477     >>NSE---f3.331351e+06 NMSE---f7.550335e-01
17478     >>NSE---f1.918784e+06 NMSE---f1.606191e-01
17479     #te:nechi-alueo-tl000+2000 are recognized as tr:nechi-alueo-tl000+2000 (5/5) via m:poles4N32-32. #
17480     vowelrecog te:ryotarou tr:ryotarou k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17481     >>NSE---f3.859211e+06 NMSE---f7.231125e-01
17482     >>NSE---f8.560779e+05 NMSE---f8.719821e-01
17483     >>NSE---f2.565981e+06 NMSE---f7.695067e-01
17484     >>NSE---f2.352337e+05 NMSE---f7.840783e-01
17485     >>NSE---f8.377783e+07 NMSE---f9.396198e-01
17486     #te:ryotarou-alueo-tl000+2000 are recognized as tr:ryotarou-alueo-tl000+2000 (5/5) via m:poles4N32-3
17487     2. #
17488     vowelrecog te:shingo tr:shingo k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17489     >>NSE---f4.005218e+06 NMSE---f1.397158e+00
17490     >>NSE---f8.29749e+06 NMSE---f6.503625e-01
17491     >>NSE---f2.162053e+07 NMSE---f7.928727e-01
17492     >>NSE---f2.234932e+07 NMSE---f4.479932e-01
17493     >>NSE---f1.921563e+07 NMSE---f6.947639e-01
17494     #te:shingo-alueo-tl000+2000 are recognized as tr:shingo-alueo-tl000+2000 (5/5) via m:poles4N32-32. #
17495     vowelrecog te:takemura tr:takemura k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17496     >>NSE---f4.614058e+05 NMSE---f3.526605e-02
17497     >>NSE---f4.020339e+06 NMSE---f3.918898e-01
17498     >>NSE---f1.257170e+08 NMSE---f1.015650e+00
17499     >>NSE---f2.748599e+05 NMSE---f8.093864e-02
17500     >>NSE---f4.170379e+07 NMSE---f1.285395e+00
17501     #te:takemura-alueo-tl000+2000 are recognized as tr:takemura-alueo-tl000+2000 (5/5) via m:poles4N32-3
17502     2. #
17503     vowelrecog te:tomisaki tr:tomisaki k:9 N:32-32 m:poles4 T:100 tt:1000:2000:1000:2000:200 DISP:2#
17504     >>NSE---f5.550445e+05 NMSE---f3.502536e-01
17505     >>NSE---f6.373441e+05 NMSE---f1.322781e+00
17506     >>NSE---f2.379518e+05 NMSE---f9.559352e-02
17507     >>NSE---f1.171460e+07 NMSE---f1.396621e+00
17508     >>NSE---f1.579402e+07 NMSE---f1.162552e+00
```

```
17508 #te:tomisaki-aiueo-tl000+2000 are recognized as tr:tomisaki-aiueo-tl000+2000 (5/5) via m:poles4N32-3
2.#
17509 vowelrecog te:yusuke tr:yusuke k:9 N:32-32 m:poles4 T:100 tt:1000+2000:1000:2000 DISP=2#
17510 >MSE--:~12.698399e+06 NMSE--:~1.215123e+00
17511 >MSE--:~1.005912e+06 NMSE--:~17.667597e-01
17512 >MSE--:~15.862346e+07 NMSE--:~17.570561e-01
17513 >MSE--:~12.644290e+06 NMSE--:~1.200502e-01
17514 >MSE--:~1.257655e+08 NMSE--:~14.598174e-01
17515 #te:yusuke-aiueo-tl000+2000 are recognized as tr:yusuke-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17516 (3)
17517 export T=100 N1=32 method=poles4 t0=1000 t1=2000 t2=1000 t3=2000 t4=2000: export N2=$N1 DISP=0
17518 rm -rf tmp
17519 for testname in fuchi kitayama nechii ryotarou shingo takemura tomisaki yusuke ; do
17520 trainname=kitayama
17521 for t2 in 1000 ; do
17522 echo "vowelrecog te:{$testname} tr:{$trainname} k:9 N:${N1}-${N2} m:{$method} T:{$T} tt:{$t0}:{$t1}
17523 :$t2}:{$t3}:{$t4} DISP:{$DISP}"
17524 vowelrecog te:{$testname} tr:{$trainname} k:9 N:${N1}-${N2} m:{$method} T:{$T} tt:{$t0}:{$t1}:{$t2}
17525 :$t3}:{$t4} DISP:{$DISP} >/dev/null
17526 done
17527
17528 #te:fuchi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N25-35.#
17529 #te:kitayama-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N25-3
5.#
17530 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N25-35.#
17531 #te:ryotarou-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (4/5) via m:poles4N25-3
5.#
17532 #te:shingo-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N25-35.#
17533 #te:takemura-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N25-3
5.#
17534 #te:tomisaki-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N25-3
5.#
17535 #te:tomisaki-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N25-3
5.#
17536 #te:fuchi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17537 #te:kitayama-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-3
2.#
17538 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N32-32.#
17539 #te:ryotarou-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (4/5) via m:poles4N32-3
2.#
17540 #te:shingo-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17541 #te:takemura-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N32-3
2.#
17542 #te:tomisaki-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-3
2.#
17543 #te:yusuke-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17544
17545
17546 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N32-32.#
17547 #te:fuchi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17548 #te:ryotarou-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (4/5) via m:poles4N32-3
2.#
17549 #te:shingo-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17550
17551 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (1/5) via m:poles4N1-1.#
17552 #te:fuchi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (2/5) via m:poles4N1-1.#
17553 #te:ryotarou-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17554 #te:shingo-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17555 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17556 #te:fuchi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17557 #te:ryotarou-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17558 #te:shingo-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17559 #te:takemura-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17560 #te:tomisaki-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17561 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17562 #te:fuchi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17563 #te:ryotarou-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (3/5) via m:poles4N1-1.#
17564 #te:shingo-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (4/5) via m:poles4N1-1.#
17565 #te:nechi-aiueo-tl000+2000 are recognized as tr:kitayama-aiueo-tl000+2000 (4/5) via m:poles4N1-1.#
17566
17567 export T=100 N1=32 method=poles4 t0=1000 t1=2000 t2=1000 t3=2000 t4=2000: export N2=$N1 DISP=0
17568 rm -rf tmp
17569 for testname in kitayama ; do
```

```
17571 trainname=nechi
17572 for t2 in 1000 ; do
17573 echo "vowelrecog te:{$testname} tr:{$trainname} k:9 N:${N1}-${N2} m:{$method} T:{$T} tt:{$t0}:{$t1}
17574 :$t2}:{$t3}:{$t4} DISP:{$DISP}"
17575 vowelrecog te:{$testname} tr:{$trainname} k:9 N:${N1}-${N2} m:{$method} T:{$T} tt:{$t0}:{$t1}:{$t2}
17576 :$t3}:{$t4} DISP:{$DISP} >/dev/null
17577 done
17578 #te:kitayama-aiueo-tl000+2000 are recognized as tr:nechi-aiueo-tl000+2000 (4/5) via m:poles4N32-32.#
17579
17580 #te:nechi-aiueo-tl000+2000 are recognized as tr:nechi-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17581
17582 #te:nechi-aiueo-tl000+2000 are recognized as tr:nechi-aiueo-tl000+2000 (5/5) via m:poles4N32-32.#
17583 DISP=1 for poles display
17584 DISP=2 for msp (multi-step-prediction) display
17585 for f in fuchi kitayama nechii ryotarou shingo takemura tomisaki yusuke ; do
17586 for vowel in a i u e o ; do
17587 echo "mv ${f}-${vowel}.txt ${f}-${vowel}.dat"
17588 mv ${f}-${vowel}.txt ${f}-${vowel}.dat
17589 done
17590 done
17591
17592 (2) 学習能力 (訓練 = テスト) のチェック
17593 DISP=2 #for display msp (multi-step prediction)
17594 export T=100 N1=32 method=poles4 t0=1000 t1=2000 t2=1000 t3=2000 t4=2000: export N2=$N1 DISP=2#
17595 rm -rf tmp
17596 for testname in fuchi kitayama nechii ryotarou shingo takemura tomisaki yusuke ; do
17597 trainname={$testname}
17598 for t2 in 1000 ; do
17599 echo "vowelrecog te:{$testname} tr:{$trainname} k:9 N:${N1}-${N2} m:{$method} T:{$T} tt:{$t0}:{$t1}
17600 :$t2}:{$t3}:{$t4} DISP:{$DISP}"
17601 vowelrecog te:{$testname} tr:{$trainname} k:9 N:${N1}-${N2} m:{$method} T:{$T} tt:{$t0}:{$t1}:{$t2}
17602 :$t3}:{$t4} DISP:{$DISP} >/dev/null
17603 done
17604 done
17605
17606 #hen futi-u e o
17607 #####
17608 dname=fuchi-e
17609 dn_timeseries=./data/${dname}.dat
17610 dn_regression=./tmp/${dname}-rg.dat
17611
17612 cat >param.dat << EOF #####save parameters
17613 0 #0:timeseries,1:chaos prepare_data() in my_function.c
17614 9 #channels
17615 ${dn_timeseries} #training file
17616 2000 2200 1000 #Ttrain>Total: points in time of training and total data
17617 0 0 0 #y0min y0max y1min y1max for normalization
17618 qu
17619 EOF
17620 #####
17621 ./can2 <param.dat
17622 echo cp tmp/train+test.dat ${dn_regression} ##save the file for regression(function approximation)
17623 cp tmp/train+test.dat ${dn_regression} ##save the file for regression(function approximation)
17624 rm -rf result-ens29e/
17625 ./ens29e ${dn_regression} ${dn_regression} N:30-60:1 ib:0:0:0:1 M:1-1:1 k:{$K} g:{$g} T:{$T} >/dev/n
ull #最適ユニット数探索
17626 #59: 3(N:58-60) Lhat=4.486e+02 Lvarmin 2=1.719e-26 Lval=1.225283e+04**N:59-59
17627 ./ens29e ${dn_regression} ${dn_regression} N:30-60:1 ib:0:0:0:3 M:1-1:1 k:{$K} g:{$g} T:{$T} >/dev/n
ull #最適ユニット数探索
17628 #47: 7(N:47-53) Lhat=4.370e+02 Lvarmin 4=9.063e-27 Lvar=9.063e-27 Lval=1.260314e+04**N:50-50
17629 ./ens29e ${dn_regression} ${dn_regression} N:30-60:1 ib:0:0:0:5 M:1-1:1 k:{$K} g:{$g} T:{$T} >/dev/n
ull #最適ユニット数探索
17630 #51:11(N:51-61) Lhat=5.049e+02 Lvarmin 2=2.047e-26 Lvar=2.047e-26 Lval=1.239715e+04**N:56-56
17631 ./ens29e ${dn_regression} ${dn_regression} N:30-60:1 ib:0:0:0:5 M:1-5:1 k:{$K} g:{$g} T:{$T} >/dev/n
ull #最適ユニット数探索
17632 #30:15(N:30-44) Lhat=5.220e+01 Lvarmin103=1.750e+02 Lvar=1.750e+02 Lval=1.254688e+04**N:35-39
17633
17634 can2
17635 0 #0:timeseries,1:function approximation in my_function.c
17636 9 #channels
17637 ./data/fuchi-o.dat #training file
17638 2000 2200 1000 #Ttrain>Total: points in time of training and total data
17639 -20000 20000 0 1 #y0min y0max y1min y1max for normalization
17640 in
17641 60 #n_units
17642 6 #n_compare
17643 0.5 3 0 #v_thresh vmin vmin2
17644 5 #v_ratio
```



```
17645 0.2 5e-3 0.7 #window width
17646 ex 1 5e-3 0.7 #<online,1:batch>, <gamma0>, <entropy_thresh>
17648 100 #iterations, rot_x, rot_z
17649 100 50 350 #iterations, rot_x, rot_z
17650 n1
17651 bestmsp.net
17652 msp
17653
17654
17655 #####Do below.
17656 export dname=fuchi-e K=9 T=100 g=5e-3
17657 export dn_timeseries=./data/${dname}.dat dn_regression=./tmp/${dname}-fa.dat
17658 export t1=3000 t2=3600 to=1000 method=mspe
17659 export t1=3000 t2=3600 to=1000 method=mspe
17660 export N1=35 N2=39 ens= #
17661 cat > param.dat << EOF #save parameters
17662 0 #0:timeseries,1:chaos prepare_data() in my_function.c
17663 ${K} 0 #channels
17664 ${dn_timeseries} #training file
17665 ${t1} ${t2} #ttrain,ttotal: points in time of training and total data
17666 0 0 0 #y0min y0max y1min y1max for normalization
17667 gu
17668 EOF
17669 ##
17670 ./can2 <param.dat >/dev/null
17671 cp tmp/ttrain+test.dat ${dn_regression}
17672 ##N1からN2までに対するcan2の実行
17673 export N1=35 N2=39
17674 export N=${N1}
17675 while [ ${N} -le ${N2} ] ; do
17676 file=tmp/bestmpN${N}.net
17677 predfile=tmp/predictN${N}.dat
17678 if [ -e $file ] ; then
17679 echo $file exists. Omit calculation.
17680 else
17681 ##
17682 cat > param.dat << EOF
17683 0 #0:timeseries,1:chaos prepare_data() in my_function.c
17684 9 0 #channels
17685 ${dn_timeseries}
17686 ${t1} ${t2} #ttrain,ttotal: points in time of training and total data
17687 0 0 0 #y0min y0max y1min y1max for normalization
17688 in #
17689 #n_cells storing vectors
17690 20 #n_compare
17691 0.5 3 #v_thresh v_min
17692 10 #v_ratio
17693 0.2 #width
17694 0.7 #window width
17695 ex #execute
17696 100 #iterations to execute
17697 1.5e-3 0.7 #i=0:online,i=1:batch, gamma0, entropy_thresh
17698 10 #display
17699 quit
17700 EOF
17701 echo "Executing can2 for N=${N}"
17702 cp bestmsp.net ${file}
17703 cp predict.dat ${predfile}
17704 ##
17705 fi
17706 export ens=${ens} "${file}"
17707 N=`expr ${N} + 1`
17708 done
17709 #####アンサンブルの実行
17710 cat > param.dat << EOF
17711 0 #0:timeseries,1:chaos prepare_data() in my_function.c
17712 9 0 #channels
17713 ${dn_timeseries}
17714 ${t1} ${t2} #ttrain,ttotal: points in time of training and total data
17715 0 0 0 #y0min y0max y1min y1max for normalization
17716 nls
17717 ${ens}
17718 EOF
17719 gu
17720 EOF
17721 ./can2 < param.dat
17722 ##Do to here.
17723 #####
17724
17725 #####
17726
```

```
17727 (3)export T=100 N1=1 method=poles4 t0=1000 t1=1000 t2=1000 t3=1000; export N2=${N1} #
17728 for testname in fuchi kitayama nechi ryotarou shingo takemura tomisaki yusuke ; do
17729 trainname=${testname}
17730 for t2 in 1000 ; do
17731 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
17732 ${t2}:${t3} DISP:0"
17733 vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}:${t2}
17734 ${t3} DISP:0 >/dev/null
17735 done
17736 done
17737
17738 (3)
17739 export T=100 N1=1 method=poles4 t0=1000 t1=1000 t2=1000 t3=1000; export N2=${N1} #
17740 for testname in fuchi ; do
17741 trainname=kitayama:nechi:ryotarou:shingo:takemura:tomisaki:yusuke
17742 for t2 in 1000 ; do
17743 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
17744 ${t2}:${t3} DISP:0"
17745 vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}:${t2}
17746 ${t3} DISP:0 >/dev/null
17747 done
17748 done
17749
17750 export T=100 N1=1 method=poles4 t0=1000 t1=4000 t2=1000 t3=4000; export N2=${N1} #
17751 for testname in fuchi ; do
17752 trainname=eguti
17753 for t2 in 1000 5000 ; do
17754 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
17755 ${t2}:${t3} DISP:0"
17756 vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}:${t2}
17757 ${t3} DISP:0 >/dev/null
17758 done
17759 done
17760
17761 (1) norm_poles.cで、半径が rj>1.0 || xj<0.0 の極は評価しないようにした。
17762 export T=100 N1=1 method=poles4 t0=1000 t1=4000 t2=1000 t3=4000; export N2=${N1} #
17763 for testname in sawa eguti ; do
17764 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainm
ame=sawa ;fi
17765 for t2 in 1000 2000 3000 4000 5000 6000 7000 8000 ; do
17766 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
17767 ${t2}:${t3} DISP:0"
17768 vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}:${t2}
17769 ${t3} DISP:0 >/dev/null
17770 done
17771 done
17772
17773 (1) norm_poles.cで、半径が rj>1.0 || xj<0.35 の極は評価しないようにした。
17774 export T=100 N1=1 method=poles4 t0=1000 t1=4000 t2=1000 t3=4000; export N2=${N1} #
17775 for testname in sawa eguti ; do
17776 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainm
ame=sawa ;fi
17777 for t2 in 1000 2000 3000 4000 5000 6000 7000 8000 ; do
17778 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
17779 ${t2}:${t3} DISP:0"
17780 vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}:${t2}
17781 ${t3} DISP:0 >/dev/null
17782 done
17783 done
17784
17785 (1) recogntion using prediction error with N=1
17786 #te:sawa-aiueo-t1000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#soso?
17787 #te:sawa-aiueo-t2000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17788 #te:sawa-aiueo-t3000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17789 #te:sawa-aiueo-t4000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17790 #te:sawa-aiueo-t5000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17791 #te:sawa-aiueo-t6000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17792 #te:sawa-aiueo-t7000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17793 #te:sawa-aiueo-t8000+1000 are recognized as tr:eguti-aiueo-t1000+1000 (5/5) via m:directN1-1.#
17794
```



```
.0 || rj<0.35 also <0.5
18244 #te:sawa-aiueo-tl000+4000 are recognized as tr:eguti-oeuoo-tl000+4000 (2/5) via m:poles4N32-32. #rj>0
18245 #te:sawa-aiueo-tl000+4000 are recognized as tr:eguti-aeueo-tl000+4000 (4/5) via m:poles4N32-32. #rj>0
18246 #te:sawa-aiueo-t2000+4000 are recognized as tr:eguti-aeueo-tl000+4000 (4/5) via m:poles4N32-32. #rj>0
18247 #te:sawa-aiueo-t3000+4000 are recognized as tr:eguti-aeueo-tl000+4000 (3/5) via m:poles4N32-32. #rj>0
18248 #te:sawa-aiueo-t3000+4000 are recognized as tr:eguti-aeueo-tl000+4000 (3/5) via m:poles4N32-32. #rj>0
18249 #te:sawa-aiueo-t3000+4000 are recognized as tr:eguti-aeueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18250 #te:sawa-aiueo-t2000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18251 #te:sawa-aiueo-t2000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18252 #te:sawa-aiueo-t3000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18253 #te:sawa-aiueo-t3000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18254 #te:sawa-aiueo-t3000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18255 #te:sawa-aiueo-t2000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18256 #te:sawa-aiueo-t3000+4000 are recognized as tr:sawa-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18257 #te:sawa-aiueo-t1000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (4/5) via m:poles4N32-32. #rj>0
18258 #te:sawa-aiueo-t1000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (4/5) via m:poles4N32-32. #rj>0
18259 #te:sawa-aiueo-t3000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (4/5) via m:poles4N32-32. #rj>0
18260 #te:sawa-aiueo-t3000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18261 #te:sawa-aiueo-t1000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (3/5) via m:poles4N32-32. #rj>0
18262 #te:sawa-aiueo-t2000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (5/5) via m:poles4N32-32. #rj>0
18263 #te:sawa-aiueo-t3000+4000 are recognized as tr:eguti-aiueo-tl000+4000 (4/5) via m:poles4N32-32. #rj>0
18264 --> egutiの1000+2000から変なデータが入っている
18265
18266
18267 #te:sawa-aiueo-tl000+3000 are recognized as tr:eguti-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18268 #te:sawa-aiueo-t2000+3000 are recognized as tr:eguti-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18269 #te:sawa-aiueo-t3000+3000 are recognized as tr:eguti-aiueo-tl000+1000 (4/5) via m:poles4N32-32. #rj>1
18270 #te:eguti-aiueo-tl000+3000 are recognized as tr:sawa-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18271 #te:eguti-aiueo-t2000+3000 are recognized as tr:sawa-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18272 #te:eguti-aiueo-t3000+3000 are recognized as tr:sawa-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18273
18274
18275 #te:eguti-aiueo-tl000+1600 are recognized as tr:sawa-aiueo-tl000+1600 (5/5) via m:poles4N32-32. #rj>1
18276 #te:eguti-aiueo-t2000+1600 are recognized as tr:sawa-aiueo-tl000+1600 (5/5) via m:poles4N32-32. #rj>1
18277 #te:eguti-aiueo-t3000+1600 are recognized as tr:sawa-aiueo-tl000+1600 (5/5) via m:poles4N32-32. #rj>1
18278 #te:sawa-aiueo-tl000+1600 are recognized as tr:eguti-aiueo-tl000+1600 (4/5) via m:poles4N32-32. #rj>1
18279 #te:sawa-aiueo-t2000+1600 are recognized as tr:eguti-aiueo-tl000+1600 (3/5) via m:poles4N32-32. #rj>1
18280 #te:sawa-aiueo-t3000+1600 are recognized as tr:eguti-aiueo-tl000+1600 (3/5) via m:poles4N32-32. #rj>1
18281
18282 #te:eguti-aiueo-tl000+1000 are recognized as tr:sawa-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18283 #te:eguti-aiueo-t2000+1000 are recognized as tr:sawa-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18284 #te:eguti-aiueo-t3000+1000 are recognized as tr:sawa-aiueo-tl000+1000 (3/5) via m:poles4N32-32. #rj>1
18285 #te:sawa-aiueo-tl000+1000 are recognized as tr:eguti-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18286 #te:sawa-aiueo-t2000+1000 are recognized as tr:eguti-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18287 #te:sawa-aiueo-t3000+1000 are recognized as tr:eguti-aiueo-tl000+1000 (5/5) via m:poles4N32-32. #rj>1
18288
18289 #te:eguti-aiueo-tl000+1000 are recognized as tr:sawa-aiueo-tl000+1000 (4/5) via m:poles4N40-40. #
18290 #te:eguti-aiueo-t2000+1000 are recognized as tr:sawa-aiueo-tl000+1000 (4/5) via m:poles4N40-40. #
18291 #te:eguti-aiueo-t3000+1000 are recognized as tr:sawa-aiueo-tl000+1000 (5/5) via m:poles4N40-40. #
```

```
18292
18293
18294 #te:sawa-aiueo-tl000+1600 are recognized as tr:eguti-aiueo-tl000+1600 (3/5) via m:poles4N32-32. #rj>1
18295 #te:sawa-aiueo-t2000+1600 are recognized as tr:eguti-aiueo-tl000+1600 (4/5) via m:poles4N32-32. #rj>1
18296 #te:sawa-aiueo-t3000+1600 are recognized as tr:eguti-aiueo-tl000+1600 (4/5) via m:poles4N32-32. #rj>1
18297
18298 #te:sawa-aiueo-tl000+1500 are recognized as tr:eguti-aiuee-tl000+1500 (4/5) via m:poles4N1-1. #rj>1.0
18299 #te:sawa-aiueo-t2000+1500 are recognized as tr:eguti-aiueo-tl000+1500 (5/5) via m:poles4N1-1. #rj>1.0
18300 #te:sawa-aiueo-t3000+1500 are recognized as tr:eguti-aiueo-tl000+1500 (5/5) via m:poles4N1-1. #rj>1.0
18301
18302 export T=100 N1=1 method=poles4 t0=1000 tl=1500 t2=1000 t3=1500; export N2=$N1} #
18303 for testname in eguti ; do #for testname in sawa ; do
18304 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainm
amesawa ; fi
18305 for t2 in 1000 2000 3000 ; do
18306 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18307 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}
18308 done
18309 done
18310 #te:eguti-aiueo-tl000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N32-32. #OK
18311 #te:eguti-aiueo-t2000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N32-32. #OK
18312 #te:eguti-aiueo-t3000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N32-32. #OK
18313
18314 #te:eguti-aiueo-tl000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N1-1. #NG4
18315 #te:eguti-aiueo-t2000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N1-1. #NG3
18316 #te:eguti-aiueo-t3000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N1-1. #OK
18317
18318 #te:sawa-aiueo-tl000+1500 are recognized as tr:eguti-aiuee-tl000+1500 via m:poles4N1-1. #OK
18319 #te:sawa-aiueo-t2000+1500 are recognized as tr:eguti-aiueo-tl000+1500 via m:poles4N1-1. #OK
18320 #te:sawa-aiueo-t3000+1500 are recognized as tr:eguti-aiueo-tl000+1500 via m:poles4N1-1. #OK
18321
18322
18323
18324
18325 #te:eguti-aiueo-tl000+1500 are recognized as tr:sawa-aiueo-tl000+1500 via m:poles4N1-1. #OKif (rj>1 ||
rj<0.5) ;
18326 #te:sawa-aiueo-tl000+1500 are recognized as tr:eguti-eiuee-tl000+1500 via m:poles4N1-1. #NG3if (rj>1 ||
rj<0.5) ;
18327
18328 #te:eguti-aiueo-tl000+1000 are recognized as tr:sawa-aiueo-tl000+1000 via m:poles4N32-32. #OK
18329 #te:eguti-aiueo-t2000+1000 are recognized as tr:sawa-aiueo-tl000+1000 via m:poles4N32-32. #OK
18330 #te:eguti-aiueo-t3000+1000 are recognized as tr:sawa-aiueo-tl000+1000 via m:poles4N32-32. #
18331
18332 #te:sawa-aiueo-tl000+1000 are recognized as tr:eguti-aiueo-tl000+1000 via m:poles4N32-32. #OK
18333 #te:sawa-aiueo-t2000+1000 are recognized as tr:eguti-aiueo-tl000+1000 via m:poles4N32-32. #OK
18334 #te:sawa-aiueo-t3000+1000 are recognized as tr:eguti-aiueo-tl000+1000 via m:poles4N32-32. #OK
18335
18336
18337
18338 export T=100 N1=32 method=poles4 t0=1000 tl=1000 t2=1000 t3=1000; export N2=$N1} #
18339 #te:sawa-aiueo is recognized as tr:eguti-aiueo via method=poles4. #OK
18340 #te:eguti-aiueo is recognized as tr:sawa-aiueo via method=poles4. #OK
18341 export T=100 N1=32 method=poles4 t0=1000 tl=1000 t2=2000 t3=1000; export N2=$N1} #
18342 #te:sawa-aiueo is recognized as tr:eguti-aiuea via method=poles4. #NG4
18343 #te:eguti-aiueo is recognized as tr:sawa-aiuea via method=poles4. #NG4
18344 export T=100 N1=32 method=poles4 t0=1000 tl=1000 t2=3000 t3=1000; export N2=$N1} #
18345 #te:sawa-aiueo is recognized as tr:eguti-aiueo via method=poles4. #OK
18346 #te:eguti-aiueo is recognized as tr:eguti-aiueo via method=poles4. #OK
18347 export T=100 N1=1 method=poles4 t0=1000 tl=1000 t2=1000 t3=1000; export N2=$N1} #
18348 #te:sawa-aiueo is recognized as tr:eguti-aiueu via method=poles4. #NG4
18349 #te:eguti-aiueo is recognized as tr:eguti-aiueu via method=poles4. #NG4
18350 #te:sawa-aiueo is recognized as tr:eguti-aiueo via method=poles4. #NG4
18351 export T=100 N1=32 method=poles4 t0=1000 tl=2000 t2=1000 t3=2000; export N2=$N1} #
18352 #te:eguti-aiueo is recognized as tr:eguti-aiueo via method=poles4. #OK
18353 #te:sawa-aiueo is recognized as tr:sawa-aiueo via method=poles4. #OK
18354 export T=100 N1=1 method=poles4 t0=1000 tl=1000 t2=1000 t3=1000; export N2=$N1} #
18355 #te:eguti-aiueo is recognized as tr:eguti-aiuee via method=poles4. #NG4
18356 #te:eguti-aiueo is recognized as tr:eguti-aiuee via method=poles4. #NG4
18357 #for testname in eguti ; do
18358 for testname in sawa eguti ; do
18359 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainm
amesawa ; fi
18360 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
```

```
18361 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
18362 done
18363
18364 export T=100 N1=1 method=poles4 t0=1000 t1=1000 t2=1000 t3=2000; export N2=${N1} #
18365 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18366 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#
18367 export T=100 N1=1 method=poles4 t0=1000 t1=1000 t2=3000 t3=2000; export N2=${N1} #
18368 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18369 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#
18370 #for testname in eguti ; do
18371 for testname in sawa eguti; do
18372 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18373 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18374 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18375 done
18376
18377 060112am
18378 export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=1000 t3=2000; export N2=${N1} #
18379 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18380 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18381 export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=2000 t3=2000; export N2=${N1} #
18382 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18383 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18384 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18385 export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=3000 t3=2000; export N2=${N1} #
18386 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18387 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18388 export T=100 N1=1 method=poles4 t0=1000 t1=1000 t2=1000 t3=2000; export N2=${N1} #
18389 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18390 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18391 export T=100 N1=1 method=direct t0=1000 t1=1000 t2=1000 t3=2000; export N2=${N1} #
18392 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18393 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18394 export T=100 N1=1 method=direct t0=1000 t1=1000 t2=2000 t3=2000; export N2=${N1} #
18395 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18396 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18397 export T=100 N1=1 method=direct t0=1000 t1=1000 t2=3000 t3=2000; export N2=${N1} #
18398 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18399 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18400 export T=100 N1=1 method=poles4 t0=1000 t1=1000 t2=3000 t3=2000; export N2=${N1} #
18401 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18402 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18403
18404 #for testname in eguti ; do
18405 for testname in sawa eguti; do
18406 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18407 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18408 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18409 done
18410
18411 export T=100 N1=32 method=poles4 t0=1000 t1=2000; export t2=${t0} t3=${t1} N2=${N1} #
18412 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18413 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18414 export T=100 N1=1 method=direct t0=1000 t1=2000; export t2=${t0} t3=${t1} N2=${N1} #
18415 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18416 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18417 export T=100 N1=32 method=direct t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18418 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18419 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18420 export T=100 N1=1 method=direct t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18421 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18422 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18423 export T=100 N1=1 method=M4 t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18424 #te:sawa-alueo is recognized as tr:eguti-alueo via method=M4.#OK
18425 #te:eguti-alueo is recognized as tr:sawa-alueo via method=M4.#OK
18426 export T=100 N1=32 method=poles4 t0=1000 t1=1500; export t2=${t0} t3=${t1} N2=${N1} #
18427 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18428 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18429 export T=100 N1=1 method=direct t0=1000 t1=1500; export t2=${t0} t3=${t1} N2=${N1} #
18430 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18431 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18432 export T=100 N1=1 method=poles4 t0=1000 t1=1500; export t2=${t0} t3=${t1} N2=${N1} #
18433 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18434 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18435 export T=100 N1=1 method=M4 t0=1000 t1=1500; export t2=${t0} t3=${t1} N2=${N1} #
```

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18436 #te:sawa-alueo is recognized as tr:eguti-alueo via method=M4.#OK
18437 #te:eguti-alueo is recognized as tr:sawa-alueo via method=M4.#OK
18438 vowelrecog te:eguti tr:sawa k:9 N:32-32 m:poles4 t:100 tt:1000:1000:3000
18439 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18440 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18441 #for testname in eguti ; do
18442 for testname in sawa ; do
18443 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18444 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18445 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18446 done
18447
18448 060110pm
18449 #####
18450 #different options for more convenient
18451 # tt:<t0><t1><t2><t3> : [<t0>,<t0>+<t1>] for training, [<t2>,<t2>+<t3>] for test
18452 # m:poles4 distance of poles
18453 # m:M4 distance of Associative Matrices
18454 # m:direct prediction error
18455
18456 rm -rf tmp;export T=100 N1=32 method=direct t0=1000 t1=2000 t2=1000 t3=2000; export N2=${N1}
18457 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#
18458 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#
18459 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=2000 t2=1000 t3=2000; export N2=${N1}
18460 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18461 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18462 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18463 rm -rf tmp;export T=100 N1=32 method=direct t0=1000 t1=2000 t2=1000 t3=2000; export N2=${N1}
18464 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18465 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18466 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18467 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18468 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18469 rm -rf tmp;export T=100 N1=32 method=direct t0=1000 t1=1000 t2=1000 t3=1000; export N2=${N1}
18470 #te:eguti-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18471 #te:sawa-alueo is recognized as tr:sawa-alueo via method=direct.#OK
18472 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=1000 t3=1000; export N2=${N1}
18473 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#OK
18474 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18475 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=1000 t3=1000 N2=35
18476 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18477 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#
18478 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=1000 t3=1000 N2=40
18479 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18480 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=1000 t2=1000 t3=1000 N2=50
18481 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18482 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#
18483 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18484 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#
18485 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=1500; export t2=${t0} t3=${t1} N2=${N1}
18486 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18487 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.# t4=800
18488 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=3000; export t2=${t0} t3=${t1} N2=${N1} # t4
=800 and 200)
18489 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#
18490 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#
18491 rm -rf tmp;export T=100 N1=32 method=poles4 t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} # t4
=800 and 200)
18492 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#xz2=1.0 | rz2<0.2
18493 rm -rf tmp;export T=100 N1=1 method=poles4 t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18494 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#NG
18495 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#OK
18496 rm -rf tmp;export T=100 N1=1 method=direct t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18497 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#OK
18498 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#NG
18499 rm -rf tmp;export T=100 N1=1 method=poles4 t0=2000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18500 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#NG
18501 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#NG
18502 rm -rf tmp;export T=100 N1=32 method=direct t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18503 #te:eguti-alueo is recognized as tr:eguti-alueo via method=direct.#NG
18504 #te:sawa-alueo is recognized as tr:sawa-alueo via method=direct.#NG
18505 rm -rf tmp;export T=100 N1=32 method=direct t0=2000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18506 #te:sawa-alueo is recognized as tr:eguti-alueo via method=poles4.#NG
18507 #te:eguti-alueo is recognized as tr:sawa-alueo via method=poles4.#NG
18508 rm -rf tmp;export T=100 N1=1 method=direct t0=2000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18509 #te:sawa-alueo is recognized as tr:eguti-alueo via method=direct.#NG
18510 #te:eguti-alueo is recognized as tr:sawa-alueo via method=direct.#NG
18511 rm -rf tmp;export T=100 N1=1 method=M4 t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18512 #te:sawa-alueo is recognized as tr:eguti-alueo via method=M4.#NG
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18513 #te:eguti-aiueo is recognized as tr:sawa-aiueu via method-m4.#NG
18514 rm -rf tmp;export T=100 N1=32 method-m4 t0=1000; export t2=${t0} t3=${t1} N2=${N1} #
18515 #te:eguti-aiueo is recognized as tr:sawa-aiueo via method-m4.#NG
18516 #te:sawa-aiueo is recognized as tr:eguti-aiueo via method-m4.#NG
18517 rm -rf tmp;export T=100 N1=32 method-m4 t0=1000 t1=1000; export t2=${t0} t3=${t1} N2=${N1} #
18518 #te:sawa-aiueo is recognized as tr:eguti-aiueo via method-m4.#OKrz2>1.0 || rz2<0.35 _t4=200
18519 #te:eguti-aiueo is recognized as tr:sawa-aiueo via method-poles4.#OKrz2>1.0 || rz2<0.35 _t4=200
18520 #for testname in sawa ; do
18521   for testname in sawa eguti ; do
18522     if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18523 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18524 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t
1}:${t2}:${t3}
18525 done
18526
18527
18528 rm -rf tmp;export T=100 N1=32 method-poles4 t0=0 t1=2000 t2=0 t3=2000
18529 export N2=${N1}
18530 for testname in sawa eguti ; do
18531   if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18532 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t1}
:${t2}:${t3}"
18533 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} tt:${t0}:${t
1}:${t2}:${t3}
18534 done
18535
18536 #####
18537 rm -rf tmp;export T=100 N1=32 method-poles4 t0=2000 toffset=0 t2=0 t3=2000
18538 #te:eguti-aiueo is recognized as tr:sawa-aiueo via method-poles4.#OK
18539 #te:sawa-aiueo is recognized as tr:eguti-aiueo via method-poles4.#OK
18540 export t1='expr ${t0} + 200';
18541 export N2=${N1}
18542 export N2=${N1}
18543 for testname in sawa eguti ; do
18544   if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18545 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} ttr:${t0}:${t1}
}:${toffset} tte:${t2}:${t3}"
18546 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} ttr:${t0}:${
t1}:${toffset} tte:${t2}:${t3}
18547 done
18548
18549 rm -rf tmp;export T=100 N1=32 method-poles4 t0=1500 toffset=1000 t2=2000 #OK
18550 export t1='expr ${t0} + 200';
18551 export t3='expr ${t2} + 400';
18552 export N2=${N1}
18553 for testname in sawa eguti ; do
18554   if [ "${testname}" = "sawa" ] ; then trainname=eguti ;elif [ "${testname}" = "eguti" ] ; then trainn
ame=sawa ;fi
18555 echo "vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} ttr:${t0}:${t1}
}:${toffset} tte:${t2}:${t3}"
18556 echo n | vowelrecog te:${testname} tr:${trainname} k:9 N:${N1}-${N2} m:${method} T:${T} ttr:${t0}:${t
1}:${toffset} tte:${t2}:${t3}
18557 done
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18571
18572 #?rm -rf tmp
18573 #?#
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18656 norm_poles tmp/${testvowel}-${testname}-k9N${N1}-${N2}-${feature}.dat tmp/${vowel}-${testname}-k9N$
18657 done
18658 done
18659 done
18660
18661 060109
18662 export ti=2000 T=10 N1=1 ; export N2=${N1} #NG te:sawa:aooeo eguti:aiatae rz2>1.0 || rz2<0.3
18663 export ti=2000 T=10 N1=32 ; export N2=${N1} #NG te:sawa:aiaoea eguti:aiatae rz2>1.0 || rz2<0.3
18664 export ti=2000 T=100 N1=32 ; export N2=${N1} #NG te:sawa:aiaoeo eguti:aiatae rz2>1.0 || rz2<0.3
18665 export ti=2000 T=100 N1=60 ; export N2=${N1} #NG te:sawa:aiueu eguti:aiatae rz2>1.0 || rz2<0.3
18666 export ti=2000 T=100 N1=1 ; export N2=${N1} #NG te:sawa:aiueo eguti:aiatae rz2>1.0 || rz2<0.3
18667 export ti=2000 T=100 N1=32 ; export N2=${N1} #OK te:sawa:aiueo eguti:aiatae rz2>1.0 || rz2<0.3
18668 echo n | vowelrecog te:sawa tr:eguti k:9 N:${N1}-${N2} m:direct T:${T} t:${t1}:2000-2200 #N=50:oiue
o
18669 echo n | vowelrecog te:eguti tr:sawa k:9 N:${N1}-${N2} m:direct T:${T} t:${t1}:2000-2200 #N=50:aiue
o(OK) N=1:aiueo
18670 #export feature=poles5
18671 #export feature=poles6 #LSP
18672 export feature=poles4 #
18673 for testname in sawa eguti ; do
18674 if [ "${testname}" = "sawa" ] ; then trainname=eguti ;
18675 elif [ "${testname}" = "eguti" ] ; then trainname=sawa ;
18676 fi
18677 echo "##### test:${testname} and train:${testname} #####"
18678 for testvowel in a i u e o ; do
18679 echo "norm of poles between ${testvowel} of ${testname} and aiueo of ${testname}"
18680 for vowel in a i u e o ; do
18681 norm_poles tmp/${testvowel}-${testname}-k9N${N1}-${N2}-${feature}.dat tmp/${vowel}-${testname}-k9N$
18682 done
18683 done
18684 done
18685
18686
18687
18688
18689 #####
18690
18691 export N1=32 ti=2000; export N2=${N1} k:9 N:${N1}-${N2} m:direct T:100 t:${t1}:200-220 #N=1:aiu
eo
18692 echo n | vowelrecog te:sawa tr:eguti
18693 echo n | vowelrecog te:eguti tr:sawa
18694 export testname=sawa trainname=eguti feature=poles5
18695 export testname=sawa trainname=eguti feature=poles4
18696 for testvowel in a i u e o ; do
18697 echo "recognition of ${testvowel} of ${testname}"
18698 for vowel in a i u e o ; do
18699 norm_poles tmp/${testvowel}-${testname}-k9N${N1}-${N2}-${feature}.dat tmp/${vowel}-${testname}-k9N$
18700 #echo "${feature}.dat > /dev/null
18701 #echo "norm_poles tmp/${testvowel}-${testname}-k9N${N1}-${N2}-${feature}.dat tmp/${vowel}-${trainnam
e)-k9N${N1}-${N2}-${feature}.dat"
18701 done
18702 done
18703
18704 060108
18705 (l)shrink2で sawa と eguti 相互の訓練・認識が成功
18706 shrink2は次のユニットをMSBの順番に使わない
18707 失敗する種(rz2>1.0)をもつ重態行列をもつユニット
18708 縦軸が大きい種(rz2<0.3)をもつ重態行列をもつユニット
18709 ユニットの数は N:50-50 以上が必要のようだ。
18710 echo n | vowelrecog te:eguti tr:sawa
18711 echo n | vowelrecog te:sawa tr:eguti
18712
18713 echo n | vowelrecog te:eguti tr:sawa
18714 echo n | vowelrecog te:sawa tr:eguti
18715
18716 echo n | vowelrecog te:eguti tr:sawa
18717 echo n | vowelrecog te:sawa tr:eguti
18718
18719 echo n | vowelrecog te:sawa tr:eguti
18720 || rz2<0.3 OK
18720 echo n | vowelrecog te:eguti tr:sawa
18721 || rz2<0.3 NG
18721
18722 echo n | vowelrecog te:eguti tr:sawa
18723 echo n | vowelrecog te:sawa tr:eguti
18724
18725
18726 echo n | vowelrecog te:sawa tr:eguti
18727 || rz2<0.3 OK
```

```
18727 echo n | vowelrecog te:eguti tr:sawa
18728 || rz2<0.3 NG
18729
18729 echo n | vowelrecog te:sawa tr:eguti
18730 || rz2<0.3
18730 echo n | vowelrecog te:sawa tr:eguti
18731 || rz2<0.3
18731 echo n | vowelrecog te:sawa tr:eguti
18732 || rz2<0.3
18732 echo n | vowelrecog te:sawa tr:eguti
18733 060106
18733 echo n | vowelrecog te:sawa tr:eguti
18734 echo n | vowelrecog te:sawa tr:eguti
18735 echo n | vowelrecog te:sawa tr:eguti
18736 echo n | vowelrecog te:sawa tr:eguti
18737 echo n | vowelrecog te:sawa tr:eguti
18738 echo n | vowelrecog te:sawa tr:eguti
18739 echo n | vowelrecog te:sawa tr:eguti
18740 echo n | vowelrecog te:sawa tr:eguti
18741 echo n | vowelrecog te:sawa tr:eguti
18742 echo n | vowelrecog te:sawa tr:eguti
18743 echo n | vowelrecog te:sawa tr:eguti
18744 echo n | vowelrecog te:sawa tr:eguti
18745 || rz2<0.5 NG
18745 echo n | vowelrecog te:sawa tr:eguti
18746 || rz2<0.3 OK
18746 echo n | vowelrecog te:sawa tr:eguti
18747 || rz2<0.3 NG
18747 echo n | vowelrecog te:sawa tr:eguti
18748 || rz2<0.3 NG
18748 echo n | vowelrecog te:sawa tr:eguti
18749 || rz2<0.3 OK
18749 echo n | vowelrecog tr:eguti te:sawa
18750 || rz2<0.3 OK
18750
18751 echo n | vowelrecog te:eguti tr:sawa
18752 echo n | vowelrecog te:eguti tr:sawa
18753 echo n | vowelrecog te:eguti tr:sawa
18754 echo n | vowelrecog te:eguti tr:sawa
18755 echo n | vowelrecog te:eguti tr:sawa
18756
18757
18758 echo n | vowelrecog te:eguti tr:sawa
18759 echo n | vowelrecog te:eguti tr:sawa
18760 echo n | vowelrecog te:eguti tr:sawa:eguti k:9 N:32-32 m:direct T:100 t:1000:1500-1700 #aiueo
18761 echo n | vowelrecog te:eguti tr:sawa:eguti k:9 N:32-32 m:direct T:100 t:1500:1500-1700 #aiueo
18762 echo n | vowelrecog te:eguti tr:sawa:eguti k:9 N:32-32 m:direct T:100 t:1500:1500-1700 #aiueo
18763 echo n | vowelrecog te:eguti tr:sawa:eguti k:9 N:1-1 m:shrink2 T:100 t:1500:1500-1700 #aiueo
18764
18765 echo n | vowelrecog te:eguti tr:sawa:eguti k:9 N:1-1 m:direct T:100 t:1500:1500-1700 #aiueo
18766 echo n | vowelrecog te:eguti tr:eguti k:9 N:1-1 m:direct T:100 t:1500:1500-1700 #aiueo
18767 echo n | vowelrecog te:eguti tr:sawa k:9 N:1-1 m:direct T:100 t:1500:1500-1700 #aiueo
18768 echo n | vowelrecog te:eguti tr:sawa
18769 echo n | vowelrecog te:eguti tr:sawa
18770 echo n | vowelrecog te:sawa tr:eguti
18771
18772 #####
18772 export testname=sawa trainname=eguti feature=M1
18773
18774 export testname=sawa trainname=eguti feature=thetal
18775 export testname=sawa trainname=eguti feature=poles5
18776 export testname=sawa trainname=eguti feature=poles4
18777 export N1=1 N2=${N1} ;
18778 for testvowel in a i u e o ; do
18779 echo "recognition of ${testvowel} of ${testname}"
18780 for vowel in a i u e o ; do
18781 norm_vecs tmp/${testvowel}-${testname}-k9N${N1}-${N2}-${feature}.dat tmp/${vowel}-${testname}-k9N$
18782 #echo "norm_vecs tmp/${testvowel}-${testname}-k9N${N1}-${N2}-${feature}.dat > /dev/null
18783 #echo "${feature}.dat > /dev/null
18783 done
18784 done
18785 #####
18785 export testname=sawa trainname=eguti
18786 #####
18787 export testname=sawa trainname=eguti
18788 for testvowel in a i u e o ; do
18789 echo "recognition of aiueo of ${testname}"
18790 for vowel in a i u e o ; do
18791 N1=1N2=1predzy.ts tmp/${testvowel}-${testname}-k9N${N1}-${N2}-thetal.dat tmp/${vowel}-${testname}
-k9N${N1}-${N2}-thetal.dat > /dev/null
18792 done
18793 done
18794 #####
```



```
18959 ##アンサンブル想起の実行
18960 cat > param.dat << EOF
18961 0 #0:timeseries,l:chaos prepare_data() in my_function.c
18962 ${K} 0 #channels
18963 ${dn.timeseries}
18964 ${t1} ${t2} #ttrain,ttotal: points in time of training and total data
18965 0 0 0 #y0min y0max ylmin ylmax for normalization
18966 nls
18967 ${ens}
18968 ${method}
18969 ${pm} #poles of M
18970 msp
18971 qu
18972 EOF
18973 echo "-----the following are param.dat-----"
18974 cat param.dat
18975 echo "-----the above are in param.dat-----"
18976 ./can2 < param.dat
18977 echo "## Done can2 for ${onsei} K=${K} N=${N1}-${N2}"
18978 prtle=tmp/${onsei}-poles${K}N${N1}-${N2}.dat
18979 prtle2=tmp/${onsei}-poles2${K}N${N1}-${N2}.dat
18980 prtle3=tmp/${onsei}-poles3${K}N${N1}-${N2}.dat
18981 echo "cp tmp/poles.dat ${prtle}"
18982 cp tmp/poles.dat ${prtle}
18983 cp tmp/poles2.dat ${prtle2}
18984 cp tmp/poles3.dat ${prtle3}
18985 done
18986 #closing of for onsei
18987 ##### Execute to here.
18988
18989
18990
18991
18992
18993
18994
18995 ##### Execute from here.
18996 cd tmp;
18997 plot [-0.1:4] "eguti-a-polesK$N32-32.dat" using 4:3 w impulses
18998 export K=8 N=1-1 poles=poles3 title="LSP"
18999 export K=12 N=1-1 poles=poles title="Poles of LPC"
19000 export K=12 N=1-1 poles=poles3 title="LSP"
19001 export K=9 N=2-2 poles=poles title="Poles of LPC"
19002 export K=9 N=32-34 poles=poles3 title="LSP"
19003 export K=8 N=1-1 poles=poles title="Poles of LPC"
19004 export K=9 N=1-1 poles=poles3 title="LSP"
19005 export K=9 N=1-1 poles=poles title="Poles of LPC"
19006 export K=9 N=32-34 poles=poles title="Poles of LPC"
19007
19008 export fbody=_aueo.${K}N${N}.${poles}
19009 export fbody_gpl<<EOF
19010 set title "${title}"
19011 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
nsize 0.5
19012 #set terminal xll; set pointsize 2;xl=0.1;x2=0.1;y2=0.1;y3=0.1;vd=0.8;set size square;
19013 #set terminal tgif; set output "${fbody}.obj"; set pointsize 0.5;xl=0.1;x2=0.6;y1=0.1;y2=0.4;y3=0.7;vd
d=0.4;
19014 set size square dd,dd; set margin 0; set lmargin 0; set tmargin 0; set bmargin 0;
19015 set multiplot
19016 EOF
19017 #####
19018 for f in a u e o aueo ; do
19019 if [ "${f}" = "a" ] ; then pos="x1.y3";
19020 elif [ "${f}" = "i" ] ; then pos="x2.y3";
19021 elif [ "${f}" = "u" ] ; then pos="x1.y2";
19022 elif [ "${f}" = "e" ] ; then pos="x2.y2";
19023 elif [ "${f}" = "o" ] ; then pos="x1.y1";
19024 elif [ "${f}" = "aueo" ] ; then pos="x2.y1";
19025 fi
19026 if [ "${f}" = "aueo" ] ; then
19027 cat >> mkfigs.gpl <<EOF
19028 cat >> mkfigs.gpl <<EOF
19029 set origin ${pos};
19030 plot [0:2*pi][0:2*pi][-2:2] "${f}-${poles}${K}N${N}.dat" using 1:2 t "${f}-${name1}${K}N${N}" , \\\
19031 cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1
19032 EOF
19033 else
19034 cat >> mkfigs.gpl <<EOF
19035 set origin ${pos};
19036 plot [0:2*pi][0:2*pi][-2:2] \\\
19037 "a-${poles}${K}N${N}.dat" using 1:2 t "a-${K}${N}${N}" w p 1, \\\
19038 "i-${poles}${K}N${N}.dat" using 1:2 t "i-${K}${N}${N}" w p 2, \\\
```

```
19039 "u-${poles}${K}N${N}.dat" using 1:2 t "u-${K}${N}${N}" w p 3, \\\
19040 "e-${poles}${K}N${N}.dat" using 1:2 t "e-${K}${N}${N}" w p 4, \\\
19041 "o-${poles}${K}N${N}.dat" using 1:2 t "o-${K}${N}${N}" w p 5, \\\
19042 cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1
19043 unset multiplot
19044 quit
19045 EOF
19046 fi
19047 done
19048 cat mkfigs.gpl
19049 gnuplot < mkfigs.gpl
19050 tgif ${fbody}.obj; gv ${fbody}.eps&
19051 #tgif -print -eps -color -dontcondense -a4 ${fbody}.obj ; gv ${fbody}.eps &
19052 #tgif -print -gif ${fbody}.obj ; convert -page A4+0+0 ${fbody}.eps ; gv ${fbody}.eps &
19053 #tgif -print -gif -a4 ${fbody}.obj ; convert -page A4+0+0 ${fbody}.gif ${fbody}.eps ; gv ${fbody}.ep
s &
19054 #lpr ${fbody}.eps;
19055
19056 ##### Execute to here.
19057
19058
19059
19060
19061
19062
19063 051220
19064 (1)051218をアンサンブルでやってみる
19065 ##### Execute from here.
19066 export K=12
19067 export K=8
19068 export K=9
19069 export N1=2 N2=2
19070 export N1=32 N2=34
19071 export N1=1 N2=1
19072 export N1=32 N2=32
19073 export pm=pWm
19074 export pm=pW
19075 export method=mspE
19076 export method=mspe
19077
19078 export T=100 g=5e-3 tl=2000 t2=2200
19079 #####
19080 for name in eguti sawa ; do
19081 for onsei in a i u e o; do
19082 dname=${name}-${onsei}
19083 dn.timeseries=./data/${dname}.dat
19084 dn_regression=./tmp/${dname}-rg.dat
19085 ##
19086 cat >param.dat << EOF #save parameters
19087 0 #0:timeseries,l:chaos prepare_data() in my_function.c
19088 ${K} 0 #channels
19089 ${dn.timeseries} #training file
19090 ${t1} ${t2} #ttrain,ttotal: points in time of training and total data
19091 0 0 0 #y0min y0max ylmin ylmax for normalization
19092 qu
19093 EOF
19094 ##各ユニット数について学習
19095 ./can2 <param.dat
19096 cp tmp/train-test.dat ${dn_regression}
19097 #####
19098 export N=${N1} ens= #
19099 while [ ${N} -le ${N2} ] ; do
19100 file=tmp/bestmsp-${dname}-${K}${N}${N}.net
19101 predfile=tmp/predict${N}.dat
19102 if [ -e ${file} ] ; then
19103 echo ${file} exists. Omit calculation. #既に学習
19104 else
19105 ##
19106 cat > param.dat << EOF
19107 0 #0:timeseries,l:chaos prepare_data() in my_function.c
19108 ${K} 0 #channels
19109 ${dn.timeseries}
19110 ${t1} ${t2} #ttrain,ttotal: points in time of training and total data
19111 0 0 0 #y0min y0max ylmin ylmax for normalization
19112 in #
19113 ${N} #n_cells storing vectors
19114 20 #n_compare
19115 0.5 3 #v_thresh v_min
19116 10 #v_ratio
19117 0.2 #width window width
19118 ex #execute
19119 1 5e-3 0.7 #i=0:online,i=1:batch, gamma0, entropy_thresh
```

```
19120 100 #iterations to execute
19121 10 #display
19122 quit
19123 EOF
19124 echo "Executing can2 for N=${N}"
19125 echo "-----the following are param.dat-----"
19126 cat param.dat
19127 echo "-----the above are in param.dat-----"
19128 can2 < param.dat
19129 cp bestmsep.net ${file}
19130 cp predict.dat ${predfile}
19131 ##
19132 fi
19133 export ens=${ens} "${file}"
19134 N=`expr ${N} + 1`
19135 done
19136 ##アノサンブル相起の実行
19137 cat param.dat
19138 #poles of M
19139 #channels
19140 $[k] 0 #timeseries,1:chaos prepare_data() in my_function.c
19141 $[dn.timeseries]
19142 $[t1] ${C2} #Ttrain,Ttotal: points in time of training and total data
19143 0 0 0 #Y0min y0max y1min y1max for normalization
19144 nls
19145 $[ens]
19146 $[pm]
19147 qu
19148 EOF
19149 echo "-----the following are param.dat-----"
19150 cat param.dat
19151 echo "-----the above are in param.dat-----"
19152 ./can2 < param.dat
19153 echo ## Done can2 for $(dname) k=${K} N=${N1}-${N2}"
19154 file=tmp/$(dname)-poles3${K}${N1}-${N2}.dat
19155 file2=tmp/$(dname)-poles2${K}${N1}-${N2}.dat
19156 file3=tmp/$(dname)-poles3${K}${N1}-${N2}.dat
19157 cp tmp/poles.dat ${file2}
19158 cp tmp/poles2.dat ${file2}
19159 cp tmp/poles3.dat ${file3}
19160 done
19161 done
19162 ##### Execute to here.
19163
19164 >>MSE---:1.002517e+03 NMSE---:9.914155e-01eguti-a K=8 N=1-1
19165 >>MSE---:1.960590e+03 NMSE---:7.403248e-01eguti-i K=8 N=1-1
19166 >>MSE---:1.388986e+03 NMSE---:1.013449e-01eguti-u K=8 N=1-1
19167 >>MSE---:1.122435e+03 NMSE---:9.601821e-01eguti-e K=8 N=1-1
19168 >>MSE---:1.333867e+03 NMSE---:8.874819e-01eguti-o K=8 N=1-1
19169 >>MSE---:4.649945e+01 NMSE---:8.800867e-01sawa-a K=8 N=1-1
19170 >>MSE---:1.527081e+03 NMSE---:74.944001e-01sawa-i K=8 N=1-1
19171 >>MSE---:2.612133e+03 NMSE---:9.917744e-01sawa-u K=8 N=1-1
19172 >>MSE---:2.403179e+03 NMSE---:9.917744e-01sawa-e K=8 N=1-1
19173 >>MSE---:1.708560e+03 NMSE---:7.813276e-01sawa-o K=8 N=1-1
19174
19175 >>MSE---:1.009086e+03 NMSE---:9.979119e-01eguti-a K=9 N=1
19176 >>MSE---:1.757768e+03 NMSE---:6.637374e-01eguti-i K=9 N=1
19177 >>MSE---:1.332717e+03 NMSE---:9.866225e-01eguti-u K=9 N=1
19178 >>MSE---:1.337969e+03 NMSE---:8.902110e-01eguti-o K=9 N=1
19179 >>MSE---:4.718409e+01 NMSE---:8.930446e-01sawa-a K=9 N=1
19180 >>MSE---:1.533527e+03 NMSE---:4.964873e-01sawa-i K=9 N=1
19181 >>MSE---:2.461112e+03 NMSE---:9.232148e-01sawa-u K=9 N=1
19182 >>MSE---:2.195880e+03 NMSE---:9.060997e-01sawa-e K=9 N=1
19183 >>MSE---:1.416616e+03 NMSE---:6.478209e-01sawa-o K=9 N=1
19184
19185 >>MSE---:9.982510e+02 NMSE---:9.8791970e-01eguti-a K=12 N=1-1
19186 >>MSE---:1.119767e+03 NMSE---:4.228875e-01eguti-i K=12 N=1-1
19187 >>MSE---:3.220792e+03 NMSE---:9.631524e-01eguti-u K=12 N=1-1
19188 >>MSE---:1.097598e+03 NMSE---:9.389359e-01eguti-e K=12 N=1-1
19189 >>MSE---:1.350245e+03 NMSE---:8.983787e-01eguti-o K=12 N=1-1
19190 >>MSE---:4.602902e+01 NMSE---:8.711829e-01sawa-a K=12 N=1-1
19191 >>MSE---:8.486471e+02 NMSE---:2.747538e-01sawa-i K=12 N=1-1
19192 >>MSE---:2.030515e+03 NMSE---:7.616887e-01sawa-u K=12 N=1-1
19193 >>MSE---:2.186250e+03 NMSE---:9.022493e-01sawa-e K=12 N=1-1
19194 >>MSE---:1.004039e+03 NMSE---:4.591491e-01sawa-o K=12 N=1-1
19195
19196 # msep: 多段予測結果をアノサンブル
19197
19198 #method=mspe>>MSE---:73.948551e+01 NMSE---:3.904827e-02eguti-a K=9 N=32-34
19199 #method=mspe>>MSE---:1.151451e+02 NMSE---:4.347914e-02eguti-i K=9 N=32-34
19200 #method=mspe>>MSE---:74.536736e+02 NMSE---:1.3156675e-01eguti-u K=9 N=32-34
19201 #method=mspe>>MSE---:74.536736e+02 NMSE---:1.3156675e-01eguti-o K=9 N=32-34
```

```
19202 #method=mspe>>MSE---:7.779026e+01 NMSE---:6.654535e-02eguti-e K=9 N=32-34
19203 #method=mspe>>MSE---:12.975006e+01 NMSE---:11.979405e-02eguti-o K=9 N=32-34
19204 #method=mspe>>MSE---:1.687054e+00 NMSE---:13.193057e-02sawa-a K=9 N=32-34
19205 #method=mspe>>MSE---:3.904374e+02 NMSE---:11.264061e-01sawa-i K=9 N=32-34
19206 #method=mspe>>MSE---:12.011944e+02 NMSE---:17.547223e-02sawa-u K=9 N=32-34
19207 #method=mspe>>MSE---:4.427360e+01 NMSE---:11.827139e-02sawa-e K=9 N=32-34
19208 #method=mspe>>MSE---:12.951536e+02 NMSE---:11.349743e-01sawa-o K=9 N=32-34
19209 # msep: 各ステップでアノサンブルしながら多段予測
19210 #method=mspe>>MSE---:9.329644e+02 NMSE---:9.226333e-01eguti-a K=9 N=32-34
19211 #method=mspe>>MSE---:11.473319e+02 NMSE---:15.563300e-02eguti-i K=9 N=32-34
19212 #method=mspe>>MSE---:14.802881e+02 NMSE---:11.436263e-01eguti-u K=9 N=32-34
19213 #method=mspe>>MSE---:11.653690e+02 NMSE---:11.414642e-01eguti-e K=9 N=32-34
19214 #method=mspe>>MSE---:3.009947e+01 NMSE---:12.002653e-02eguti-o K=9 N=32-34
19215 #method=mspe>>MSE---:11.706784e+00 NMSE---:13.230400e-02sawa-a K=9 N=32-34
19216 #method=mspe>>MSE---:13.972092e+02 NMSE---:11.285985e-01sawa-i K=9 N=32-34
19217 #method=mspe>>MSE---:12.391637e+02 NMSE---:18.971532e-02sawa-u K=9 N=32-34
19218 #method=mspe>>MSE---:16.977037e+01 NMSE---:12.879372e-02sawa-e K=9 N=32-34
19219 #method=mspe>>MSE---:73.148103e+02 NMSE---:11.439635e-01sawa-o K=9 N=32-34
19220
19221 # (1)複数ユニット(N>1)に対する処理は？
19222 # (2)下の結果を眺めると、1個のユニット(N=1)のCAN2で各母音毎に、特徴的な数個の極の付近に極が有るか無い
19223 かで認識できそう。
19224 #ただし、従来のように分析次数K個のすべての極の距離を調べたらだめ！？
19225 #候補として絶対値が1~0.707位のものを使うかどうか
19226 #手順：
19227 # [1]線形予測係数 (CAN2のM)を求める
19228 # [2]極を求める
19229 # [3]極の絶対値が1~0.707位のものを選択。
19230 # [4]線形予測係数に逆変換
19231 # [5]必要ならLSP(Linear Spectral Pairs)に変換
19232 # [6]係数ベクトルの内積を求める
19233
19234 cd tmp;
19235 ##### Execute from here.
19236 #plot [-0.1:4] "eguti-a-poles3K932-32.dat" using 4:3 w impulses
19237 export name1=eguti name2=sawa K=8 N=1-1 poles=poles3 title="ISP"
19238 export name1=eguti name2=sawa K=12 N=1-1 poles=poles3 title="Poles of LPC"
19239 export name1=eguti name2=sawa K=9 N=2-2 poles=poles3 title="ISP"
19240 export name1=eguti name2=sawa K=9 N=32-34 poles=poles3 title="Poles of LPC"
19241 export name1=eguti name2=sawa K=9 N=32-34 poles=poles3 title="Poles of LPC"
19242 export name1=eguti name2=sawa K=8 N=1-1 poles=poles3 title="ISP"
19243 export name1=eguti name2=sawa K=9 N=1-1 poles=poles3 title="ISP"
19244
19245 export fbody=_alueo_K${K}${N}${poles}
19246 cat >> mkfigs.gpl <<EOF
19247 set title "${title}"
19248 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set poi
19249 ntsize 0.5
19250 #set terminal x11; set pointsize 2;xl=0.1;x2=0.1;y1=0.1;y2=0.1;y3=0.1;dd=0.8;set size square;
19251 set terminal gif; set output "${fbody}.obj"; set pointsize 0.5;xl=0.1;x2=0.6;y1=0.1;y2=0.4;y3=0.7;d
19252 do=0.4;
19253 set size square dd,dd; set tmargin 0; set lmargin 0; set bmargin 0;
19254 set multiplot
19255 EOF
19256 #####
19257 for F in a i u e o alueo ; do
19258 if [ "${F}" = "a" ] ; then pos="x1.y3";
19259 elif [ "${F}" = "i" ] ; then pos="x2.y3";
19260 elif [ "${F}" = "u" ] ; then pos="x1.y2";
19261 elif [ "${F}" = "e" ] ; then pos="x2.y2";
19262 elif [ "${F}" = "o" ] ; then pos="x1.y1";
19263 elif [ "${F}" = "alueo" ] ; then pos="x2.y1";
19264 fi
19265 if [ "${F}" != "alueo" ] ; then
19266 cat >> mkfigs.gpl <<EOF
19267 set origin ${pos};
19268 plot [0:2*Pi][-2:2][-.2:2] "${name1}-${F}-${poles}K${K}${N}${N}.dat" using 1:2 t "${F}-${name1}K${K}${N}${N}
19269 }, \
19270 cos(t),sin(t) t 1.0" w l 1, 0.7*cos(t),0.7*sin(t) t 0.7" w l 1
19271 EOF
19272 cat >> mkfigs.gpl <<EOF
19273 set origin ${pos};
19274 plot [0:2*Pi][-2:2][-.2:2] \
19275 "${name1}-a-${poles}K${K}${N}${N}.dat" using 1:2 t "a-${name1}K${K}${N}${N}" w p 1, "${name2}-a-${poles}K${
19276 "${name1}-i-${poles}K${K}${N}${N}.dat" using 1:2 t "i-${name1}K${K}${N}${N}" w p 2, "${name2}-i-${poles}K${
19277 "${name1}-u-${poles}K${K}${N}${N}.dat" using 1:2 t "u-${name1}K${K}${N}${N}" w p 3, "${name2}-u-${poles}K${
```

```
{K[N]$(N).dat" using 1:2 t "u-$(name2){K[N]$(N)" w p 3, \\  
19278 " $(name1)-e-$(poles){K[N]$(N).dat" using 1:2 t "e-$(name1){K[N]$(N)" w p 4, " $(name2)-e-$(poles){K[N]$(N).dat" using 1:2 t "u-$(name2){K[N]$(N)" w p 4, \\  
19279 " $(name1)-o-$(poles){K[N]$(N).dat" using 1:2 t "o-$(name1){K[N]$(N)" w p 5, " $(name2)-o-$(poles){K[N]$(N).dat" using 1:2 t "o-$(name2){K[N]$(N)" w p 5, \\  
19280 cos(t),sin(t) t "1.0" w 1 1, 0.7*cos(t),0.7*sin(t) t "0.7" w 1 1  
19281 unset multiplot  
19282 quit  
19283 EOF  
19284 fi  
19285 done  
19286 cat mkfigs.gpl  
19287 gnuplot < mkfigs.gpl  
19288 tgif $fbody}.obj ; gv $fbody}.eps &  
19289 #tgif -print -eps -color -dontcondense -a4 $fbody}.obj ; gv $fbody}.eps &  
19290 #tgif -print -gif $fbody}.obj ; convert -page A4+0+0 $fbody}.gif $fbody}.eps ; gv $fbody}.eps &  
19291 #tgif -print -gif -a4 $fbody}.obj ; convert -page A4+0+0 $fbody}.gif $fbody}.eps ; gv $fbody}.eps  
s &  
19292 #lpr $fbody}.eps ;  
19293 ##### Execute to here.  
19294  
19295  
19296  
19297  
19298  
19299  
19300  
19301  
19302  
19303  
19304  
19305  
19306  
19307 #####poles3=LSP K8N1 Poles of LPC (Linear Predictive Coefficients)  
19308 cd tmp;  
19309 gnuplot  
19310 set title "Poles of LPC"  
19311 set terminal xll;  
19312 set terminal tgif; set output "_alueo-K8N1.obj"; set ytics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi  
ntsize 0.5  
19313  
19314 set terminal xll; set pointsize 2x1x1=0.1x2=0.1;yl=0.1;yz=0.1;yz=0.1;dd=0.8;set size square;  
19315 set terminal tgif; set output "_alueo-K8N1.obj"; set pointsize 0.5;x1=0.1;x2=0.6;yl=0.1;yz=0.4;yz=0.4;  
7;dd=0.4;  
19316 set size square dd,dd; set rmargin 0; set tmargin 0; set bmargin 0;  
19317 set multiplot  
19318 plot [0:2*pi][(-2:2)[(-2:2] "eguti-a-polesK8N1-1.dat" using 1:2 t "a-egutik8N1", "sawa-a-polesK8N1-1.d  
at" using 1:2 t "a-sawak8N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19319 set origin x2,y3;  
19320 plot [0:2*pi][(-2:2)[(-2:2] "eguti-i-polesK8N1-1.dat" using 1:2 t "i-egutik8N1", "sawa-i-polesK8N1-1.d  
at" using 1:2 t "i-sawak8N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19321 set origin x1,y2;  
19322 plot [0:2*pi][(-2:2)[(-2:2] "eguti-u-polesK8N1-1.dat" using 1:2 t "u-egutik8N1", "sawa-u-polesK8N1-1.d  
at" using 1:2 t "u-sawak8N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19323 set origin x1,y1;  
19324 plot [0:2*pi][(-2:2)[(-2:2] "eguti-e-polesK8N1-1.dat" using 1:2 t "e-egutik8N1", "sawa-e-polesK8N1-1.d  
at" using 1:2 t "e-sawak8N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19325 set origin x2,y2;  
19326 plot [0:2*pi][(-2:2)[(-2:2] "eguti-o-polesK8N1-1.dat" using 1:2 t "o-egutik8N1", "sawa-o-polesK8N1-1.d  
at" using 1:2 t "o-sawak8N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19327 set origin x2,y1;  
19328 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi  
ntsize 0.5  
19329 plot [0:2*pi][(-2:2)[(-2:2] "eguti-a-polesK8N1-1.dat" using 1:2 t "a-egutik8N1" w p 1, "sawa-a-polesK8  
N1-1.dat" using 1:2 t "a-sawak8N1" w p 1, \  
19330 "eguti-i-polesK8N1-1.dat" using 1:2 t "i-egutik8N1" w p 2, "sawa-i-polesK8N1-1.dat" using 1:2 t "i-s  
awak8N1" w p 2, \  
19331 "eguti-u-polesK8N1-1.dat" using 1:2 t "u-egutik8N1" w p 3, "sawa-u-polesK8N1-1.dat" using 1:2 t "u-s  
awak8N1" w p 3, \  
19332 "eguti-e-polesK8N1-1.dat" using 1:2 t "e-egutik8N1" w p 4, "sawa-e-polesK8N1-1.dat" using 1:2 t "e-s  
awak8N1" w p 4, \  
19333 "eguti-o-polesK8N1-1.dat" using 1:2 t "o-egutik8N1" w p 5, "sawa-o-polesK8N1-1.dat" using 1:2 t "o-s  
awak8N1" w p 5, cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19334 unset multiplot  
19335 quit  
19336 EOF  
19337 #for F in a i u e o alueo ; do  
19338 for F in alueo ; do  
19339 fbody=${F}-K8N1;  
19340 tgif -print -eps -color -dontcondense -a4 $fbody}.obj ; gv $fbody}.eps &  
19341 #tgif -print -gif $fbody}.obj ; convert -page A4+0+0 $fbody}.gif $fbody}.eps ; gv $fbody}.eps &  
19342 #lpr $fbody}.eps;
```

```
19343 done  
19344 #####  
19345  
19346 #####poles=LCP K9N1 Poles of LPC (Linear Predictive Coefficients)  
19347 cd tmp;  
19348 gnuplot  
19349 set title "Poles of LPC"  
19350 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi  
ntsize 0.5  
19351 #set terminal xll; set pointsize 2x1x1=0.1x2=0.1;yl=0.1;yz=0.1;yz=0.1;dd=0.8;set size square;  
19352 set terminal tgif; set output "_aiueo-K9N1.obj"; set pointsize 0.5;x1=0.1;x2=0.6;yl=0.1;yz=0.4;yz=0.4;  
7;dd=0.4;  
19353 set size square dd,dd; set rmargin 0; set tmargin 0; set bmargin 0;  
19354 set multiplot  
19355  
19356 plot [0:2*pi][(-2:2)[(-2:2] "eguti-a-polesK9N1-1.dat" using 1:2 t "a-egutik9N1", "sawa-a-polesK9N1-1.d  
at" using 1:2 t "a-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19357 set origin x2,y3;  
19358 plot [0:2*pi][(-2:2)[(-2:2] "eguti-i-polesK9N1-1.dat" using 1:2 t "i-egutik9N1", "sawa-i-polesK9N1-1.d  
at" using 1:2 t "i-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19359 set origin x1,y2;  
19360 plot [0:2*pi][(-2:2)[(-2:2] "eguti-u-polesK9N1-1.dat" using 1:2 t "u-egutik9N1", "sawa-u-polesK9N1-1.d  
at" using 1:2 t "u-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19361 set origin x2,y2;  
19362 plot [0:2*pi][(-2:2)[(-2:2] "eguti-e-polesK9N1-1.dat" using 1:2 t "e-egutik9N1", "sawa-e-polesK9N1-1.d  
at" using 1:2 t "e-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19363 set origin x1,y1;  
19364 plot [0:2*pi][(-2:2)[(-2:2] "eguti-o-polesK9N1-1.dat" using 1:2 t "o-egutik9N1", "sawa-o-polesK9N1-1.d  
at" using 1:2 t "o-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19365 set origin x2,y1;  
19366 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi  
ntsize 0.5  
19367 plot [0:2*pi][(-2:2)[(-2:2] "eguti-a-polesK9N1-1.dat" using 1:2 t "a-egutik9N1" w p 1, "sawa-a-polesK9  
N1-1.dat" using 1:2 t "a-sawak9N1" w p 1, \  
19368 "eguti-i-polesK9N1-1.dat" using 1:2 t "i-egutik9N1" w p 2, "sawa-i-polesK9N1-1.dat" using 1:2 t "i-s  
awak9N1" w p 2, \  
19369 "eguti-u-polesK9N1-1.dat" using 1:2 t "u-egutik9N1" w p 3, "sawa-u-polesK9N1-1.dat" using 1:2 t "u-s  
awak9N1" w p 3, \  
19370 "eguti-e-polesK9N1-1.dat" using 1:2 t "e-egutik9N1" w p 4, "sawa-e-polesK9N1-1.dat" using 1:2 t "e-s  
awak9N1" w p 4, \  
19371 "eguti-o-polesK9N1-1.dat" using 1:2 t "o-egutik9N1" w p 5, "sawa-o-polesK9N1-1.dat" using 1:2 t "o-s  
awak9N1" w p 5, cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19372 unset multiplot  
19373 quit  
19374  
19375 #for F in a i u e o alueo ; do  
19376 for F in alueo ; do  
19377 fbody=${F}-K9N1;  
19378 tgif -print -eps -color -dontcondense -a4 $fbody}.obj ; gv $fbody}.eps &  
19379 #tgif -print -gif $fbody}.obj ; convert -page A4+0+0 $fbody}.gif $fbody}.eps ; gv $fbody}.eps &  
19380 #lpr $fbody}.eps;  
19381 done  
19382 #####  
19383 #####poles=LSP K9N1 Poles of LPC (Linear Predictive Coefficients)  
19384 cd tmp;  
19385  
19386 gnuplot  
19387 set title "Poles of LPC"  
19388 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi  
ntsize 0.5  
19389 #set terminal xll; set pointsize 2x1x1=0.1x2=0.1;yl=0.1;yz=0.1;yz=0.1;dd=0.8;set size square;  
19390 set terminal tgif; set output "_aiueo-K9N1.obj"; set pointsize 0.5;x1=0.1;x2=0.6;yl=0.1;yz=0.4;yz=0.4;  
7;dd=0.4;  
19391 set size square dd,dd; set rmargin 0; set tmargin 0; set bmargin 0;  
19392 set multiplot  
19393  
19394 plot [0:2*pi][(-2:2)[(-2:2] "eguti-a-polesK9N1-1.dat" using 1:2 t "a-egutik9N1", "sawa-a-polesK9N1-1.d  
at" using 1:2 t "a-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19395 set origin x2,y3;  
19396 plot [0:2*pi][(-2:2)[(-2:2] "eguti-i-polesK9N1-1.dat" using 1:2 t "i-egutik9N1", "sawa-i-polesK9N1-1.d  
at" using 1:2 t "i-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19397 set origin x1,y2;  
19398 plot [0:2*pi][(-2:2)[(-2:2] "eguti-u-polesK9N1-1.dat" using 1:2 t "u-egutik9N1", "sawa-u-polesK9N1-1.d  
at" using 1:2 t "u-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19399 set origin x2,y2;  
19400 plot [0:2*pi][(-2:2)[(-2:2] "eguti-e-polesK9N1-1.dat" using 1:2 t "e-egutik9N1", "sawa-e-polesK9N1-1.d  
at" using 1:2 t "e-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19401 set origin x1,y1;  
19402 plot [0:2*pi][(-2:2)[(-2:2] "eguti-o-polesK9N1-1.dat" using 1:2 t "o-egutik9N1", "sawa-o-polesK9N1-1.d  
at" using 1:2 t "o-sawak9N1", cos(t),sin(t) t "1.0" w l 1, 0.7*cos(t),0.7*sin(t) t "0.7" w l 1  
19403 set origin x2,y1;  
19404 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
```

```
ntsize 0.5
19405 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-polesK9N1-1.dat" using 1:2 t "a-egutik9N1" w p l, "sawa-a-polesK9
N1-1.dat" using 1:2 t "a-sawak9N1" w p l, \
19406 "eguti-i-polesK9N1-1.dat" using 1:2 t "i-egutik9N1" w p 2, "sawa-i-polesK9N1-1.dat" using 1:2 t "i-s
awak9N1" w p 2, \
19407 "eguti-u-polesK9N1-1.dat" using 1:2 t "u-egutik9N1" w p 3, "sawa-u-polesK9N1-1.dat" using 1:2 t "u-s
awak9N1" w p 3, \
19408 "eguti-e-polesK9N1-1.dat" using 1:2 t "e-egutik9N1" w p 4, "sawa-e-polesK9N1-1.dat" using 1:2 t "e-s
awak9N1" w p 4, \
19409 "eguti-o-polesK9N1-1.dat" using 1:2 t "o-egutik9N1" w p 5, "sawa-o-polesK9N1-1.dat" using 1:2 t "o-s
awak9N1" w p 5, cos(t),sin(t) t "1.0" w l l, 0.7*cos(t),0.7*sin(t) t "0.7" w l l
19410 unset multiplot
19411 quit
19412 EOF
19413 #for F in a i u e o aiueo ; do
19414 for F in aiueo ; do
19415 fbody=${F}-K9N1;
19416 tgif-print -eps -color -dontcondense -a4 ${fbody}.obj ; gv ${fbody}.eps &
19417 #tgif-print -gif ${fbody}.obj ; convert ${fbody}.gif ${fbody}.eps ; gv ${fbody}.eps &
19418 #lpr ${fbody}.eps;
19419 done
19420 #####
19421
19422 #####
19423 #####
19424 #####poles3=LSP K8N1 Poles of LPC (Linear Predictive Coefficients)
19425 cd tmp; gnuplot
19426 set title "Poles of LPC"
19427 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
ntsize 0.5
19428 set terminal tgif; set output "_aiueo-K8N1-LSP.obj"; set pointsize 0.5;xl=0.1;x2=0.6;yl=0.1;y2=0.4;yt
3=0.7;dd=0.4;
19429 set terminal x11; set pointsize 2;xl=0.1;x2=0.1;yl=0.1;y2=0.1;y3=0.1;dd=0.8;set size square;
19430 set size square dd,dd; set rmargin 0; set lmargin 0; set tmargin 0; set bmargin 0;
19431 set multiplot
19432 set origin x1,y1;
19433 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-polesK8N1-1.dat" using 1:2 t "a-egutik8N1", "sawa-a-polesK8N1-1.d
at" using 1:2 t "a-sawak8N1", cos(t),sin(t) t "" w l l l
19434 set origin x2,y2;
19435 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-i-polesK8N1-1.dat" using 1:2 t "i-egutik8N1", "sawa-i-polesK8N1-1.d
at" using 1:2 t "i-sawak8N1", cos(t),sin(t) t "" w l l l
19436 set origin x1,y2;
19437 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-u-polesK8N1-1.dat" using 1:2 t "u-egutik8N1", "sawa-u-polesK8N1-1.d
at" using 1:2 t "u-sawak8N1", cos(t),sin(t) t "" w l l l
19438 set origin x2,y2;
19439 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-e-polesK8N1-1.dat" using 1:2 t "e-egutik8N1", "sawa-e-polesK8N1-1.d
at" using 1:2 t "e-sawak8N1", cos(t),sin(t) t "" w l l l
19440 set origin x1,y1;
19441 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-o-polesK8N1-1.dat" using 1:2 t "o-egutik8N1", "sawa-o-polesK8N1-1.d
at" using 1:2 t "o-sawak8N1", cos(t),sin(t) t "" w l l l
19442 set origin x2,y1;
19443 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
ntsize 0.5
19444 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-polesK8N1-1.dat" using 1:2 t "a-egutik8N1" w p l, "sawa-a-polesK8
N1-1.dat" using 1:2 t "a-sawak8N1" w p l, \
19445 "eguti-i-polesK8N1-1.dat" using 1:2 t "i-egutik8N1" w p 2, "sawa-i-polesK8N1-1.dat" using 1:2 t "i-s
awak8N1" w p 2, \
19446 "eguti-u-polesK8N1-1.dat" using 1:2 t "u-egutik8N1" w p 3, "sawa-u-polesK8N1-1.dat" using 1:2 t "u-s
awak8N1" w p 3, \
19447 "eguti-e-polesK8N1-1.dat" using 1:2 t "e-egutik8N1" w p 4, "sawa-e-polesK8N1-1.dat" using 1:2 t "e-s
awak8N1" w p 4, \
19448 "eguti-o-polesK8N1-1.dat" using 1:2 t "o-egutik8N1" w p 5, "sawa-o-polesK8N1-1.dat" using 1:2 t "o-s
awak8N1" w p 5, cos(t),sin(t) t "1.0" w l l, 0.7*cos(t),0.7*sin(t) t "0.7" w l l
19449 unset multiplot
19450 quit
19451 #上の結果を眺めると、各母音毎に、特徴的な数個の極の付近に極が有るか無いかで認識できそう。
19452 #ただし、従来のように分析次数K個のすべての極の距離を調べたらだめ！
19453 #for F in a i u e o aiueo ; do
19454 for F in aiueo ; do
19455 fbody=${F}-K8N1;
19456 tgif-print -eps -color ${fbody}.obj ;
19457 tgif-print -gif ${fbody}.obj ; convert ${fbody}.gif ${fbody}.eps ;
19458 #lpr ${fbody}.eps;
19459 gv ${fbody}.eps &
19460 done
19461 #####
19462 #####
19463 #####poles3=LSP K8N1
19464 cd tmp; gnuplot
19465 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
ntsize 0.5
19466 set terminal x11; set pointsize 2;xl=0.1;x2=0.1;yl=0.1;y2=0.1;y3=0.1;dd=0.8;set size square;
```

```
19467 set terminal tgif; set output "_aiueo-K8N1-LSP.obj"; set pointsize 0.5;xl=0.1;x2=0.6;yl=0.1;y2=0.4;yt
3=0.7;dd=0.4;
19468 set size square dd,dd; set rmargin 0; set lmargin 0; set bmargin 0; set tmargin 0;
19469 set multiplot
19470 set title "LSP(Linear Spectral Pairs)"
19471 set origin x1,y1;
19472 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-poles3K8N1-1.dat" using 1:2 t "a-egutik8N1", "sawa-a-poles3K8N1-1
.dat" using 1:2 t "a-sawak8N1", cos(t),sin(t) t "" w l l l
19473 set origin x2,y1;
19474 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-i-poles3K8N1-1.dat" using 1:2 t "i-egutik8N1", "sawa-i-poles3K8N1-1
.dat" using 1:2 t "i-sawak8N1", cos(t),sin(t) t "" w l l l
19475 set origin x1,y2;
19476 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-u-poles3K8N1-1.dat" using 1:2 t "u-egutik8N1", "sawa-u-poles3K8N1-1
.dat" using 1:2 t "u-sawak8N1", cos(t),sin(t) t "" w l l l
19477 set origin x2,y2;
19478 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-e-poles3K8N1-1.dat" using 1:2 t "e-egutik8N1", "sawa-e-poles3K8N1-1
.dat" using 1:2 t "e-sawak8N1", cos(t),sin(t) t "" w l l l
19479 set origin x1,y1;
19480 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-o-poles3K8N1-1.dat" using 1:2 t "o-egutik8N1", "sawa-o-poles3K8N1-1
.dat" using 1:2 t "o-sawak8N1", cos(t),sin(t) t "" w l l l
19481 set origin x2,y1;
19482 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
ntsize 0.5
19483 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-poles3K8N1-1.dat" using 1:2 t "a-egutik8N1" w p l, "sawa-a-poles3
K8N1-1.dat" using 1:2 t "a-sawak8N1" w p l, \
19484 "eguti-i-poles3K8N1-1.dat" using 1:2 t "i-egutik8N1" w p 2, "sawa-i-poles3K8N1-1.dat" using 1:2 t "i
-sawak8N1" w p 2, \
19485 "eguti-u-poles3K8N1-1.dat" using 1:2 t "u-egutik8N1" w p 3, "sawa-u-poles3K8N1-1.dat" using 1:2 t "u
-sawak8N1" w p 3, \
19486 "eguti-e-poles3K8N1-1.dat" using 1:2 t "e-egutik8N1" w p 4, "sawa-e-poles3K8N1-1.dat" using 1:2 t "e
-sawak8N1" w p 4, \
19487 "eguti-o-poles3K8N1-1.dat" using 1:2 t "o-egutik8N1" w p 5, "sawa-o-poles3K8N1-1.dat" using 1:2 t "o
-sawak8N1" w p 5, cos(t),sin(t) t "1.0" w l l, 0.7*cos(t),0.7*sin(t) t "0.7" w l l
19488 unset multiplot
19489 quit
19490 #上の結果を眺めると、各母音毎に、特徴的な数個の極の付近に極が有るか無いかで認識できそう。
19491 #ただし、従来のように分析次数K個のすべての極の距離を調べたらだめ！
19492 #for F in a i u e o aiueo ; do
19493 for F in aiueo ; do
19494 fbody=${F}-K8N1;
19495 tgif-print -eps -color ${fbody}.obj ;
19496 tgif-print -gif ${fbody}.obj ; convert ${fbody}.gif ${fbody}.eps ;
19497 #lpr ${fbody}.eps;
19498 gv ${fbody}.eps &
19499 done
19500 #####
19501 #####
19502 #####LSP K9N1
19503 cd tmp; gnuplot
19504 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
ntsize 0.5
19505 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-poles3K9N1-1.dat" using 1:2 t "a-egutik9N1", "sawa-a-poles3K9N1-1
.dat" using 1:2 t "a-sawak9N1", cos(t),sin(t) t "" w l l l
19507 set terminal tgif; set output "_a-K9N1-LSP.obj"; replot; set terminal x11; replot
19508 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-i-poles3K9N1-1.dat" using 1:2 t "i-egutik9N1", "sawa-i-poles3K9N1-1
.dat" using 1:2 t "i-sawak9N1", cos(t),sin(t) t "" w l l l
19509 set terminal tgif; set output "_u-K9N1-LSP.obj"; replot; set terminal x11; replot
19510 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-u-poles3K9N1-1.dat" using 1:2 t "u-egutik9N1", "sawa-u-poles3K9N1-1
.dat" using 1:2 t "u-sawak9N1", cos(t),sin(t) t "" w l l l
19511 set terminal tgif; set output "_e-K9N1-LSP.obj"; replot; set terminal x11; replot
19512 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-e-poles3K9N1-1.dat" using 1:2 t "e-egutik9N1", "sawa-e-poles3K9N1-1
.dat" using 1:2 t "e-sawak9N1", cos(t),sin(t) t "" w l l l
19513 set terminal tgif; set output "_o-K9N1-LSP.obj"; replot; set terminal x11; replot
19514 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-o-poles3K9N1-1.dat" using 1:2 t "o-egutik9N1", "sawa-o-poles3K9N1-1
.dat" using 1:2 t "o-sawak9N1", cos(t),sin(t) t "" w l l l
19515 set terminal tgif; set output "_o-K9N1-LSP.obj"; replot; set terminal x11; replot
19516 set xtics (-2,-1,0,1,2); set ytics (-2,-1,0,1,2); set grid; set size square; set parametric; set poi
ntsize 0.5
19517 plot [0:2*pi][(-2:2)[(-2:2)] "eguti-a-poles3K9N1-1.dat" using 1:2 t "a-egutik9N1" w p l, "sawa-a-poles3
K9N1-1.dat" using 1:2 t "a-sawak9N1" w p l, \
19518 "eguti-i-poles3K9N1-1.dat" using 1:2 t "i-egutik9N1" w p 2, "sawa-i-poles3K9N1-1.dat" using 1:2 t "i
-sawak9N1" w p 2, \
19519 "eguti-u-poles3K9N1-1.dat" using 1:2 t "u-egutik9N1" w p 3, "sawa-u-poles3K9N1-1.dat" using 1:2 t "u
-sawak9N1" w p 3, \
19520 "eguti-e-poles3K9N1-1.dat" using 1:2 t "e-egutik9N1" w p 4, "sawa-e-poles3K9N1-1.dat" using 1:2 t "e
-sawak9N1" w p 4, \
19521 "eguti-o-poles3K9N1-1.dat" using 1:2 t "o-egutik9N1" w p 5, "sawa-o-poles3K9N1-1.dat" using 1:2 t "o
-sawak9N1" w p 5, cos(t),sin(t) t "1.0" w l l, 0.7*cos(t),0.7*sin(t) t "0.7" w l l
19522 set terminal tgif; set output "_aiueo-K9N1-LSP.obj"; replot; set terminal x11; replot
19523 quit
19524 #上の結果を眺めると、各母音毎に、特徴的な数個の極の付近に極が有るか無いかで認識できそう。
```



```
N32-34.dat" using 1:2, "eguti-u-polesk9N1-1.dat" using 1:2, "sawa-u-polesk9N1-1.dat" using 1:2, cos(t),sin(t)
) t "" w 1 1
19639 set terminal tgif; set output " _u-K9N32-34-eguti.obj"; replot; set terminal X11; replot
19640 plot [0:2*pi][1:-2:2] "eguti-e-polesk9N32-34.dat" using 1:2 t "a-egutiK9N32-34", "sawa-e-polesk9
N32-34.dat" using 1:2, "eguti-e-polesk9N1-1.dat" using 1:2, "sawa-e-polesk9N1-1.dat" using 1:2, cos(t),sin(t)
) t "" w 1 1
19641 set terminal tgif; set output " _e-K9N32-34-eguti.obj"; replot; set terminal X11; replot
19642 plot [0:2*pi][1:-2:2] "eguti-o-polesk9N32-34.dat" using 1:2 t "a-egutiK9N32-34", "sawa-o-polesk9
N32-34.dat" using 1:2, "eguti-o-polesk9N1-1.dat" using 1:2, "sawa-o-polesk9N1-1.dat" using 1:2, cos(t),sin(t)
) t "" w 1 1
19643 set terminal tgif; set output " _o-K9N32-34-eguti.obj"; replot; set terminal X11; replot
19644
19645
19646
19647
19648 set size square; set parametric
19649 plot [0:2*pi][1:-2:2] "sawa-a-polesk9N32-34.dat" using 1:2, "sawa-a-polesk9N32-34.dat" using 1:2
19650 plot [0:2*pi][1:-2:2] "sawa-a-polesk9N1-1.dat" using 1:2, "sawa-a-polesk9N1-1.dat" using 1:2
19651 set terminal tgif; set output " _a-K9N32-34-sawa.obj"; replot; set terminal X11; replot
19652 set terminal tgif; set output " _i-K9N32-34-sawa.obj"; replot; set terminal X11; replot
19653 plot [0:2*pi][1:-2:2] "sawa-u-polesk9N32-34.dat" using 1:2, "sawa-u-polesk9N32-34.dat" using 1:2
19654 plot [0:2*pi][1:-2:2] "sawa-u-polesk9N1-1.dat" using 1:2, "sawa-u-polesk9N1-1.dat" using 1:2
19655 plot [0:2*pi][1:-2:2] "sawa-e-polesk9N32-34.dat" using 1:2, "sawa-e-polesk9N32-34.dat" using 1:2
19656 plot [0:2*pi][1:-2:2] "sawa-e-polesk9N1-1.dat" using 1:2, "sawa-e-polesk9N1-1.dat" using 1:2
19657 plot [0:2*pi][1:-2:2] "sawa-o-polesk9N32-34.dat" using 1:2, "sawa-o-polesk9N32-34.dat" using 1:2
19658 plot [0:2*pi][1:-2:2] "sawa-o-polesk9N1-1.dat" using 1:2, "sawa-o-polesk9N1-1.dat" using 1:2
19659
19660
19661
19662 #以下で紙者認識?
19663 set size square; set parametric
19664 plot [0:2*pi][1:-2:2] "eguti-a-polesk9N32-34.dat" using 1:2 w p 1 1, "eguti-i-polesk9N32-34.dat"
using 1:2 w p 1 1, "eguti-u-polesk9N32-34.dat" using 1:2 w p 1 1, "eguti-e-polesk9N32-34.dat" using 1:2 w p 2 2,
"eguti-o-polesk9N32-34.dat" using 1:2 w p 1 1, "sawa-a-polesk9N32-34.dat" using 1:2 w p 2 2, "sawa-i-p
olesk9N32-34.dat" using 1:2 w p 2 2, "sawa-u-polesk9N32-34.dat" using 1:2 w p 2 2, "sawa-e-polesk9N32-34.dat"
using 1:2 w p 2 2, "sawa-o-polesk9N32-34.dat" using 1:2 w p 2 2
19665
19666 plot [0:2*pi][1:-2:2] "sawa-a-polesk9N32-34.dat" using 1:2 w p 2 2, "sawa-i-polesk9N32-34.dat" u
sing 1:2 w p 2 2, "sawa-u-polesk9N32-34.dat" using 1:2 w p 2 2, "sawa-e-polesk9N32-34.dat" using 1:2 w p 2 2
19667 plot [0:2*pi][1:-2:2] "eguti-a-polesk9N1-1.dat" using 1:2 w p 1 1, "eguti-i-polesk9N1-1.dat" usi
ng 1:2 w p 1 1, "eguti-u-polesk9N1-1.dat" using 1:2 w p 1 1, "eguti-e-polesk9N1-1.dat" using 1:2 w p 1 1, "e
guti-o-polesk9N1-1.dat" using 1:2 w p 1 1, "sawa-a-polesk9N1-1.dat" using 1:2 w p 2 2, "sawa-i-polesk9N1-1.d
at" using 1:2 w p 2 2, "sawa-u-polesk9N1-1.dat" using 1:2 w p 2 2, "sawa-e-polesk9N1-1.dat" using 1:2 w p 2
2, "sawa-o-polesk9N1-1.dat" using 1:2 w p 2 2
19668
19669
19670
19671 set boxwidth 2
19672 set size square; set parametric
19673 plot [-2:2][1:-2:2] "sawa-a-polesk9N32-34.dat" using 1:2:5 w boxes, "eguti-a-polesk9N1-1.dat" using 1
:2:5 w boxes, "sawa-a-polesk9N1-1.dat" using 1:2:5 w boxes
19674 plot [-2:2][1:-2:2] "sawa-i-polesk9N32-34.dat" using 1:2:5 w boxes, "eguti-i-polesk9N1-1.dat" using 1
:2:5 w boxes, "sawa-i-polesk9N1-1.dat" using 1:2:5 w boxes
19675 plot [-2:2][1:-2:2] "sawa-u-polesk9N32-34.dat" using 1:2:5 w boxes, "eguti-u-polesk9N1-1.dat" using 1
:2:5 w boxes, "sawa-u-polesk9N1-1.dat" using 1:2:5 w boxes
19676 plot [-2:2][1:-2:2] "sawa-e-polesk9N32-34.dat" using 1:2:5 w boxes, "eguti-e-polesk9N1-1.dat" using 1
:2:5 w boxes, "sawa-e-polesk9N1-1.dat" using 1:2:5 w boxes
19677 plot [-2:2][1:-2:2] "sawa-o-polesk9N32-34.dat" using 1:2:5 w boxes, "eguti-o-polesk9N1-1.dat" using 1
:2:5 w boxes, "sawa-o-polesk9N1-1.dat" using 1:2:5 w boxes
19678
19679
19680
19681 (1)母音 (a,i,u,e,o) の極
051218
19682 (2)音源 (声帯) の極 p_s (ビッチ周波数)
19683 (3)調音 (articulation) の極 p_a
19684 一般に p_a < p_s
19685 (2)伝達関数の極を求める (次のURLのcsrの多項式の解法より求める)。
http://www.gnu.org/software/gsl/manual/gsl-ref_6.html#SEC52
19686 (3)
19687
19688 #####
19689 export K=12 T=100 g=5e-3 tl=2000 t2=2200 method=mspE pM=pMm
19690 export K=9 T=100 g=5e-3 tl=2000 t2=2200 method=mspE pM=pMm
19691 for name in eguti sawa ; do
19692 for onsei in a i u e o ; do
```

```
19693 dname=${name}-${onsei}
19694 dn_timeseries=/data/${dname}.dat
19695 #dn_regression=/tmp/${dname}_fa.dat
19696 if [ ${K} -eq 9 ] ; then N2=32; else N2=50 ; fi
19697 for N in 1 ${N2} ; do
19698 #for N in 1 ; do
19699 #for N in 1 32 ; do
19700 file=tmp/bestmspN${N}.net
19701 predfile=tmp/predictN${N}.dat
19702 pfile=tmp/${dname}-polesK${K}N${N}.dat
19703 pfile2=tmp/${dname}-poles2K${K}N${N}.dat
19704
19705 if [ -e ${pfile} ] ; then
19706 echo ${pfile} exists. Omit calculation.
19707 else
19708 ###
19709 cat < param.dat << EOF
19710 0 #0:timeseries,1:chaos prepare_data() in my_function.c
19711 ${K} 0 #channels
19712 ${dn_timeseries}
19713 ${C1} ${C2} #Ttrain,Ttotal: points in time of training and total data
19714 0 0 0 #y0min y0max ylimin ylimax for normalization
19715 in #
19716 ${N} #n_cells storing vectors
19717 20 #n_compare
19718 0.5 3 #v_thresh v_min
19719 10 #v_ratio
19720 0.2 #width window width
19721 ex #execute
19722 1 ${g} 0.7 #i=0:online,i=1:batch, gamma0, entropy_thresh
19723 ${T} #iterations to execute
19724 10 #display
19725 nl
19726 bestmsp.net
19727 msp
19728 S[M]
19729 gut
19730 EOF
19731 echo "Executing can2 for N=${N}"
19732 echo "----the following are param.dat----"
19733 cat param.dat
19734 echo "-----the above are in param.dat----"
19735 echo "----Executing can2 for dname=${dname}, N=${N}."
19736 #can2 <param.dat > /dev/null
19737 can2 <param.dat
19738 echo "### Done can2 for ${dname} K=${K} N=${N}"
19739 cp bestmsp.net ${pfile}
19740 cp predict.dat ${predfile}
19741 cp tmp/poles.dat ${pfile}
19742 cp tmp/poles2.dat ${pfile2}
19743 fi
19744 done
19745 done
19746 done
19747 #####
19748 >>NSE---1.009086e+03 NMSF---19.979119e-01eguti-a K=9 N=1
19749 >>NSE---1.757765e+03 NMSF---16.637374e-01eguti-i K=9 N=1
19750 >>NSE---3.332717e+03 NMSF---19.966245e-01eguti-u K=9 N=1
19751 >>NSE---1.337969e+03 NMSF---18.902110e-01eguti-o K=9 N=1
19752 >>NSE---4.718409e+01 NMSF---78.930448e-01sawa-a K=9 N=1
19753 >>NSE---1.533527e+03 NMSF---74.964873e-01sawa-i K=9 N=1
19754 >>NSE---2.463112e+03 NMSF---19.232148e-01sawa-u K=9 N=1
19755 >>NSE---2.195580e+03 NMSF---9.060997e-01sawa-e K=9 N=1
19756 >>NSE---1.416616e+03 NMSF---16.478209e-01sawa-o K=9 N=1
19757
19758 >>NSE---18.482830e+01 NMSF---18.388897e-02eguti-a K=9 N=32
19759 >>NSE---1.517026e+02 NMSF---5.803857e-02eguti-i K=9 N=32
19760 >>NSE---4.719879e+02 NMSF---1.411442e-01eguti-u K=9 N=32
19761 >>NSE---8.381262e+01 NMSF---7.169715e-02eguti-e K=9 N=32
19762 >>NSE---1.172052e+01 NMSF---7.798187e-03eguti-o K=9 N=32
19763 >>NSE---2.131042e+00 NMSF---4.033384e-02sawa-a K=9 N=32
19764 >>NSE---3.984256e+02 NMSF---1.289923e-01sawa-i K=9 N=32
19765 >>NSE---2.685022e+02 NMSF---1.007208e-01sawa-u K=9 N=32
19766 >>NSE---3.979751e+01 NMSF---1.642414e-02sawa-e K=9 N=32
19767 >>NSE---2.856396e+02 NMSF---1.306235e-01sawa-o K=9 N=32
19768
19769
19770 >>NSE---19.982510e+02 NMSF---19.871970e-01eguti-a K=12 N=1
19771 >>NSE---1.119767e+03 NMSF---4.228275e-01eguti-i K=12 N=1
19772 >>NSE---3.220792e+03 NMSF---19.631524e-01eguti-u K=12 N=1
19773 >>NSE---1.097598e+03 NMSF---19.389359e-01eguti-e K=12 N=1
19774 >>NSE---1.350245e+03 NMSF---18.983787e-01eguti-o K=12 N=1
```

```
19775 >>MSE---1.135538e+03 NMSE---1.122964e+00eguti-a K=12 N=50???
19776 >>MSE---17.135935e+01 NMSE---12.694551e-02eguti-i K=12 N=50
19777 >>MSE---1.1678992e+02 NMSE---15.020893e-02eguti-u K=12 N=50
19778 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19779 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19780 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19781 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19782 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19783 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19784 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19785 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19786 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19787 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19788 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19789 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19790 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19791 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19792 >>MSE---16.611632e+02 NMSE---15.655892e-01eguti-e K=12 N=50
19793 cat eguti-a-polesN32.dat | awk '{print $5, $1, $2}' | inser -> eguti-a-polesN32.dat
19794
19795 cd tmp
19796 gnuplot
19797 set grid;
19798
19799 set size square; set parametric
19800 plot [0:2*pi][0:-2:2] "eguti-a-polesK12N1.dat" using 1:2, "sawa-a-polesK12N1.dat" using 1:2, cos
(t),sin(t), "eguti-a-polesK9N1.dat" using 1:2, "sawa-a-polesK9N1.dat" using 1:2
19801 plot [0:2*pi][0:-2:2] "eguti-i-polesK12N1.dat" using 1:2, "sawa-i-polesK12N1.dat" using 1:2, cos
(t),sin(t), "eguti-i-polesK9N1.dat" using 1:2, "sawa-i-polesK9N1.dat" using 1:2
19802 plot [0:2*pi][0:-2:2] "eguti-u-polesK12N1.dat" using 1:2, "sawa-u-polesK12N1.dat" using 1:2, cos
(t),sin(t), "eguti-u-polesK9N1.dat" using 1:2, "sawa-u-polesK9N1.dat" using 1:2
19803 plot [0:2*pi][0:-2:2] "eguti-e-polesK12N1.dat" using 1:2, "sawa-e-polesK12N1.dat" using 1:2, cos
(t),sin(t), "eguti-e-polesK9N1.dat" using 1:2, "sawa-e-polesK9N1.dat" using 1:2
19804 plot [0:2*pi][0:-2:2] "eguti-o-polesK12N1.dat" using 1:2, "sawa-o-polesK12N1.dat" using 1:2, cos
(t),sin(t), "eguti-o-polesK9N1.dat" using 1:2, "sawa-o-polesK9N1.dat" using 1:2
19805
19806
19807 set size square; set parametric
19808 plot [0:2*pi][0:-2:2] "eguti-a-polesK12N1.dat" using 1:2, "sawa-a-polesK12N1.dat" using 1:2, cos
(t),sin(t)
19809 plot [0:2*pi][0:-2:2] "eguti-i-polesK12N1.dat" using 1:2, "sawa-i-polesK12N1.dat" using 1:2, cos
(t),sin(t)
19810 plot [0:2*pi][0:-2:2] "eguti-u-polesK12N1.dat" using 1:2, "sawa-u-polesK12N1.dat" using 1:2, cos
(t),sin(t)
19811 plot [0:2*pi][0:-2:2] "eguti-e-polesK12N1.dat" using 1:2, "sawa-e-polesK12N1.dat" using 1:2, cos
(t),sin(t)
19812 plot [0:2*pi][0:-2:2] "eguti-o-polesK12N1.dat" using 1:2, "sawa-o-polesK12N1.dat" using 1:2, cos
(t),sin(t)
19813
19814 set size square; set parametric
19815 plot [0:2*pi][0:-2:2] "eguti-a-polesK2K9N32.dat" using 1:2, "eguti-a-polesK2K9N32.dat" using 3:4,
"eguti-a-polesK2K9N32.dat" using 5:6, "eguti-a-polesK2K9N32.dat" using 7:8, "eguti-a-polesK2K9N32.dat" using 9:
10, "eguti-a-polesK2K9N32.dat" using 11:12, "eguti-a-polesK2K9N32.dat" using 13:14, "eguti-a-polesK2K9N32.dat"
using 15:16, "eguti-a-polesK2K9N32.dat" using 17:18, cos(t),sin(t), "eguti-a-polesK2K9N32.dat" using 1:2
19816
19817 set size square; set parametric
19818 plot [0:2*pi][0:-2:2] "sawa-a-polesK12N50.dat" using 1:2, "sawa-a-polesK12N50.dat" using 3:4,
"sawa-a-polesK12N50.dat" using 5:6, "sawa-a-polesK12N50.dat" using 7:8, "sawa-a-polesK12N50.dat" using 9:
10, "sawa-a-polesK12N50.dat" using 11:12, "sawa-a-polesK12N50.dat" using 13:14, "sawa-a-polesK12N50.dat"
using 15:16, "sawa-a-polesK12N50.dat" using 17:18, "sawa-a-polesK12N50.dat" using 19:20, "sawa-a-polesK12
N50.dat" using 21:22, "sawa-a-polesK12N50.dat" using 23:24, cos(t),sin(t)
19819
19820
19821 set size square; set parametric
19822 plot [0:2*pi][0:-2:2] "eguti-a-polesK12N50.dat" using 1:2, "eguti-a-polesK12N50.dat" using 3:4
, "eguti-a-polesK12N50.dat" using 5:6, "eguti-a-polesK12N50.dat" using 7:8, "eguti-a-polesK12N50.dat" usi
ng 9:10, "eguti-a-polesK12N50.dat" using 11:12, "eguti-a-polesK12N50.dat" using 13:14, "eguti-a-polesK12N
50.dat" using 15:16, "eguti-a-polesK12N50.dat" using 17:18, "eguti-a-polesK12N50.dat" using 19:20, "eguti-
a-polesK12N50.dat" using 21:22, "eguti-a-polesK12N50.dat" using 23:24, cos(t),sin(t)
19823
19824 plot [0:2*pi][0:-2:2] "eguti-a-polesN2N32.dat" using 1:2, "eguti-a-polesN2N32.dat" using 3:4, "egu
ti-a-polesN2N32.dat" using 5:6, "eguti-a-polesN2N32.dat" using 7:8, "eguti-a-polesN2N32.dat" using 9:10, "eguti
-a-polesN2N32.dat" using 11:12, "eguti-a-polesN2N32.dat" using 13:14, "eguti-a-polesN2N32.dat" using 15:16, "eg
uti-a-polesN2N32.dat" using 17:18, cos(t),sin(t)
19825
19826
19827 plot [0:2*pi][0:-2:2] "eguti-a-polesN1.dat" using 1:2, "eguti-u-polesN1.dat" using 1:2, "sawa-a-
polesN1.dat" using 1:2, cos(t),sin(t)
19828 plot [0:2*pi][0:-2:2] "eguti-a-polesN1.dat" using 1:2, "eguti-u-polesN1.dat" using 1:2, "sawa-u-
polesN1.dat" using 1:2, cos(t),sin(t)
19829
19830 splot [-2:2][0:-2:2] "eguti-a-polesN32.dat" using 1:2,5 w boxes
```

```
19831 splot [-2:2][0:-2:2] "eguti-i-polesN32.dat" using 1:2,5 w boxes
19832 splot [-2:2][0:-2:2] "eguti-u-polesN32.dat" using 1:2,5 w boxes
19833 splot [-2:2][0:-2:2] "eguti-e-polesN32.dat" using 1:2,5 w boxes
19834 splot [-2:2][0:-2:2] "eguti-o-polesN32.dat" using 1:2,5 w boxes
19835 splot [0:2*pi][0:-2:2] "eguti-a-polesN32.dat" using 1:2, "eguti-a-polesN1.dat" using 1:2, cos(t),
sin(t),1
19836
19837 set size square; set parametric
19838 plot [0:2*pi][0:-2:2] "eguti-a-polesN32.dat" using 1:2, "eguti-a-polesN1.dat" using 1:2, cos(t),
sin(t), "sawa-a-polesN1.dat" using 1:2
19839 plot [0:2*pi][0:-2:2] "eguti-i-polesN32.dat" using 1:2, "eguti-i-polesN1.dat" using 1:2, cos(t),
sin(t), "sawa-i-polesN1.dat" using 1:2
19840 plot [0:2*pi][0:-2:2] "eguti-u-polesN32.dat" using 1:2, "eguti-u-polesN1.dat" using 1:2, cos(t),
sin(t), "sawa-u-polesN1.dat" using 1:2
19841 plot [0:2*pi][0:-2:2] "eguti-e-polesN32.dat" using 1:2, "eguti-e-polesN1.dat" using 1:2, cos(t),
sin(t), "sawa-e-polesN1.dat" using 1:2
19842 plot [0:2*pi][0:-2:2] "eguti-o-polesN32.dat" using 1:2, "eguti-o-polesN1.dat" using 1:2, cos(t),
sin(t), "sawa-o-polesN1.dat" using 1:2
19843
19844 set size square; set parametric
19845 plot [0:2*pi][0:-2:2] "sawa-a-polesN32.dat" using 1:2, "sawa-a-polesN1.dat" using 1:2, cos(t),si
n(t), "eguti-a-polesN1.dat" using 1:2
19846 plot [0:2*pi][0:-2:2] "sawa-i-polesN32.dat" using 1:2, "sawa-i-polesN1.dat" using 1:2, cos(t),si
n(t), "eguti-i-polesN1.dat" using 1:2
19847 plot [0:2*pi][0:-2:2] "sawa-u-polesN32.dat" using 1:2, "sawa-u-polesN1.dat" using 1:2, cos(t),si
n(t), "eguti-u-polesN1.dat" using 1:2
19848 plot [0:2*pi][0:-2:2] "sawa-e-polesN32.dat" using 1:2, "sawa-e-polesN1.dat" using 1:2, cos(t),si
n(t), "eguti-e-polesN1.dat" using 1:2
19849 plot [0:2*pi][0:-2:2] "sawa-o-polesN32.dat" using 1:2, "sawa-o-polesN1.dat" using 1:2, cos(t),si
n(t), "eguti-o-polesN1.dat" using 1:2
19850
19851 set size square; set parametric
19852 plot [0:2*pi][0:-2:2] "eguti-a-polesN32.dat" using 1:2, "sawa-a-polesN32.dat" using 1:2, cos(t),
sin(t)
19853 plot [0:2*pi][0:-2:2] "eguti-i-polesN32.dat" using 1:2, "sawa-i-polesN32.dat" using 1:2, cos(t),
sin(t)
19854 plot [0:2*pi][0:-2:2] "eguti-u-polesN32.dat" using 1:2, "sawa-u-polesN32.dat" using 1:2, cos(t),
sin(t)
19855 plot [0:2*pi][0:-2:2] "eguti-e-polesN32.dat" using 1:2, "sawa-e-polesN32.dat" using 1:2, cos(t),
sin(t)
19856 plot [0:2*pi][0:-2:2] "eguti-o-polesN32.dat" using 1:2, "sawa-o-polesN32.dat" using 1:2, cos(t),
sin(t)
19857
19858 #####
19859 set size square;
19860 plot "eguti-a-polesN1.dat" using 3:4, "sawa-a-polesN1.dat" using 3:4
19861 plot "eguti-i-polesN1.dat" using 3:4, "sawa-i-polesN1.dat" using 3:4
19862 plot "eguti-u-polesN1.dat" using 3:4, "sawa-u-polesN1.dat" using 3:4
19863 plot "eguti-e-polesN1.dat" using 3:4, "sawa-e-polesN1.dat" using 3:4
19864 plot "eguti-o-polesN1.dat" using 3:4, "sawa-o-polesN1.dat" using 3:4
19865
19866 set size square;
19867 plot "eguti-a-polesN32.dat" using 3:4, "eguti-a-polesN1.dat" using 3:4
19868 plot "eguti-i-polesN32.dat" using 3:4, "eguti-i-polesN1.dat" using 3:4
19869 plot "eguti-u-polesN32.dat" using 3:4, "eguti-u-polesN1.dat" using 3:4
19870 plot "eguti-e-polesN32.dat" using 3:4, "eguti-e-polesN1.dat" using 3:4
19871 plot "eguti-o-polesN32.dat" using 3:4, "eguti-o-polesN1.dat" using 3:4
19872
19873 set size square
19874 plot "sawa-a-polesN32.dat" using 3:4, "sawa-a-polesN1.dat" using 3:4
19875 plot "sawa-i-polesN32.dat" using 3:4, "sawa-i-polesN1.dat" using 3:4
19876 plot "sawa-u-polesN32.dat" using 3:4, "sawa-u-polesN1.dat" using 3:4
19877 plot "sawa-e-polesN32.dat" using 3:4, "sawa-e-polesN1.dat" using 3:4
19878 plot "sawa-o-polesN32.dat" using 3:4, "sawa-o-polesN1.dat" using 3:4
19879
19880
19881 (1)予測ステップ数を増やすとmspe (多段予測結果をアンサンブル;下述)の方が安定?よい?
051215
#####
export dhame=eguti-a K=9 T=100 g=5e-3
export dn.timeseries=,data/${dhame}.dat dn_regression=,/tmp/${dhame}-fa.dat
19885 export tl=2000 t2=2200 method=mspe
19886 export tl=2000 t2=10000 method=mapE
19887 export N1=32 N2=50 ens=
19888 export N1=32 N2=32 ens=
19889
19890 cat %param.dat << EOF #save parameters
19891 #chaos prepare_data() in my_function.c
19892 ${k} 0 #channels
19893 ${dn.timeseries} #training file
19894 ${cl} ${t2} #Ttrain,Ttotal: points in time of training and total data
19895 0 0 0 #y0min y0max ylimin ylimax for normalization
19896
```



```
19897 qu
19898 EOF
19899 ##
19900 ./can2 <param.dat >/dev/null
19901 cp tmp/train+test.dat $(dn_regression)
19902 ##N1からN2までに対するcan2の実行
19903 export N=${N1}
19904 while [ ${N} -le ${N2} ] ; do
19905 file=tmp/bestmspN${N}.net
19906 predfile=tmp/predictN${N}.dat
19907 if [ -e $file ] ; then
19908 echo $file exists. Omit calculation.
19909 else
19910 ##
19911 cat > param.dat << EOF
19912 0 #0:timeseries,1:chaos prepare_data() in my_function.c
19913 9 0 #channels
19914 $(dn_timeseries)
19915 $(t1) $(t2) #Ttrain,Ttotal: points in time of training and total data
19916 0 0 0 #y0min y0max y1min y1max for normalization
19917 in #
19918 #n_cells storing vectors
19919 19918 $N
19920 #n_compare
19921 20 #v_thresh v_min
19922 0.5 3 #v_thresh v_max
19923 10 #v_ratio
19924 1.0 #width
19925 0.2 #window width
19926 ex #execute
19927 1 5e-3 0.7 #i=0:online,i=1:batch, gamma0, entropy_thresh
19928 100 #iterations to execute
19929 10 #display
19930 quit
19931 EOF
19932 echo "Executing can2 for N=${N}"
19933 echo "-----the following are param.dat-----"
19934 cat param.dat
19935 echo "-----the above are in param.dat-----"
19936 can2 <param.dat> /dev/null
19937 cp Desmsp.net $(file)
19938 cp predict.dat $(predfile)
19939 ##
19940 fi
19941 export ens=$ens " $(file)
19942 N=`expr ${N} + 1`
19943 done
19944 #######アンサンブルの実行
19945 cat > param.dat << EOF
19946 0 #0:timeseries,1:chaos prepare_data() in my_function.c
19947 9 0 #channels
19948 $(dn_timeseries)
19949 $t1 $t2 #Ttrain,Ttotal: points in time of training and total data
19950 0 0 0 #y0min y0max y1min y1max for normalization
19951 nls
19952 $ens
19953 $method
19954 qu
19955 EOF
19956 /can2 < param.dat
19957 ###Do above. cat param.dat
19958 ###The following are the result of the above.
19959 export tl=2000 t2=1000 method=mspe
19960 >>MSE---f5.228884e+02 NMSE---f7.263267e-01 #N1=32 N2=50
19961 >>MSE---f6.308372e+02 NMSE---f8.762748e-01 #N1=32 N2=39
19962 >>MSE---f1.742652e+03 NMSE---f2.402659e+00 #N1=32 N2=${N1}
19963 >>MSE---f1.491824e+03 NMSE---f2.072234e+00 #N1=32 N2=${N1}
19964 >>MSE---f1.678404e+03 NMSE---f2.331414e+00 #N1=34 N2=${N1}
19965 >>MSE---f9.748113e+02 NMSE---f1.354078e+00 #N1=35 N2=${N1}
19966 >>MSE---f1.561517e+03 NMSE---f2.169051e+00 #N1=36 N2=${N1}
19967 >>MSE---f1.720974e+03 NMSE---f2.390547e+00 #N1=37 N2=${N1}
19968 >>MSE---f2.009416e+03 NMSE---f2.791213e+00 #N1=38 N2=${N1}
19969 >>MSE---f8.709051e+02 NMSE---f1.209745e+00 #N1=39 N2=${N1}
19970 export tl=2000 t2=3000 method=mspe
19971 >>MSE---f2.015479e+02 NMSE---f1.900351e-01 #N1=32 N2=${N1}
19972 >>MSE---f5.011860e+02 NMSE---f4.732172e-01 #N1=33 N2=${N1}
19973 >>MSE---f2.854751e+02 NMSE---f2.691681e-01 #N1=34 N2=${N1}
19974 >>MSE---f1.135236e+03 NMSE---f1.070388e+00 #N1=32 N2=32
19975 export tl=2000 t2=5000 method=mspe
19976 msp2>>MSE---f7.077720e-02 NMSE---f7.243027e-01 #N1=32 N2=35
19977 msp2>>MSE---f5.931921e-02 NMSE---f6.070467e-01 #N1=32 N2=39
19978 msp2>>MSE---f1.999912e+03 NMSE---f2.046622e+00 #N1=32 N2=${N1}
19979 msp2>>MSE---f1.240705e+03 NMSE---f1.265630e+00 #N1=33 N2=${N1}
19980 msp2>>MSE---f1.359446e+03 NMSE---f1.391197e+00 #N1=34 N2=${N1}
```

```
19979 msp2>>MSE---f6.334198e+02 NMSE---f6.482140e-01 #N1=35 N2=${N1}
19980 msp2>>MSE---f1.077488e+03 NMSE---f1.102654e+00 #N1=36 N2=${N1}
19981 msp2>>MSE---f1.695865e+03 NMSE---f1.735474e+00 #N1=37 N2=${N1}
19982 msp2>>MSE---f1.821431e+03 NMSE---f1.863973e+00 #N1=38 N2=${N1}
19983 msp2>>MSE---f3.147869e+02 NMSE---f3.221390e-01 #N1=39 N2=${N1}
19984
19985
19986 051209
19987 (1)時系列データに対してアンサンブル平均をとるルーチンを入れた。
19988 ルーチンは exec_msp_test_ensemble() (in sim.c, mspe): 各ステップでアンサンブルしながら多段予測
19989 結果として mspeよりmspeの方が良い結果 理由は不明だがあまりよくない? (あるユニット数Nについて
19990 悪い結果が出たらmspeでも悪い結果になるが、mspeならそうならない可能性があるから)
19991 もし対象系が線形なら、mspeもmspeと同じになるはず?
19992
19993 #####(1)
19994 export dhame=eguti-a K=9 T=100 g=5e-3
19995 export dn_timeseries./data/$(dhame).dat dn_regression=-/tmp/$(dhame)--fa.dat
19996 export tl=2000 t2=2000 method=mspe
19997 export tl=2000 t2=3000 method=mspe
19998 exp
19999 cat >param.dat << EOF #save parameters
20000 0 #0:timeseries,1:chaos prepare_data() in my_function.c
20001 #channels
20002 ${K} 0 #channels
20003 $(dn_timeseries) #training file
20004 ${t1} ${t2} #Ttrain,Ttotal: points in time of training and total data
20005 0 0 0 #y0min y0max y1min y1max for normalization
20006 qu
20007 EOF
20008 ##
20009 ./can2 <param.dat >/dev/null
20010 cp tmp/train+test.dat $(dn_regression)
20011 ##汎化能力のあるアンサンブルユニット数(11=N,ld=N)の推定
20012 ./ense2se $(dn_regression) $(dn_regression) N:30-50:1 ib:0-0:0:2 M:1-20:1 k:${K} g:${g} T:${T} >/dev/
20013 null #最適ユニット数探索
20014 #30: 5(N:30-34) lhat=4.825e-04 lvarmin 0=2.537e-01 lvar0=2.537e-01 lval=2.629464e+00*N:32-32
20015 #30: 6(N:30-35) lhat=4.825e-04 lvarmin 1=2.537e-01 lvar0=2.537e-01 lval=2.629464e+00*N:32-33
20016 #30: 7(N:30-36) lhat=4.825e-04 lvarmin 2=2.537e-01 lvar0=2.537e-01 lval=2.629464e+00*N:32-34
20017 #30: 8(N:30-37) lhat=4.825e-04 lvarmin 3=2.537e-01 lvar0=2.537e-01 lval=2.629464e+00*N:32-35
20018 #30: 9(N:30-38) lhat=4.825e-04 lvarmin 4=2.537e-01 lvar0=2.537e-01 lval=2.629464e+00*N:32-36
20019
20020 #####(2) Do the following, with the above values.
20021 ##### N1からN2までに対するcan2の実行とアンサンブルの実行
20022 export N1=31 N2=31 ens= >>MSE---f2.215070e+02 NMSE---f2.190542e-01
20023 export N1=32 N2=32 ens= >>MSE---f8.482830e+01 NMSE---f8.388897e-02
20024 export N1=33 N2=33 ens= >>MSE---f7.062676e+01 NMSE---f6.984468e-02
20025 export N1=34 N2=34 ens= >>MSE---f6.774110e+01 NMSE---f6.699097e-02
20026 export N1=35 N2=35 ens= >>MSE---f9.398983e+01 NMSE---f9.294904e-02
20027 export N1=36 N2=36 ens= >>MSE---f6.288071e+01 NMSE---f6.218441e-02
20028 export N1=37 N2=37 ens= >>MSE---f8.743941e+01 NMSE---f8.647116e-02
20029 export N1=38 N2=38 ens= >>MSE---f4.696035e+01 NMSE---f4.644034e-02
20030 export N1=39 N2=39 ens= >>MSE---f4.696035e+01 NMSE---f4.644034e-02
20031 export N1=40 N2=40 ens= >>MSE---f9.180860e+02 NMSE---f9.079197e-01
20032 export N1=50 N2=50 ens= >>MSE---f5.666294e+01 NMSE---f5.603549e-02
20033 export N1=60 N2=60 ens= >>MSE---f8.482679e+01 NMSE---f8.388747e-02
20034 #####
20035 export N1=32 N2=33 ens= >>MSE---f4.338302e+01 NMSE---f4.290263e-02
20036 export N1=32 N2=34 ens= >>MSE---f3.948551e+01 NMSE---f3.904827e-02
20037 export N1=32 N2=35 ens= >>MSE---f4.204710e+01 NMSE---f4.158149e-02
20038 export N1=40 N2=50 ens= >>MSE---f1.245492e+02 NMSE---f1.231700e-01
20039 export N1=32 N2=36 ens= >>MSE---f4.364106e+01 NMSE---f4.315780e-02
20040 export N1=38 N2=39 ens= >>MSE---f4.477799e+01 NMSE---f4.428215e-02
20041 export N1=38 N2=40 ens= >>MSE---f1.356911e+02 NMSE---f1.341885e-01
20042 export N1=32 N2=39 ens= >>MSE---f4.557897e+01 NMSE---f4.507425e-02
20043
20044 #####
20045 export dhame=eguti-a K=9 T=100 g=5e-3
20046 export dn_timeseries./data/$(dhame).dat dn_regression=-/tmp/$(dhame)--fa.dat
20047 cat >param.dat << EOF #save parameters
20048 0 #0:timeseries,1:chaos prepare_data() in my_function.c
20049 ${K} 0 #channels
20050 $(dn_timeseries) #training file
20051 ${t1} ${t2} #Ttrain,Ttotal: points in time of training and total data
20052 0 0 0 #y0min y0max y1min y1max for normalization
20053 qu
20054 EOF
20055 /can2 <param.dat >/dev/null
20056 cp tmp/train+test.dat $(dn_regression)
20057
20058 ##N1からN2までに対するcan2の実行
20059 export N=${N1}
```

```
20660 while [ ${N} -le ${N2} ] ; do
20661 file=tmp/bestmspN${N}.net
20662 predfile=tmp/predictN${N}.dat
20663 if [ -e ${file} ] ; then
20664 echo $file exists. Omit calculation.
20665 else
20666 ##
20667 cat > param.dat << EOF
20668 0      #0:timeseries,1:chaos prepare_data() in my_function.c
20669 9 0 #channels
20670 ${dn,timeseries}      #Ttrain,Ttotal: points in time of training and total data
20701 ${tl} ${c2}      #y0min y0max y1min y1max for normalization
20702 0 0 0 0
20703 in      #
20704 ${N}      #n_cells storing vectors
20705 20      #n_compare
20706 0.5 3      #v_thresh v_min
20707 10      #v_ratio
20708 0.2      #width window width
20709 ex      #execute
20800 1 5e-3 0.7      #i=0:online,i=1:batch, gamma0, entropy_thresh
20801 100      #iterations to execute
20802 10      #display
20803 quit
20804 EOF
20805 echo "Executing can2 for N=${N}"
20806 can2 <param.dat > /dev/null
20807 cp bestmsp.net ${file}
20808 cp predict.dat ${predfile}
20809 ##
20890 fi
20901 export ens=${ens} "${file}"
20902 N=`expr ${N} + 1`
20903 done
20904 #####アンサンブルの実行
20905 cat > param.dat << EOF
20906 0      #0:timeseries,1:chaos prepare_data() in my_function.c
20907 9 0 #channels
20908 ${dn,timeseries}
20909 ${tl} ${c2}      #Ttrain,Ttotal: points in time of training and total data
20900 0 0 0 0      #y0min y0max y1min y1max for normalization
20901 nls
20902 ${ens}
20903 ${method}
20904 qu
20905 EOF
20906 ./can2 < param.dat
20907 #####Do to here.
20908 #####
20909 #####
20910 051208
20911 export dname=eguti-a K=9 T=100 g=5e-3
20912 export dn,timeseries=/data/${dname}.dat dn_regressions=/tmp/${dname}-fa.dat
20913 cat >param.dat << EOF #save parameters
20914 0      #0:timeseries,1:chaos prepare_data() in my_function.c
20915 ${K} 0 #channels
20916 ${dn,timeseries} #training file
20917 2000 2200      #Ttrain,Ttotal: points in time of training and total data
20918 0 0 0 0      #y0min y0max y1min y1max for normalization
20919 qu
20920 EOF
20921 #####
20922 ./can2 <param.dat >/dev/null
20923 cp tmp/train+test.dat ${dn_regression}
20924 ./ens2ge ${dn_regression} ${dn_regression} N:30-50:1 ib:0:0:0:2 M:1-20:1 k:${K} g:${g} T:${T} >/dev/
null #最適ユニット数探索
20925 30: 5(N:30-34) Lhat=4.825e-04 Lvarmin 0=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:32-33
20926 30: 6(N:30-35) Lhat=4.825e-04 Lvarmin 1=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:32-33
20927 30: 7(N:30-36) Lhat=4.825e-04 Lvarmin 2=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:32-34
20928 30: 8(N:30-37) Lhat=4.825e-04 Lvarmin 3=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:32-35
20929 30: 9(N:30-38) Lhat=4.825e-04 Lvarmin 4=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:32-36
20930 30: 10(N:30-39) Lhat=4.825e-04 Lvarmin 5=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:32-37
20931 30: 11(N:30-40) Lhat=4.825e-04 Lvarmin 6=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:33-33
20932 30: 7(N:30-36) Lhat=4.825e-04 Lvarmin 0=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:33-33
20933 30: 8(N:30-37) Lhat=4.825e-04 Lvarmin 1=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:33-34
20934 30: 9(N:30-38) Lhat=4.825e-04 Lvarmin 2=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:33-35
20935 30: 10(N:30-39) Lhat=4.825e-04 Lvarmin 3=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:33-36
20936 30: 11(N:30-40) Lhat=4.825e-04 Lvarmin 4=2.537e-01 Lvar0=2.537e-01 Lval=2.629464e+00**N:33-37
20937
20938 ./ens2ge ${dn_regression} ${dn_regression} N:30-50:1 ib:0:0:0:1 M:1-50:1 k:${K} g:${g} T:${T} >/dev/
null #最適ユニット数探索
```

```
20939 #global min of Lvar with local min of Lhat (9neighbour of (11,1d)) **Use this or the next)**
20940 38: 6(N:38-43) Lhat=5.889e-03 Lvarmin49=1.539e-02 Lvar0=1.539e-02 Lval=3.645195e+00**N:39-42
20941 30: 8(N:30-37) Lhat=4.805e-03 Lvarmin83=3.261e-02 Lvar0=3.261e-02 Lval=3.859228e+00**N:31-36
20942 38:15(N:38-52) Lhat=2.549e-03 Lvarmin199=9.518e-02 Lvar0=9.125e-02 Lval=3.430284e+00**N:39-51
20943 30:14(N:30-43) Lhat=3.460e-03 Lvarmin237=1.090e-01 Lvar0=1.090e-01 Lval=3.680236e+00**N:31-42
20944 44:46(N:44-89) Lhat=5.800e-04 Lvarmin836=2.463e-01 Lvar0=2.499e-01 Lval=2.780940e+00**N:45-88
20945
20946 ./ens2ge ${dn_regression} ${dn_regression} N:30-50:1 ib:0:0:0:1 M:1-20:1 k:${K} g:${g} T:${T} >/dev/
null #最適ユニット数探索
20947 #global min of Lvar with local min of Lhat (9neighbour of (11,1d)) **Use this or the next)**
20948 30: 3(N:30-32) Lhat=3.427e-02 Lvarmin 0=8.701e-30 Lvar0=8.701e-30 Lval=3.557289e+00**N:31-31
20949 50:21(N:50-71) Lhat=1.270e-03 Lvarmin302=8.894e-02 Lvar0=8.894e-02 Lval=2.720587e+00**N:51-70
20950 42:22(N:42-63) Lhat=1.259e-03 Lvarmin373=1.045e-01 Lvar0=1.045e-01 Lval=2.811621e+00**N:43-62
20951 35:22(N:35-56) Lhat=1.543e-03 Lvarmin404=1.187e-01 Lvar0=1.187e-01 Lval=2.915208e+00**N:36-55
20952
20953 #####
20954 ##Do from here
20955 export NI=36 N2=55 N=${N1} ens=
20956 export NI=51 N2=70 ens= #
20957 export NI=31 N2=36 ens= #
20958 export NI=31 N2=31 ens= #>>MSE---;2.215070e+02 NMSE---;2.190542e-01
20959 export NI=32 N2=32 ens= #>>MSE---;8.482830e+01 NMSE---;8.388897e-02
20960 export NI=33 N2=33 ens= #>>MSE---;7.062676e+01 NMSE---;6.984468e-02
20961 export NI=34 N2=34 ens= #>>MSE---;6.774110e+01 NMSE---;6.699077e-02
20962 export NI=35 N2=35 ens= #>>MSE---;9.398983e+01 NMSE---;9.294904e-02
20963 export NI=36 N2=36 ens= #>>MSE---;6.288071e+01 NMSE---;6.218441e-02
20964 export NI=37 N2=37 ens= #>>MSE---;8.743941e+01 NMSE---;8.647116e-02
20965 export NI=38 N2=38 ens= #>>MSE---;4.696035e+01 NMSE---;4.644034e-02
20966 export NI=39 N2=39 ens= #>>MSE---;5.666294e+01 NMSE---;5.603549e-02
20967 export NI=50 N2=50 ens= #>>MSE---;8.482679e+01 NMSE---;8.388747e-02
20968 export NI=60 N2=60 ens= #>>MSE---;9.264342e+02 NMSE---;9.161755e-01
20969
20970
20971 export NI=31 N2=34 ens= #>>MSE---;1.070042e+03 NMSE---;1.058193e+00
20972 export NI=32 N2=42 ens= #>>MSE---;1.199918e+03 NMSE---;1.186631e+00
20973 export NI=32 N2=35 ens= #>>MSE---;9.207404e+02 NMSE---;9.105447e-01
20974 export NI=32 N2=36 ens= #>>MSE---;1.200897e+03 NMSE---;1.187599e+00
20975 export NI=32 N2=37 ens= #>>MSE---;9.480944e+01 NMSE---;9.375958e-02
20976 export NI=32 N2=38 ens= #>>MSE---;9.058365e+02 NMSE---;8.956059e-01
20977 export NI=32 N2=39 ens= #>>MSE---;3.462070e+02 NMSE---;3.423734e-01
20978 export NI=32 N2=41 ens= #>>MSE---;5.189151e+02 NMSE---;5.087396e-01
20979 export NI=32 N2=60 ens= #>>MSE---;5.078947e+02 NMSE---;5.022706e-01
20980
20981 export N=${N1}
20982 while [ ${N} -le ${N2} ] ; do
20983 file=tmp/bestmspN${N}.net
20984 predfile=tmp/predictN${N}.dat
20985 if [ -e ${file} ] ; then
20986 echo $file exists. Omit calculation.
20987 else
20988 ##
20989 cat > param.dat << EOF
20990 0      #0:timeseries,1:chaos prepare_data() in my_function.c
20991 9 0 #channels
20992 ${dn,timeseries}
20993 $Ttrain,Ttotal: points in time of training and total data
20994 2000 2200      #Ttrain,Ttotal: points in time of training and total data
20995 0 0 0 0      #y0min y0max y1min y1max for normalization
20996 in      #
20997 ${N}      #n_cells storing vectors
20998 20      #n_compare
20999 0.5 3      #v_thresh v_min
20990 10      #v_ratio
20991 0.2      #width window width
20992 ex      #execute
20993 1 5e-3 0.7      #i=0:online,i=1:batch, gamma0, entropy_thresh
20994 100      #iterations to execute
20995 10      #display
20996 quit
20997 EOF
20998 echo "Executing can2 for N=${N}"
20999 can2 <param.dat > /dev/null
20990 cp bestmsp.net ${file}
20991 cp predict.dat ${predfile}
20992 ##
20993 fi
20994 export ens=${ens} "${file}"
20995 N=`expr ${N} + 1`
20996 done
20997 #####
20998 cat > param.dat << EOF
20999 0      #0:timeseries,1:chaos prepare_data() in my_function.c
```

```
20220 9 0 #channels
20221 $(dn.timeseries)
20222 #Ttrain,Ttotal: points in time of training and total data
20223 0 0 0 #y0min y0max y1min y1max for normalization
20224 nls
20225 $(ens)
20226 mspe
20227 qu
20228 EOF
20229 ./can2 < param.dat
20230 ##$Do to here.
20231 cat tmp/predictK32.dat awk '{print $1}'>tmp.dat
20232 cat tmp/predictK33.dat awk '{print $1}' | paste - tmp.dat >tmp1.dat
20233 cat tmp/predictK34.dat awk '{print $1}' | paste - tmp1.dat>tmp2.dat
20234 cat tmp2.dat |awk '{print ($1+$2+$3)/3}'>tmp3.dat
20235 cat tmp/predictK32.dat |awk '{print $3}'>tmp0.dat
20236 predxy.ts tmp3.dat tmp0.dat > tmp4.dat #NSE=3.948564e+01 (num=200)
20237 predxy.ts tmp4.dat > /dev/null #NSE=6.482830e+01 (num=200)
20238 predxy.ts tmp1.dat tmp0.dat > /dev/null #NSE=7.062676e+01 (num=200)
20239
20240 gnuplot
20241 set style data lines
20242 plot "tmp1.dat" using 0:1, "tmp2.dat" using 0:1, "tmp3.dat" using 0:1 t "y-" ,
"tmp4.dat" using 0:2 t "ytrue"
20243 051206
20244
20245 #####
20246 ###(1) set parameters
20247 export dhame=eguti-a dn_timeseries=./data/${dhame}.dat K=9 dn_regression=./tmp/${dhame}-fa.dat T=100
20248
20249 export dhame=eguti-i dn_timeseries=./data/${dhame}.dat K=9 dn_regression=./tmp/${dhame}-fa.dat T=100
20250
20251 export dhame=eguti-u dn_timeseries=./data/${dhame}.dat K=9 dn_regression=./tmp/${dhame}-fa.dat T=100
20252
20253 ##(2) save a data file (tmp/train+test.dat) for regression(function approximation) from time series
20254 data
20255 cat >param.dat << EOF ##$save paramaters
20256 0 #0:timeseries,1:chaos prepare_data() in my_function.c
20257 #channels
20258 #K 0
20259 #train,Ttotal: points in time of training and total data
20260 2000 2200 #Ttrain,Ttotal: points in time of training and total data
20261 0 0 0 #y0min y0max y1min y1max for normalization
20262 qu
20263 EOF
20264 ./can2 #####
20265
20266 echo cp tmp/train+test.dat ${dn_regression} ##$save the file for regression(function approximation)
20267 cp tmp/train+test.dat ${dn_regression} ##$save the file for regression(function approximation)
20268 ##(3) search optimal N by ens2ge for checking generalization ability
20269
20270 rm -rf result-ensr2ge/
20271
20272 #ens2ge ${dn_regression} ${dn_regression} N:20-70:1 ib:0:0:0:1 M:1-1:1 K:${K} g:${g} T:${T} >/dev/n
ull #結果エロット数探索
20273
20274 #Global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)** for egu
ti-u.dat
20275
20276 #Global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)** for egu
ti-a.dat
20277 #31: 3(N:31-33) Lhat=2.336e-02 Lvarmin 1=1.161e-29 Lvar0=1.161e-29 Lval=3.923823e+00**N:32-32
20278 #61: 3(N:60-62) Lhat=7.288e-02 Lvarmin 2=1.164e-29 Lvar0=1.164e-29 Lval=3.091771e+00**N:61-61
20279 #35: 3(N:35-37) Lhat=3.481e-02 Lvarmin 9=1.194e-29 Lvar0=1.194e-29 Lval=3.822176e+00**N:36-36
20280 #26: 3(N:26-28) Lhat=2.391e-02 Lvarmin10=1.198e-29 Lvar0=1.198e-29 Lval=4.054219e+00**N:27-27
20281 #40: 3(N:40-42) Lhat=1.709e-02 Lvarmin16=1.217e-29 Lvar0=1.217e-29 Lval=3.649823e+00**N:41-41
20282
20283 #export dn_timeseries=./data/eguti-i.dat K=9 dn_regression=./tmp/eguti-i-reg.dat T=100 g=5e-3 ???
20284 #Global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**
20285 #36: 3(N:36-38) Lhat=2.148e-02 Lvarmin 4=9.841e-30 Lvar0=9.841e-30 Lval=1.037186e+01**N:37-37
20286 #31: 3(N:31-33) Lhat=7.547e-02 Lvarmin 7=9.939e-30 Lvar0=9.939e-30 Lval=1.073436e+01**N:32-32
20287 #38: 3(N:38-40) Lhat=9.163e-02 Lvarmin 8=1.002e-29 Lvar0=1.002e-29 Lval=1.016154e+01**N:39-39
20288 #20: 3(N:20-22) Lhat=1.355e+00 Lvarmin11=1.007e-29 Lvar0=1.007e-29 Lval=1.228819e+00**N:21-21
20289 #46: 3(N:46-48) Lhat=1.533e-01 Lvarmin14=1.026e-29 Lvar0=1.026e-29 Lval=9.947929e+00**N:47-47
20290 #ens2ge ${dn_regression} ${dn_regression} N:20-70:1 ib:0:0:0:3 m:7-1:1 K:${K} g:${g} T:${T}
20291 #Global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**
20292 #53: 7(N:53-55) Lhat=1.174e-01 Lvarmin 7=7.328e-30 Lvar0=7.328e-30 Lval=3.124946e+00**N:56-56
20293 #20: 7(N:20-25) Lhat=3.336e-01 Lvarmin 9=7.420e-30 Lvar0=7.420e-30 Lval=4.445499e+00**N:23-23
20294 #55: 7(N:55-61) Lhat=1.229e-01 Lvarmin17=7.604e-30 Lvar0=7.604e-30 Lval=3.069501e+00**N:58-58
20295
```

```
20294 #25: 7(N:25-31) Lhat=7.483e-02 Lvarmin16=7.696e-30 Lvar0=7.696e-30 Lval=4.017811e+00**N:28-28
20295 #70: 7(N:70-76) Lhat=1.350e-01 Lvarmin19=7.696e-30 Lvar0=7.696e-30 Lval=2.933559e+00**N:73-73
20296 export dn_timeseries=./data/eguti-a.dat K=9 dn_regression=./tmp/eguti-a-reg.dat T=100 g=5e-3 ; ./ens2
ge ${dn_regression} ${dn_regression} N:20-70:1 ib:0:0:0:1 m:3-3:1 K:${K} g:${g} T:${T}
20297 #Global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**
20298 #63: 3(N:63-65) Lhat=1.637e-02 Lvarmin 0=1.198e-29 Lvar0=1.198e-29 Lval=3.46465e+00**N:64-64
20299 #68: 3(N:68-70) Lhat=1.720e-02 Lvarmin 9=1.283e-29 Lvar0=1.283e-29 Lval=3.322435e+00**N:69-69
20300 #50: 3(N:50-52) Lhat=1.529e-02 Lvarmin11=1.288e-29 Lvar0=1.288e-29 Lval=4.054251e+00**N:51-51
20301 #70: 3(N:70-72) Lhat=3.213e-02 Lvarmin16=1.300e-29 Lvar0=1.300e-29 Lval=3.304859e+00**N:71-71
20302 #57: 3(N:57-59) Lhat=1.016e-02 Lvarmin20=1.323e-29 Lvar0=1.323e-29 Lval=3.604134e+00**N:58-58
20303 ./ens2ge ${dn_regression} ${dn_regression} N:20-70:1 ib:0:0:0:2 m:5-5:1 K:${K} g:${g} T:${T}
20304 #Global min of Lvar with local min of Lhat (9neighbour of (11,12) **Use this or the above)**
20305 #7: 5(N: 67- 71) Lhat=7.710e-02 Lvarmin 2=3.562e-29 Lvar0=3.562e-29 Lval=2.880e+00**N:69-69
20306 #53: 5(N: 53- 57) Lhat=8.883e-02 Lvarmin 10=3.937e-29 Lvar0=3.927e-29 Lval=3.147e+00**N:55-55
20307 #20: 5(N: 20- 24) Lhat=1.717e-01 Lvarmin 18=4.030e-29 Lvar0=4.030e-29 Lval=4.496e+00**N:22-22
20308 #62: 5(N: 62- 66) Lhat=1.142e-01 Lvarmin 21=4.051e-29 Lvar0=4.051e-29 Lval=3.046e+00**N:64-64
20309 #48: 5(N: 48- 52) Lhat=4.372e-02 Lvarmin 24=4.062e-29 Lvar0=4.062e-29 Lval=3.356e+00**N:50-50
20310
20311 ##(4) do can2 with N obtained above
20312 #use N=37 ##$use N obtained above ./data/eguti-i.dat
20313 export N=64 ##$use N obtained above ./data/eguti-a.dat
20314 export N=32 ##$use N obtained above ./data/eguti-i.dat
20315
20316 export dhame=eguti-a dn_timeseries=./data/${dhame}.dat dn_regression=./tmp/${dhame}-fa.dat T=100 g=5
e-3 K=9
20317 cat << EOF ##$save param.dat
20318 ##do the following command by manual
20319 ./can2
20320 0 #0:timeseries,1:chaos prepare_data() in my_function.c
20321 #channels
20322 #K 0
20323 #train,Ttotal: points in time of training and total data
20324 2000 2200 #Ttrain,Ttotal: points in time of training and total data
20325 0 0 0 #y0min y0max y1min y1max for normalization
20326 #
20327 #n_cells storing vectors
20328 20 #n_compare
20329 0.5 3 #v_thresh v_min
20330 1.0 #v_ratio
20331 0.2 #width window width
20332 1.0 #exhecute
20333 1.5 0.7 #i=0:online,i=1:batch, gamma0, entropy_thresh
20334 #iterations to execute
20335 10 #display
20336 nl
20337 bestmsp.net
20338
20339 msp
20340 ##do the following command by manual
20341 EOF
20342 #####
20343 ./can2
20344 0 #0:timeseries,1:chaos prepare_data() in my_function.c
20345 9 0 #channels
20346 #data/eguti-a.dat
20347 #Ttrain,Ttotal: points in time of training and total data
20348 2000 2200 #y0min y0max y1min y1max for normalization
20349 0 0 0 0
20350 #
20351 #n_cells storing vectors
20352 20 #n_compare
20353 0.5 3 #v_thresh v_min
20354 1.0 #v_ratio
20355 0.2 #width window width
20356 1.0 #exhecute
20357 1.5e-3 0.7 #i=0:online,i=1:batch, gamma0, entropy_thresh
20358 #iterations to execute
20359 100 #display
20360 nl
20361 bestmsp.net
20362 msp
20363 #>>>MSE---:1.676446e+02 NMSE---:8.388897e-02 ./data/eguti-a.dat N=32 2msp
20364 #>>>MSE---:1.537026e+02 NMSE---:5.803857e-02 ./data/eguti-i.dat N=32 66msp
20365 #>>>MSE---:4.719879e+02 NMSE---:1.411442e-01 ./data/eguti-u.dat N=32 42msp
20366 #>>>MSE---:8.381262e+01 NMSE---:7.169715e-02 ./data/eguti-e.dat N=32 10msp
20367 #>>>MSE---:1.172052e+01 NMSE---:7.798187e-03 ./data/eguti-o.dat N=32 4msp
20368
20369 #>>>MSE---:1.676446e+02 NMSE---:1.657982e-01 ./data/eguti-a.dat N=64
20370 #>>>MSE---:8.743941e+01 NMSE---:8.647116e-02 ./data/eguti-a.dat N=37
20371 #>>>MSE---:1.664505e+02 NMSE---:6.285222e-02 ./data/eguti-i.dat N=37
20372 #>>>MSE---:4.772133e+02 NMSE---:1.427068e-01 ./data/eguti-u.dat N=37
20373 #>>>MSE---:f3.314281e+01 NMSE---:2.835188e-02 ./data/eguti-e.dat N=37
20374 #>>>MSE---:f1.383154e+01 NMSE---:9.202749e-03 ./data/eguti-o.dat N=37
20375
```

```
20374 #####
20375 #####
20376 #####
20377 #####
20378 051211
20379 ./can2
20380 0
20381 9 #channels
20382 ./data/eguti-a.dat #training file
20383 2000 2200 #ttrain,Ttotal: points in time of training and total data
20384 0 0 0 #y0min y0max y1min y1max for normalization
20385 in #
20386 52 #n_cells storing vectors
20387 20 #n_compare
20388 0 5 3 #v thresh v_min
20389 1.0 #v_ratio
20390 0.2 #width window width
20391 ex #execute
20392 1.5e-3 0.7 #l=0:online,i=1:batch, gamma0, entropy_thresh
20393 100 #iterations to execute
20394 nl #display
20395 nl
20396 bestmsp.net
20397 msp
20398
20399 gamma0=5e-4T:1:100N:52>>MSE---;6.273830e+01 NMSE---;6.204357e-02
20400 gamma0=1e-3T:1:100N:52>>MSE---;5.388490e+01 NMSE---;5.328822e-02
20401 gamma0=5e-3T:1:100N:52>>MSE---;4.155724e+01 NMSE---;4.109706e-02***
20402 gamma0=1e-2T:1:100N:52>>MSE---;4.731408e+01 NMSE---;4.679016e-02
20403 gamma0=5e-3T:1:50N:52>>MSE---;8.570549e+01 NMSE---;8.475644e-02
20404 gamma0=5e-3T:1:10N:52>>MSE---;8.570549e+01 NMSE---;8.475644e-02
20405 gamma0=5e-3T:1:10N:40>>MSE---;9.180606e+02 NMSE---;9.079197e-01
20406 gamma0=5e-3T:1:10N:30>>MSE---;3.749752e+02 NMSE---;3.708229e-01
20407 gamma0=5e-3T:1:50N:30>>MSE---;3.749752e+02 NMSE---;3.708229e-01
20408 gamma0=1e-3T:1:50N:30>>MSE---;7.932715e+01 NMSE---;7.844873e-02
20409 gamma0=5e-3T:1:50N:40>>MSE---;9.180606e+02 NMSE---;9.079197e-01
20410
20411
20412
20413 -----
20414 ./can2
20415 0 #channels
20416 9 #channels
20417 ./data/eguti-a.dat #training file
20418 2000 2200 #ttrain,Ttotal: points in time of training and total data
20419 0 0 0 #y0min y0max y1min y1max for normalization
20420 qu
20421 cp tmp/train-test.dat ./train-test.dat
20422
20423 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:3-3:1 ib:0:0:0:1 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20424 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20425 63: 3(N:63-65) Lhat=1.637e-02 Lvarmin 1=6.198e-29 Lvar0=1.198e-29 Lval=3.46465e+00**N:64-64
20426 68: 3(N:68-70) Lhat=1.720e-02 Lvarmin 8=1.274e-29 Lvar0=1.274e-29 Lval=3.324243e+00**N:69-69
20427 50: 3(N:50-52) Lhat=1.528e-02 Lvarmin11=1.295e-29 Lvar0=1.295e-29 Lval=4.352435e+00**N:51-51
20428 70: 3(N:70-72) Lhat=3.213e-02 Lvarmin14=1.300e-29 Lvar0=1.300e-29 Lval=3.304859e+00**N:71-71
20429 57: 3(N:57-59) Lhat=1.016e-02 Lvarmin18=1.311e-29 Lvar0=1.311e-29 Lval=3.604134e+00**N:58-58
20430
20431 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:5-5:1 ib:0:0:0:2 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20432 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20433 53: 5(N:53-57) Lhat=8.546e-02 Lvarmin 1=3.438e-29 Lvar0=3.438e-29 Lval=3.732040e+00**N:55-55
20434 70: 5(N:70-74) Lhat=3.280e-02 Lvarmin 5=3.576e-29 Lvar0=3.576e-29 Lval=3.294625e+00**N:72-72
20435 57: 5(N:57-61) Lhat=4.916e-02 Lvarmin 7=3.604e-29 Lvar0=3.604e-29 Lval=3.591849e+00**N:59-59
20436 48: 5(N:48-52) Lhat=3.973e-02 Lvarmin12=3.627e-29 Lvar0=3.627e-29 Lval=4.064284e+00**N:51-51
20437 62: 5(N:62-66) Lhat=4.049e-02 Lvarmin20=3.705e-29 Lvar0=3.705e-29 Lval=3.46465e+00**N:64-64
20438
20439 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:7-7:1 ib:0:0:0:3 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20440 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20441 18: 7(N:18-24) Lhat=8.260e-02 Lvarmin 1=6.613e-30 Lvar0=6.613e-30 Lval=5.259844e+00**N:21-21
20442 68: 7(N:68-74) Lhat=5.051e-02 Lvarmin 9=7.028e-30 Lvar0=7.028e-30 Lval=3.304859e+00**N:71-71
20443 44: 7(N:44-50) Lhat=6.046e-02 Lvarmin14=7.074e-30 Lvar0=7.074e-30 Lval=4.128588e+00**N:47-47
20444 2: 7(N:2- 8) Lhat=2.768e+00 Lvarmin25=7.420e-30 Lvar0=7.420e-30 Lval=1.765152e+01**N:5-5
20445 57: 7(N:57-63) Lhat=7.145e-02 Lvarmin27=7.535e-30 Lvar0=7.535e-30 Lval=3.559589e+00**N:60-60
20446 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:9-9:1 ib:0:0:0:4 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20447 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20448 1: 9(N:1- 9) Lhat=4.057e+00 Lvarmin 8=2.691e-29 Lvar0=2.691e-29 Lval=1.765152e+01**N:5-5
20449 68: 9(N:68-76) Lhat=8.504e-02 Lvarmin12=2.731e-29 Lvar0=2.731e-29 Lval=3.294625e+00**N:72-72
20450 57: 9(N:57-65) Lhat=8.611e-02 Lvarmin27=2.802e-29 Lvar0=2.802e-29 Lval=3.544234e+00**N:61-61
20451 38: 9(N:38-46) Lhat=1.168e-01 Lvarmin31=2.827e-29 Lvar0=2.827e-29 Lval=4.354537e+00**N:42-42
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20452 44: 9(N:44-52) Lhat=7.393e-02 Lvarmin33=2.846e-29 Lvar0=2.846e-29 Lval=4.129611e+00**N:48-48
20453 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:11-11:1 ib:0:0:0:5 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20454 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20455 42:11(N:42-52) Lhat=1.189e-01 Lvarmin 5=3.108e-29 Lvar0=3.108e-29 Lval=4.128588e+00**N:47-47
20456 70:11(N:70-80) Lhat=7.130e-02 Lvarmin11=3.136e-29 Lvar0=3.136e-29 Lval=4.289333e+00**N:75-75
20457 37:11(N:37-47) Lhat=1.512e-01 Lvarmin17=3.187e-29 Lvar0=3.187e-29 Lval=4.354537e+00**N:42-42
20458 35:11(N:35-45) Lhat=1.496e-01 Lvarmin19=3.196e-29 Lvar0=3.196e-29 Lval=4.365211e+00**N:40-40
20459 57:11(N:57-67) Lhat=1.034e-01 Lvarmin21=3.212e-29 Lvar0=3.212e-29 Lval=3.536903e+00**N:62-62
20460 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:13-13:1 ib:0:0:0:6 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20461 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20462 29:13(N:29-41) Lhat=1.951e-01 Lvarmin 2=9.655e-30 Lvar0=9.655e-30 Lval=4.431388e+00**N:35-35
20463 36:13(N:36-48) Lhat=1.751e-01 Lvarmin12=1.007e-29 Lvar0=1.007e-29 Lval=4.354537e+00**N:42-42
20464 19:13(N:19-31) Lhat=4.637e-01 Lvarmin15=1.018e-29 Lvar0=1.018e-29 Lval=4.747027e+00**N:25-25
20465 68:13(N:68-80) Lhat=8.601e-02 Lvarmin22=1.037e-29 Lvar0=1.037e-29 Lval=3.306429e+00**N:74-74
20466 40:13(N:40-52) Lhat=1.495e-01 Lvarmin25=1.046e-29 Lvar0=1.046e-29 Lval=4.147976e+00**N:46-46
20467 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:15-15:1 ib:0:0:0:7 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20468 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20469 57:15(N:57-71) Lhat=1.524e-01 Lvarmin 8=4.309e-30 Lvar0=4.309e-30 Lval=3.46465e+00**N:64-64
20470 28:15(N:28-42) Lhat=2.262e-01 Lvarmin21=4.586e-30 Lvar0=4.586e-30 Lval=4.431388e+00**N:35-35
20471 67:15(N:67-81) Lhat=1.011e-01 Lvarmin29=4.862e-30 Lvar0=4.862e-30 Lval=3.306429e+00**N:74-74
20472 35:15(N:35-49) Lhat=1.936e-01 Lvarmin40=4.977e-30 Lvar0=4.977e-30 Lval=4.354537e+00**N:42-42
20473 16:15(N:16-30) Lhat=4.759e-01 Lvarmin48=5.092e-30 Lvar0=5.092e-30 Lval=5.209941e+00**N:23-23
20474 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:21-21:1 ib:0:0:0:10 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20475 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20476 25:21(N:25-45) Lhat=3.077e-01 Lvarmin20=4.021e-29 Lvar0=4.021e-29 Lval=4.431388e+00**N:35-35
20477 36:21(N:36-56) Lhat=2.592e-01 Lvarmin24=4.053e-29 Lvar0=4.053e-29 Lval=4.147976e+00**N:46-46
20478 64:21(N:64-84) Lhat=1.607e-01 Lvarmin34=4.132e-29 Lvar0=4.132e-29 Lval=3.306429e+00**N:74-74
20479 68:21(N:68-88) Lhat=1.586e-01 Lvarmin38=4.152e-29 Lvar0=4.152e-29 Lval=3.246947e+00**N:78-78
20480 32:21(N:32-52) Lhat=2.431e-01 Lvarmin52=4.268e-29 Lvar0=4.268e-29 Lval=4.354537e+00**N:42-42
20481 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:25-25:1 ib:0:0:0:12 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20482 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20483 57:25(N:57-81) Lhat=2.117e-01 Lvarmin 3=1.009e-29 Lvar0=1.009e-29 Lval=3.322435e+00**N:69-69
20484 68:25(N:68-92) Lhat=3.176e-01 Lvarmin27=1.122e-29 Lvar0=1.122e-29 Lval=4.064284e+00**N:50-50
20485 38:25(N:38-52) Lhat=1.875e-01 Lvarmin35=1.124e-29 Lvar0=1.124e-29 Lval=3.246947e+00**N:78-78
20486 28:25(N:28-52) Lhat=2.822e-01 Lvarmin38=1.129e-29 Lvar0=1.129e-29 Lval=4.365211e+00**N:40-40
20487 64:25(N:64-88) Lhat=1.906e-01 Lvarmin44=1.143e-29 Lvar0=1.143e-29 Lval=3.279911e+00**N:76-76
20488 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:31-31:1 ib:0:0:0:15 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20489 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20490 20:31(N:20-44) Lhat=4.676e-01 Lvarmin 9=2.396e-30 Lvar0=2.396e-30 Lval=4.431388e+00**N:35-35
20491 32:31(N:32-62) Lhat=3.884e-01 Lvarmin13=2.396e-30 Lvar0=2.396e-30 Lval=4.128588e+00**N:47-47
20492 35:31(N:35-65) Lhat=3.793e-01 Lvarmin18=2.443e-30 Lvar0=2.443e-30 Lval=4.064284e+00**N:50-50
20493 63:31(N:63-93) Lhat=2.285e-01 Lvarmin30=2.512e-30 Lvar0=2.512e-30 Lval=3.246947e+00**N:78-78
20494 61:31(N:61-91) Lhat=2.328e-01 Lvarmin34=2.558e-30 Lvar0=2.558e-30 Lval=3.279911e+00**N:76-76
20495 ens2ge ./train-test.dat ./train-test.dat N:1-70:1 m:41-41:1 ib:0:0:0:20 k:9 g:5e-4 T:10 >/dev/null #最適
ユニット数探索
20496 #global min of Lvar with local min of Lhat (9neighbour of (11,ld) **Use this or the next)**
20497 27:41(N:27-67) Lhat=4.810e-01 Lvarmin 4=4.180e-29 Lvar0=4.180e-29 Lval=4.128588e+00**N:47-47
20498 25:41(N:25-65) Lhat=4.801e-01 Lvarmin 8=4.208e-29 Lvar0=4.208e-29 Lval=4.176745e+00**N:45-45
20499 58:41(N:58-98) Lhat=2.917e-01 Lvarmin15=4.219e-29 Lvar0=4.219e-29 Lval=3.246947e+00**N:78-78
20500 70:41(N:70-110) Lhat=2.759e-01 Lvarmin17=4.251e-29 Lvar0=4.251e-29 Lval=2.961341e+00**N:90-90
20501 30:41(N:30-70) Lhat=4.721e-01 Lvarmin25=4.277e-29 Lvar0=4.277e-29 Lval=4.064284e+00**N:50-50
20502
20503
20504 ./can2
20505 0 #0:timeseries,1:chaos prepare_data() in my_function.c
20506 9 #channels
20507 ./data/eguti-a.dat #training file
20508 #ttrain,Ttotal: points in time of training and total data
20509 2000 2200 #y0min y0max y1min y1max for normalization
20510 0 0 0 #
20511 in #n_cells storing vectors
20512 52 #n_compare
20513 20 #v thresh v_min
20514 0 5 3 #v_ratio
20515 1.0 #width window width
20516 0.4 #width window width
20517 sr #show training data show_data_params(train);
20518 n #no
20519 sb #show network params
20520 sb #show batch params
20521 ex #execute
20522 1 5.000000e-04 7.000000e-01 #<0:online,1:batch>, <gamma0>, <entropy_thresh>
20523 10 #iterations to execute
20524 10 #display
20525 nl
20526 bestmsp.net
```

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20527 msp
20528
20529
20530
20531
20532
20533 ens2ge ./train+test.dat ./train+test.dat N:1-55:1 m:3-3:1 ib:0:0:0:1 k:9 g:5e-4 T:10 >/dev/null #最適
ユニツツ数探索
20534 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**yuka
20535 50: 3(N:50-52) Lhat=1.529e-02 Lvarmin=4=1.288e-29 Lvar=1.288e-29 Lval=4.054251e+00**N:51-51
20536 31: 3(N:31-33) Lhat=1.652e-02 Lvarmin1=1.336e-29 Lvar=1.336e-29 Lval=4.490052e+00**N:32-32
20537 31: 3(N:31-33) Lhat=1.237e+00 Lvarmin1=1.336e-29 Lvar=1.336e-29 Lval=4.490052e+00**N:32-32
20538 39: 3(N:39-41) Lhat=1.299e-02 Lvarmin19=1.385e-29 Lvar=1.385e-29 Lval=4.365211e+00**N:40-40
20539 44: 3(N:44-46) Lhat=1.881e-02 Lvarmin24=1.410e-29 Lvar=1.410e-29 Lval=4.176745e+00**N:45-45
20540 54: 3(N:54-56) Lhat=2.059e-02 Lvarmin27=1.415e-29 Lvar=1.415e-29 Lval=3.732040e+00**N:55-55
20541 ens2ge ./train+test.dat ./train+test.dat N:1-70:1 m:3-3:1 ib:0:0:0:1 k:9 g:5e-4 T:10 >/dev/null #最適
ユニツツ数探索
20542
20543
20544 ./can2
20545 0
20546 9 #channels
20547 ./data/a3000.dat #training file
20548 2000 2200 #train,Ttotal: points in time of training and total data
20549 0 0 0 #y0min y0max y1min y1max for normalization
20550 cp tmp/train+test.dat ./train+test.dat
20551
20552 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**yuka
20553 31: 3(N:31-33) Lhat=1.786e-02 Lvarmin=2=1.270e-29 Lvar=1.270e-29 Lval=4.510962e+00**N:32-32
20554 31: 3(N:31-33) Lhat=2.237e+00 Lvarmin=6=1.320e-29 Lvar=1.320e-29 Lval=2.139330e+01**N:2-2
20555 40: 3(N:40-42) Lhat=1.553e-02 Lvarmin10=1.332e-29 Lvar=1.332e-29 Lval=4.334125e+00**N:41-41
20556 44: 3(N:44-46) Lhat=1.399e-02 Lvarmin2=1.385e-29 Lvar=1.385e-29 Lval=4.146070e+00**N:45-45
20557 50: 3(N:50-52) Lhat=1.244e-02 Lvarmin26=1.408e-29 Lvar=1.408e-29 Lval=3.969630e+00**N:51-51
20558
20559 ens2ge ./train+test.dat ./train+test.dat N:1-70:1 m:3-6:1 ib:0:0:0:1 k:9 g:5e-4 T:10 >/dev/null #最適
ユニツツ数探索
20560 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**yuka
20561 57: 3(N:57-59) Lhat=5.898e-03 Lvarmin15=1.360e-29 Lvar=1.360e-29 Lval=3.639333e+00**N:58-58
20562 20: 3(N:20-22) Lhat=7.867e-03 Lvarmin3=1.438e-29 Lvar=1.438e-29 Lval=5.329403e+00**N:21-21
20563 9: 3(N:9-11) Lhat=2.529e-01 Lvarmin4=1.449e-29 Lvar=1.449e-29 Lval=8.432670e+00**N:10-10
20564 4: 3(N:4-6) Lhat=1.062e-01 Lvarmin6=1.578e-29 Lvar=1.578e-29 Lval=1.464747e+01**N:5-5
20565 30: 5(N:30-34) Lhat=6.765e-03 Lvarmin106=7.937e-03 Lvar=0.7937e-03 Lval=4.506730e+00**N:31-33
20566 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**susanoo
20567 57: 3(N:57-59) Lhat=1.016e-02 Lvarmin1=1.311e-29 Lvar=1.311e-29 Lval=3.604134e+00**N:58-58
20568 63: 4(N:63-66) Lhat=8.505e-03 Lvarmin70=1.692e-03 Lvar=1.692e-03 Lval=3.459597e+00**N:64-64
20569 31: 4(N:31-34) Lhat=9.348e-03 Lvarmin81=3.680e-03 Lvar=3.680e-03 Lval=4.480961e+00**N:32-33
20570 53: 4(N:53-56) Lhat=1.604e-02 Lvarmin93=5.261e-03 Lvar=5.261e-03 Lval=3.730632e+00**N:54-55
20571 38: 6(N:38-43) Lhat=4.669e-03 Lvarmin11=8.505e-03 Lvar=0.8505e-03 Lval=4.354464e+00**N:39-42
20572
20573 ens2ge ./train+test.dat ./train+test.dat N:1-70:1 m:3-3:1 ib:0:0:0:1 k:9 g:5e-4 T:10 >/dev/null #最適
ユニツツ数探索
20574 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**
20575 63: 3(N:63-65) Lhat=1.637e-02 Lvarmin=0=1.198e-29 Lvar=1.198e-29 Lval=3.464665e+00**N:64-64
20576 68: 3(N:68-70) Lhat=1.720e-02 Lvarmin=8=1.274e-29 Lvar=1.274e-29 Lval=3.322435e+00**N:69-69
20577 50: 3(N:50-52) Lhat=1.529e-02 Lvarmin1=1.295e-29 Lvar=1.295e-29 Lval=4.054251e+00**N:51-51
20578 70: 3(N:70-72) Lhat=3.212e-02 Lvarmin14=1.300e-29 Lvar=1.300e-29 Lval=3.304859e+00**N:71-71
20579 57: 3(N:57-59) Lhat=1.016e-02 Lvarmin18=1.311e-29 Lvar=1.311e-29 Lval=3.604134e+00**N:58-58
20580
20581 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**
20582 50: 3(N:50-52) Lhat=1.529e-02 Lvarmin=3=1.295e-29 Lvar=1.295e-29 Lval=4.054251e+00**N:51-51
20583 31: 3(N:31-33) Lhat=1.652e-02 Lvarmin1=1.343e-29 Lvar=1.343e-29 Lval=4.490052e+00**N:32-32
20584 39: 3(N:39-41) Lhat=1.299e-02 Lvarmin18=1.380e-29 Lvar=1.380e-29 Lval=4.365211e+00**N:40-40
20585 44: 3(N:44-46) Lhat=1.881e-02 Lvarmin24=1.410e-29 Lvar=1.410e-29 Lval=4.176745e+00**N:45-45
20586 54: 3(N:54-56) Lhat=2.059e-02 Lvarmin27=1.413e-29 Lvar=1.413e-29 Lval=3.732040e+00**N:55-55
20587 -----
20588
20589 ./can2
20590 0
20591 9 #channels
20592 ./data/equti-a.dat #training file
20593 2000 2200 #train,Ttotal: points in time of training and total data
20594 0 0 0 #y0min y0max y1min y1max for normalization
20595 in
20596 0 #
20597 52 #n_cells storing vectors
20598 20 #n_compare
20599 0.5 3 #v_thresh v_min
20600 10 #v_ratio
20601 0.4 #width window width
20602 sr #show training data show_data_params(train):
20603 n #no
20604 #show network params
```

```
20605 sb #show batch params
20606 ex #execute
20607 1 #i=0:online,i=1:batch
20608 100 #iterations to execute
20609 10 #display
20610 nl
20611 bestmsp.net
20612 msp
20613 ens2ge tmp/train+test.dat tmp/train+test.dat N:1-55:1 m:3-20:1 ib:0:0:0:0 k:9 w:0.4 >/dev/null
20614
20615 061129
20616 現在までの実験結果と疑問点
20617 (1)
20618
20619 make clean; make "GPUT=1" <-- 実行中に図を表示したいとき、
20620 can2
20621 0
20622 12 0 0 #channels
20623 ./data/a3000.dat #training file
20624 2001 2200 #number of training data get_data_parms in my_function.c
20625 0 0 0 #ymin0 ymax0 y1min ymax0:No normalization if ymin0==0 && ymax0==0.
20626 in
20627 21 #n_cells storing vectors
20628 20 #n_compare
20629 0.5 3 0 #v_thresh in [0,1], v_min, vmin2
20630 10 #v_ratio Value Ratio for reinit
20631 0.2 #width window width
20632 sr #show training data show_data_parms(train):
20633 n #no
20634 #show network params
20635 sb #show batch params
20636 ex #execute
20637 1.5.000000e-02 7.000000e-01 # Learning Mode (0:online,1:batch), gamma0, entropy_thresh
20638 100 #iterations to execute
20639 100 50 350 表示回数, rot_x, rot_z
20640 nl
20641 bestmsp.net
20642 msp
20643 #multi-step prediction of test data
20644 #msp #single-step prediction of training data
20645 #ssp
20646 (2)
20647 ens2ge train+test.dat train+test.dat N:1-20:1 m:3-20:1 ib:0:0:0:0 k:12 >/dev/null
20648 #global min of Lvar with local min of Lhat (9neighbour of (11,1d) **Use this or the next)**
20649 19: 7(N:19-25) Lhat=9.494e-04 Lvarmin13=7.897e-02 Lvar=0.7897e-02 Lval=3.800875e+00**N:20-24
20650 19:20(N:19-38) Lhat=5.569e-04 Lvarmin66=2.077e-01 Lvar=0.2077e-01 Lval=3.305439e+00**N:20-37
20651 16:20(N:16-35) Lhat=1.089e-03 Lvarmin100=2.782e-01 Lvar=0.2782e-01 Lval=3.399093e+00**N:17-34
20652 12:20(N:12-31) Lhat=1.225e-03 Lvarmin178=4.207e-01 Lvar=0.4207e-01 Lval=3.574863e+00**N:13-30
20653 10:20(N:10-29) Lhat=1.177e-03 Lvarmin210=4.866e-01 Lvar=0.4866e-01 Lval=3.711434e+00**N:11-28
20654 t:train+test v:train+test 19:20(N:19-38) Lhatmin=5.568881e-04 Lval=3.305439e+00
20655 t:train+test v:train+test 20:20(N:20-39) Lhat=5.921234e-04 Lvalmin=3.254410e+00
20656 t:train+test v:train+test 20:3(N:20-22) Lvarmin=1.023905e-02 Lvarval=3.946501e+00
20657 t:train+test v:train+test 20:3(N:20-39) Lvarmin=2.093391e-01 Lvarvalmin=3.463749e+00
20658 ensrs train+test.dat -l:train+test.dat 1:1 ib:0:0:0:0 N:21-38 k:12 > /dev/null
20659 # 0 3.2544036e+00 1.7325950e-01 97 39 5.9212337e-04 #n ltest ltrain bestIT Nr Lhat+
20660
20661 040519
20662 (1)
20663 dataconvl ./data/CoordData_Cube.dat > ./data/CoordData_Cube2.dat
20664 gnuplot
20665 rx=50;rz=300
20666 set view rx,rz; splot [-100:400][:-150:200] " ./data/CoordData_Cube2.dat" using 1:2:3 w l
20667 pause 1: rz= rz-359 ? 0 : rz+20; set view rx,rz; replot
20668
20669 ./can2
20670 4
20671 0 #0:時系列,1:閾数,3:i3cnn04,4:距離ゾーダ
20672 2 0 次元 k1 k2
20673 ./data/CoordData_Cube2.dat
20674 -100 400 -150 200 xmin,xmax,xlmin,xlmax (range for test) -1500 1500 -600 1600
20675 145 1088 0 1 出力の正規化 ymin0 ymax0 → ymin1 ymax1
20676 -100 400 0 1 入力力の正規化 xmin0 xmax0 → xmin1 xmax1
20677 -150 200 0 1 入力の正規化 xlmin0 xlmax0 → xlmin1 xlmax1
20678 0 0 #r1 r2 ネットの初期化
20679 in
20680 500 セル数
20681 6 n_compare
20682 0.2 4 0 v_thresh vmin vmin2
20683 5 width,gamma #window width
20684 ex #実行
20685 1 0.05 0.7 #<0:online,1:batch>, <gamma0>, <entropy_thresh>
20686 100 l_times 学習回数
```

```
20687 100 50 5 表示回数, rot_x, rot_z
20688 gu
20689 gnuplot
20690 rx=50:rz=300
20691 set view rx,rz: splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l, "/result/
FCoordData_Cube2+tr13526+T100+K2+N500+NC6+vt0.2+vm4:0+vr5.0+w0.2+batch/funcSSP+t100-1.dat" using 1:2:3 t "y"
w l
20692 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20693 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20694 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20695 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20696 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20697 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20698 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20699
20700 040516e evening
20701 (l)gnuplot でデータを動的にする方法
20702 gnuplot
20703 rx=50:rz=300
20704 set view rx,rz: splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20705 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20706 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20707 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20708 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20709 以上をカットし、ペーストする。
20710 gnuplot
20711 rx=10:rz=300
20712 set view rx,rz: splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20713 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20714 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20715 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20716 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20717 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20718
20719
20720
20721 (3) 表示角度を学習実行時に設定できるようにした。
20722 実行例: (→下の「100 50 5 表示回数, rot_x, rot_z」を参照。)
20723 ./can2
20724 4 #0:時系列,1:閾値,3:ijcnn04,4:距離データ
20725 2 0 次元 k1 k2
20726 ./data/CoordData_Cube.dat
20727 -100 400 -150 200 x0max,x1min,xlmax (range for test) -1500 1500 -600 1600
20728 145 1088 0 1 出力の正規化 ymin0 ymax0 → ymin1 ymax1
20729 -100 400 0 1 入力 of 正規化 x0min0 x0max0 → x0min x0max
20730 -150 200 0 1 入力 of 正規化 xlmin0 xlmax0 → xlmin,xlmax
20731 0 0 #r1 r2
20732 in ネットの初期化
20733 500
20734 6 n_compare
20735 0.2 4 0 v_thresh vmin vmin2
20736 5 v_ratio
20737 0.2 width,gamma #window width
20738 ex 実行
20739 1 0.05 0.7 #<0:online,1:batch>, <gamma0>, <entropy_thresh>
20740 100 i_times 学習回数
20741 100 50 5 表示回数, rot_x, rot_z
20742 gu
20743
20744 gnuplot
20745 rx=50:rz=300
20746 set view rx,rz: splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l, "result/PC
CoordData_Cube+tr13206+T100+K2+N500+NC6+vt0.2+vm4:0+vr5.0+w0.2+batch/funcSSP+t100-1.dat" using 1:2:3 t "y"
w l
20747 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20748 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20749 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20750 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20751 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20752 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20753 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20754
20755 plot [-0.2:1.2][[-0.2:1.2] " ./result/PCoordData_Cube+tr13206+T100+K2+N500+NC6+vt0.2+vm4:0+vr5.0+w0.2+
batch/net_w+t100.dat" using 1:2 t "w" w p
20756
20757 (3) 以前、西田くんにもらった 3dmeasure.dat を学習させてみた。
20758 前如理。
20759 make dataset2 ← 3dmeasure.dat を gnuplot と can2 で読み込み可能形式にする。
20760 ./dataset2 ./data/3dmeasure.dat > ./data/3dmeasure1.dat
20761 gnuplot
20762 rx=10:rz=0
20763 set view rx,rz: splot [1.3:2.0][90:250] " ./data/3dmeasure1.dat" using 1:2:3 w l
```

```
20764 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20765 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20766 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20767
20768 ./can2
20769 4 #0:時系列,1:閾値,3:ijcnn04,4:距離データ
20770 2 0 次元 k1 k2
20771 ./data/3dmeasure1.dat
20772 1.3 2.0 90 250 x0min,x0max,x1min,xlmax (range for test)
20773 500 1100 0 1 出力の正規化 ymin0 ymax0 → ymin1 ymax1
20774 1.3 2.0 0 1 入力 of 正規化 x0min0 x0max0 → x0min x0max
20775 90 250 0 1 入力 of 正規化 xlmin0 xlmax0 → xlmin,xlmax
20776 0 0 #r1 r2
20777 in ネットの初期化
20778 500
20779 6 n_compare
20780 0.2 4 0 v_thresh vmin vmin2
20781 5 v_ratio
20782 0.2 width,gamma #window width
20783 ex 実行
20784 1 0.05 0.7 #<0:online,1:batch>, <gamma0>, <entropy_thresh>
20785 100 i_times 学習回数
20786 100 10 15 表示回数, rot_x, rot_z
20787 gu
20788 gnuplot
20789 rx=10:rz=300
20790 set view rx,rz: splot [1.3:2.0][90:250] " ./data/3dmeasure1.dat" using 1:2:3 w l, "/result/F3dmeas
ure1+tr5921+T100+K2+N500+NC6+vt0.2+vm4:0+vr5.0+w0.2+batch/funcSSP+t100-1.dat" using 1:2:3 t "y" w l
20791 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20792 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20793 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20794 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20795 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20796 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20797 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20798 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20799 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20800 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20801 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20802 pause 1: rz= rz>359 ? 0 : rz>20; set view rx,rz: replot
20803
20804 plot [-0.2:1.2][[-0.2:1.2] " ./result/F3dmeasure1+tr5921+T100+K2+N500+NC6+vt0.2+vm4:0+vr5.0+w0.2+batch
/net_w+t100.dat" using 1:2 t "w" w p
h/net_w+t100.dat" using 1:2 t "w" w p
20805
040516
20806 (1) 入力変数の正規化アルゴリズムを修正した。
20807 各変数 x0,x1 について正規化するようにした。
20808 (以前は全変数のminとmaxを使っていた)
20809 (2) データ表示
20810 splot [1.3:2.2][100:250] "3dmeasure.dat" using 2:3:1 w l
20811 make dataset (dataset.c ← gnuplot用に1水平スキャンデータ毎に改行)
20812 ./dataset ./data/CoordData_Cube.dat > ./data/CoordData_Cubel.dat
20813 gnuplot
20814 set view 10.0; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20815 set view 50.5; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20816 set view 50.10; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20817 set view 50.15; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20818 set view 50.16; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20819 set view 50.0; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20820 set view 50.350; splot [-100:400][[-150:200] " ./data/CoordData_Cubel.dat" using 1:2:3 w l
20821 plot " ./data/CoordData_Cubel.dat" using 1:2 w p
20822 ← wrappplot/plot.c にset view 50.5を加えた。
20823
20824 (4)実行例
20825 コンパイル
20826 make clean; make "QPLT=1" <-- 実行中に図を表示したいとき、
20827 make clean; make "QPLT=0" <-- 実行中に図を表示したくないとき
20828 実行
20829 ./can2
20830
20831 4 #0:時系列,1:閾値,3:ijcnn04,4:距離データ
20832 2 0 次元 k1 k2
20833 ./data/CoordData_Cube.dat
20834 -100 400 -150 200 x0min,x0max,x1min,xlmax (range for test) -1500 1500 -600 1600
20835 145 1088 0 1 出力の正規化 ymin0 ymax0 → ymin1 ymax1
20836 -100 400 0 1 入力 of 正規化 x0min0 x0max0 → x0min x0max
20837 -150 200 0 1 入力 of 正規化 xlmin0 xlmax0 → xlmin,xlmax
20838 0 0 #r1 r2
20839 in ネットの初期化
20840 500
20841 6 n_compare
20842 0.2 4 0 v_thresh vmin vmin2
20843 5 v_ratio
```

```
20844 0.2 width,gamma #window width
20845 ex 実行
20846 1 0.05 0.7 #<0:online,i:batch>, <gamma0>, <entropy_thresh>
20847 100 i_times 学習回数
20848 100 50 5 表示回数, rot_x, rot_z
20849 qu
20850
500>→100MSE1.442e+02NMSE08.28e-03MSRtr7.89e-05N500k2w0.2vm4:0
20851 以上の結果を使って以下を実行して確認:
20852 gnuplot
20853 set view 50,5; plot [-100:400][:-150:200] " ./data/CoordData_Cube1.dat" using 1:2:3 w l, "result/FCo
ordData_Cube+tr13206+T100+K2+N500+NC6+vr0.2+vm4:0+vr5.0+w0.2+batch/funcSSP+T100-1.dat" using 1:2:3 t "y^" w
l
20855
20856 plot [-0.2:1.2][:-0.2:1.2] " ./result/FCoordData_Cube+tr13206+T100+K2+N500+NC6+vt0.2+vm4:0+vr5.0+w0.2+
batch/mc_w+T100.dat" using 1:2 t "w" w p
20857
```

(注意: 以上の実行例では、安定した学習を行うため
20858 出力変数x1,x2,yの領域を[0,1]に正規化して学習させてます。
20859 全測結果や予測誤差は逆変換して表示してりますが、
20860 学習された荷重w11,w12は正規化されたまま表示してます。
20861 なお、実行後は表示が消えますが、結果は、./result/O
20862 下のディレクトリに保存されます。(詳しくは沢さんが知ってます)。
20863 また画面表示される予測結果Single-Step Predictionの真値 y は、
20864 51×51の正方形格子点 (x1,y1) に最も近いデータ点の値としている本当の真値
20865 ではありません。

```
20867 -----
20868 (1)距離 データ処理関数 load_data_RANGEData()を追加した:
20869 距離 データの 一部の矩形領域を処理するようにした。
20870
20871 (2)コンパイル
20872 make clean; make "GFLT=1" <-- 実行中に図を表示したいとき、
20873 make clean; make "GFLT=0" <-- 実行中に図を表示したくないとき
20874
20875 (3)データの確認
20876 gnuplot
20877 set data style lines
20878 plot " ./data/CoordData_Cube.dat" using 1:2:3
20879 set data style points
20880 plot [-100:400][:-300:200] " ./data/CoordData_Cube.dat" using 1:2
20881 (4)実行例
20882 ./can2
20883 4
20884 #0:時系列,1:閾数,3:ijcnn04,4:距離データ
20885 次元
20886 ./data/CoordData_Cube.dat
20887 -200 200 -500 500 xmin,xmax,ymin,ymax (range for test) -1500 1500 -600 1600
20888 出力の正規化 xmin0 ymax0 → ymin1 ymax1
20889 -150 400 0 1 入力 of 正規化 xminin0 xmaxin0 → xminin1 xmaxin
20890 0 0 #r1 r2
20891 ネットの初期化
20892 in
20893 次元数
20894 6 n_compare
20895 0.2 4 v_thresh vmin vmin2
20896 5 v_ratio
20897 0.2 width,gamma #window width
20898 ex 実行
20899 1 0.05 0.75 #<0:online,i:batch>, <gamma0>, <entropy_thresh>
20900 i_times 学習回数
20901 表示回数
20902 qu
```

(注意: 以上の実行例では、安定した学習を行うため
20900 入力出力変数x1,x2,yの領域を[0,1]に正規化して学習させてます。
20901 予測結果や予測誤差は逆変換して表示してりますが、
20902 学習された荷重w11,w12は正規化されたまま表示してます。
20903 なお、実行後は表示が消えますが、結果は、./result/O
20904 下のディレクトリに保存されます。(詳しくは沢さんが知ってます)。
20905 また画面表示される予測結果Single-Step Predictionの真値 y は、
20906 50×50の正方形格子点 (x1,y1) に最も近いデータ点の値としている本当の真値
20907 ではありません。

```
20909 040513
20910 make mkrangetestdata
20911 mkrangetestdata -500 500 100 -500 1200 100 > ./data/rangetest.dat
20912 mkrangetestdata -1500 1500 100 -600 1600 100 > ./data/rangetest.dat
20913 mkrangetestdata -750 930 100 -1122 1433 100 > ./data/rangetest.dat
20914 mkrangetestdata -200 200 100 -500 500 100 > ./data/rangetest25.dat
20915
20916 ./can2
20917 4
20918 #0:時系列,1:閾数,3:ijcnn04,4:RangeData
20919 次元
20920 ./data/CoordData_Cube.dat
20921 -100 350 -300 150 xmin,xmax,ymin,ymax (range for test) -1500 1500 -600 1600
20922 0 0 0 正規化パラメタ y0min y0max y1min y1max
```

```
20923 in ネットの初期化
20924 500 次元数
20925 6 n_compare
20926 0.2 3 0 v_thresh vmin vmin2
20927 5 v_ratio
20928 0.2 width,gamma #window width
20929 ex 実行
20930 1 0.05 0.80 #<0:online,i:batch>, <gamma0>, <entropy_thresh>
20931 10 i_times 学習回数
20932 表示回数
20933 qu
20934 ./can2
20935 1
20936 #0:時系列,1:閾数,
20937 2 0 次元
20938 ./data/CoordData_Cube.dat
20939 ./data/rangetest25.dat
20940 0 0 0 正規化パラメタ y0min y0max y1min y1max
20941 in ネットの初期化
20942 500 次元数
20943 6 n_compare
20944 0.2 3 0 v_thresh vmin vmin2
20945 5 v_ratio
20946 0.2 width,gamma #window width
20947 ex 実行
20948 1 0.05 0.80 #<0:online,i:batch>, <gamma0>, <entropy_thresh>
20949 10 i_times 学習回数
20950 表示回数
20951 qu
20952 ./can2
20953 4
20954 #0:時系列,1:閾数,3:ijcnn04,4:RangeData
20955 2 0 次元
20956 ./data/CoordData_Cube.dat
20957 -200 200 -500 500 xmin,xmax,ymin,ymax (range for test) -1500 1500 -600 1600
20958 出力の正規化パラメタ y0min y0max y1min y1max
20959 in ネットの初期化
20960 100 次元数
20961 6 n_compare
20962 0.2 3 0 v_thresh vmin vmin2
20963 5 v_ratio
20964 0.2 width,gamma #window width
20965 ex 実行
20966 1 0.05 0.80 #<0:online,i:batch>, <gamma0>, <entropy_thresh>
20967 10 i_times 学習回数
20968 表示回数
20969 qu
20970 ./can2
20971 4
20972 #0:時系列,1:閾数,3:ijcnn04,4:RangeData
20973 2 0 次元
20974 ./data/CoordData_Cube.dat
20975 -200 200 -500 500 xmin,xmax,ymin,ymax (range for test) -1500 1500 -600 1600
20976 出力の正規化パラメタ y0min y0max y1min y1max
20977 145 1088 0 1 正規化パラメタ xmin0 xmax0 ymin ymax
20978 -1122 1432 0 1 正規化パラメタ xmin0 xmax0 ymin ymax
20979 0 0 #r1 r2
20980 in ネットの初期化
20981 100 次元数
20982 6 n_compare
20983 0.2 3 0 v_thresh vmin vmin2
20984 5 v_ratio
20985 0.2 width,gamma #window width
20986 ex 実行
20987 1 0.05 0.80 #<0:online,i:batch>, <gamma0>, <entropy_thresh>
20988 10 i_times 学習回数
20989 表示回数
20990 qu
20991 ktermx
20992 cd ./result/FCoordData_Cube+tr160801+T10+K2+N100+NC6+vt0.2+vm3:0+vr5.0+w0.2+batch; gnuplot funcSSP+T
10.-gp1
20993
20994 ./can2
20995 1
20996 #0:時系列,1:閾数,
20997 2 0 次元
20998 ./data/CoordData_Cube.dat
20999 ./data/rangetest25.dat
20999 145 1088 0 1 正規化パラメタ y0min y0max y1min y1max
21000 -1122 1432 0 1 正規化パラメタ xmin0 xmax0 ymin ymax
21001 0 0 #r1 r2
21002 in ネットの初期化
21003 100 次元数
```

```
21004 6 n_compare
21005 0.2 3 0 v_thresh vmin vmin2
21006 5 v_ratio
21007 0.2 width,gamma #window width
21008 ex 実行
21009 1 0.05 0.80 #<0:online,1:batch>, <gamma>, <entropy_thresh>
21010 10 i_times 学習回数
21011 10 表示回数
21012 qu
21013
21014
21015 040510
21016 sh bench2b03ieice.sh
21017 sh bench2o03ieice.sh
21018 040310.log 040311e.log 040510f02.log 040510f03o.log 040510f11o.log
21019 040311.log 040311n.log 040510f03.log 040510f11.log
21020
21021 040426
21022 まず、
21023 make clean; make "GPRT=1" <-- 実行中に図を表示したいとき
21024 make clean; make "GPRT=0" <-- 実行中に図を表示したくないとき
21025 として、例えば bench2b.sh または以下を行う。
21026 ./can2
21027 1 #0:時系列,1:関数
21028 2 次元
21029 ./data/07train1e3.dat
21030 ./data/07test.dat
21031 0 0 0 正規化パラメタ yomin yomax ylimin ylimax
21032 in ネットの初期化
21033 100 セル数
21034 6 n_compare
21035 0.2 3 0 v_thresh vmin vmin2
21036 5 v_ratio
21037 0.1 0.05 width,gamma #window width
21038 ex 実行
21039 1 0.05 0.80 #<0:online,1:batch>, <gamma>, <entropy_thresh>
21040 10 i_times 学習回数
21041 10 表示回数
21042 qu
21043
21044 040310
21045 (1) make "GPRT=1"
21046 (2) 結果は ./result/の下に
21047 040311
21048 net->entropy_thresh=LA(net->n_cells,0.75,1.00,0.90,500) ;
21049 see 040311e.log
21050 batch
21051 D=1e3
21052 >>2ttest3.5327e-04,74train7.4276e-05N100k2w0.lvm1:0 0m4.950s
21053 >>84test3.9918e-04,100train7.6028e-05N100k2w0.lvm2:0
21054 >>17test3.4486e-04,89train7.7138e-05N100k2w0.lvm4:0
21055 >>20test2.6159e-04,80train9.2993e-05N100k2w0.lvm5:0
21056 >>21test3.1889e-04,100train1.0776e-04N100k2w0.lvm6:0
21057 >>10test3.1089e-04,99train1.3890e-04N100k2w0.lvm7:0
21058 >>80test2.7536e-04,38train4.9048e-05N100k2w0.lvm3:0 noise0
21059
21060 >>18test3.0627e-04, 99train7.7302e-05N100k2w0.lvm3:0 0m5.230s
21061 >>24test4.7916e-04,100train2.5782e-05N200k2w0.lvm3:0 0m10.230s
21062 >>52test3.4901e-04,100train2.5906e-05N300k2w0.lvm3:0 0m15.500s
21063 >>7test6.2930e-04,100train1.2289e-05N400k2w0.lvm3:0 0m22.190s
21064 >>5test5.8345e-04,100train1.4024e-05N500k2w0.lvm3:0 0m29.430s
21065 D=5e3
21066 >>96test8.4962e-05, 85train9.6303e-05N100k2w0.lvm3:0 0m17.610s
21067 >>72test4.0073e-05, 96train4.5509e-05N200k2w0.lvm3:0 0m37.300s
21068 >>50test3.4081e-05, 99train3.7600e-05N300k2w0.lvm3:0 0m55.300s
21069 >>20test3.7368e-05, 15train3.7836e-05N400k2w0.lvm3:0 0m47.770s
21070 >>59test5.0089e-05,100train2.7924e-05N500k2w0.lvm3:0 1m29.770s
21071 D=1e4
21072 >>65test6.6669e-05,100train7.6892e-05N100k2w0.lvm3:0 0m33.370s
21073 >>95test2.4903e-05, 92train4.5406e-05N200k2w0.lvm3:0 1m11.220s
21074 >>82test1.9685e-05, 98train3.9723e-05N300k2w0.lvm3:0 1m45.030s
21075 >>55test1.8372e-05,100train3.4113e-05N400k2w0.lvm3:0 2m18.160s
21076 >>51test1.8074e-05,100train3.1159e-05N500k2w0.lvm3:0 2m50.550s
21077 D=5e4
21078 >>96test2.8420e-05, 98train6.1535e-05N100k2w0.lvm3:0 2m54.290s
21079 >>98test1.4672e-05, 97train4.5205e-05N200k2w0.lvm3:0 5m35.510s
21080 >>86test7.6037e-06, 99train3.8442e-05N300k2w0.lvm3:0 8m16.360s
21081 >>69test6.1563e-06, 99train3.6585e-05N400k2w0.lvm3:0 10m36.150s
21082 >>99test5.1274e-06, 96train3.5157e-05N500k2w0.lvm3:0 13m37.050s
21083 online
21084 D=1e3
21085 >> 41test4.6537e-04,100train1.0572e-04N100k2w0.lvm3:0 0m16.000s
```

```
>> 70test6.0533e-04,100train6.7116e-05N200k2w0.lvm3:0 0m31.120s
21087 >>100test5.6474e-04,100train1.9377e-05N300k2w0.lvm3:0 0m46.230s
21088 >>100test9.3572e-04,100train8.3702e-06N400k2w0.lvm3:0 1m1.460s
21089 >> 35test9.9502e-04,100train2.7464e-06N500k2w0.lvm3:0 1m16.290s
21090 D=5e3
21091 >>100test1.0583e-04, 98train9.3564e-05N100k2w0.lvm3:0 1m12.830s
21092 >>100test7.1262e-05,100train7.7752e-05N200k2w0.lvm3:0 2m22.290s
21093 >> 97test5.2127e-05, 99train5.2846e-05N300k2w0.lvm3:0 3m32.210s
21094 >> 17test6.0295e-05,100train4.0370e-05N400k2w0.lvm3:0 4m41.610s
21095 >> 17test4.5329e-05, 98train3.3946e-05N500k2w0.lvm3:0 5m51.120s
21096 D=1e4
21097 >> 56test6.4194e-05,94train9.3962e-05N100k2w0.lvm3:0 2m23.780s
21098 >>100test6.0600e-05,99train7.2820e-05N200k2w0.lvm3:0 4m41.220s
21099 >> 84test4.5436e-05,97train5.5646e-05N300k2w0.lvm3:0 6m59.020s
21100 >> 26test3.6985e-05,98train4.7309e-05N400k2w0.lvm3:0 9m39.120s
21101 >> 92test3.1103e-05,97train3.3952e-05N500k2w0.lvm3:0 11m33.470s
21102 D=5e4
21103 >> 96test3.2184e-05, 99train6.5059e-05N100k2w0.lvm3:0 11m46.240s
21104 >> 80test1.9184e-05, 99train5.2492e-05N200k2w0.lvm3:0 23m6.790s
21105 >>100test1.8349e-05,100train5.1622e-05N300k2w0.lvm3:0 34m26.720s
21106 >>100test1.311e-05,100train4.7674e-05N400k2w0.lvm3:0 46m59.210s
21107 >>56test1.2118e-05,98train4.2992e-05N500k2w0.lvm3:0 57m44.690s
21108
21109 >>96test3.2184e-05,99train6.5059e-05N100k2w0.lvm3:0 11m50.320s
21110
21111 -----
21112 D=1e3
21127 >>18test3.0627e-04H4.109532e-05>>100ssp3.8339e-04H7.159275e-06N100k2w0.lvm3:0 0m5.220s **
21128 >>57ssp4.7740e-04H2.756919e-06>>100ssp5.0049e-04H2.556167e-06N200k2w0.lvm3:0 0m10.420s
21129 >>52ssp3.4901e-04H1.185315e-05>>100ssp4.1055e-04H9.474721e-06N300k2w0.lvm3:0 0m15.700s
21130 >> 7ssp6.2930e-04H9.854391e-06>> 49ssp7.2670e-04H4.411319e-06N400k2w0.lvm3:0 0m22.510s
21131 >> 5ssp5.8345e-04H1.075559e-05>> 63ssp1.07733e-03H8.505738e-06N500k2w0.lvm3:0 0m29.340s
21132 x=0.34 0.000157998 5.6797778e-05 955 1m24.790s
21133 D=5e3
21134 >>62ssp7.7720e-05H1.762614e-06>> 59ssp7.9841e-05H1.542854e-05N100k2w0.lvm3:0 0m16.000s
21135 >>63ssp4.7848e-05H3.385847e-06>> 95ssp6.6219e-05H2.438220e-06N200k2w0.lvm3:0 0m36.850s
21136 >>50ssp3.4081e-05H2.662382e-06>>100ssp3.5285e-05H2.077933e-06N300k2w0.lvm3:0 0m55.210s*****
21137 >>20ssp3.7368e-05H3.578769e-06>> 15ssp4.7483e-05H2.845090e-06N400k2w0.lvm3:0 0m47.840s
21138 >>59ssp5.0089e-05H1.638658e-06>>100ssp5.2996e-05H1.475891e-06N500k2w0.lvm3:0 1m30.010s
21139 x=0.30 3.95415e-05 5.7753327e-05 4042 8m45.130s **
21140 D=1e4
21141 >>78ssp7.1292e-05H3.023923e-05>>42ssp1.3409e-04H2.693487e-05N100k2w0.lvm3:0 0m31.260s
21142 >>95ssp2.4903e-05H4.352362e-06>>74ssp3.2677e-05H3.085976e-06N200k2w0.lvm3:0 1m11.270s
21143 >>64ssp2.1126e-05H1.953754e-06>>86ssp2.1805e-05H1.557001e-06N300k2w0.lvm3:0 1m44.060s
21144 >>55ssp1.8372e-05H1.742066e-06>>88ssp1.8861e-05H1.443445e-06N400k2w0.lvm3:0 2m17.860s
21145 >>51ssp1.8074e-05H1.424525e-06>>81ssp1.8600e-05H1.236897e-06N500k2w0.lvm3:0 2m50.170s*****
21146 x=0.18 2.9135e-05 4.8554882e-05 5613 14m14.440s by terasu**
21147 D=5e4
21148 >>96ssp2.8420e-05H9.558920e-06>>89ssp3.0436e-05H8.612877e-06N100k2w0.lvm3:0 2m50.210s
21149 >>81ssp1.2295e-05H5.848392e-06>>96ssp1.3448e-05H5.315518e-06N200k2w0.lvm3:0 5m39.210s
21150 >>96ssp7.6037e-06H2.259639e-06>>94ssp1.0068e-05H1.814841e-06N300k2w0.lvm3:0 8m18.190s
21151 >>85ssp5.7613e-06H9.715256e-07>>93ssp5.9677e-06H9.192231e-07N400k2w0.lvm3:0 10m49.820s
21152 >>99ssp5.1274e-06H7.69098e-07>>92ssp5.1931e-06H7.419423e-07N500k2w0.lvm3:0 13m32.190s ****
21153 x=0.18 2.12596e-05 5.0942349e-05 9431 337m54.390s
21154
21155
21156 D=1e3
21157 >> 41ssp4.6537e-04H1.283971e-04>>1asp1.1086e-03H1.101294e-03N100k2w0.lvm3:0 0m16.010s
21158 >> 70ssp6.0533e-04H6.746053e-05>>1asp9.2951e-04H2.466056e-04N200k2w0.lvm3:0 0m31.100s
21159 >>100ssp5.6474e-04H1.937659e-05>>1asp1.1095e-03H1.641004e-04N300k2w0.lvm3:0 0m46.100s
21160 >>100ssp9.3572e-04H8.370218e-06>>1asp1.5364e-03H1.591809e-04N400k2w0.lvm3:0 1m1.180s
21161 >> 35ssp9.9502e-04H3.449163e-06>>1asp1.3760e-03H2.152085e-04N500k2w0.lvm3:0
21162 D=5e3
21163 >>100ssp1.0583e-04H9.409067e-05>>1asp4.1188e-04H4.731135e-04N100k2w0.lvm3:0 1m12.740s
21164 >>100ssp7.1262e-05H7.775153e-05>>1asp4.5320e-04H5.096229e-04N200k2w0.lvm3:0 2m32.890s
21165 >> 97ssp5.2127e-05H5.292182e-05>>1asp1.5097e-04H1.310186e-04N300k2w0.lvm3:0 3m32.320s
21166 >> 17ssp6.0295e-05H4.686067e-05>>1asp1.3083e-04H1.122913e-04N400k2w0.lvm3:0 4m40.830s
21167
```

```
>> 41test4.6537e-04,100train1.0572e-04N100k2w0.lvm3:0 0m16.000s
```



```
21168 >> l7ssp4.5329e-05H3.933964e-05>>>lssp1.2419e-04H1.122968e-04N500k2w0.1vm3:0 5m50.150s
21169 D=le4
21170 >> 56sspp6.4194e-05H1.011630e-04>>>lssp4.4539e-04H4.439835e-04N100k2w0.1vm3:0 2m23.510s
21171 >> 100sspp6.0600e-05H7.282430e-05>>>lssp2.4471e-04H2.670268e-04N200k2w0.1vm3:0 4m40.480s
21172 >> 84sspp4.5436e-05H5.590699e-05>>>lssp1.3074e-04H1.106084e-04N300k2w0.1vm3:0 6m57.210s
21173 >> 26sspp3.6985e-05H5.050373e-05>>>lssp9.2563e-05H9.502154e-05N400k2w0.1vm3:0 9m14.670s
21174 >> 92sspp3.1103e-05H4.007001e-05>>>lssp7.8360e-05H8.998270e-05N500k2w0.1vm3:0 11m28.210s
21175 D=5e4
21176 >>96sspp3.2184e-05H6.557853e-05>>>lssp2.2125e-04H2.351238e-04N100k2w0.1vm3:0 11m50.030s
21177 >>80sspl.9184e-05H5.530818e-05>>>lssp8.5118e-05H1.253944e-04N200k2w0.1vm3:0 23m3.040s
21178 >>100sspl.8349e-05H5.162161e-05>>>lssp4.4178e-05H7.736686e-05N300k2w0.1vm3:0 34m57.630s
21179
21180
21181 040310
21182
21183 can2
21184 1 #0:時系列,1:関数
21185 2 次元
21186 ./data/07train1e3.dat
21187 ./data/07test1e3.dat
21188 0 0 0 正規化/パラメタ y0min y0max y1min y1max
21189 in ネットの初期化
21190 ゼル数
21191 100
21192 6 n_compare
21193 0.2 0 0 v_thresh vmin vmin2
21194 5 v_ratio
21195 width,gamma #window width
21196 0.1 0.05
21197 ex 実行
21198 1 0.05 0.90 0:オンライン (不能) 1:バッチ
21199 i_times 学習回数
21200 100 表示回数
21201 qu
21202 data for sci2004
21203 N=100 D=le3 100MSF5.467e-04MSFtr+6.85e-05
21204 N=120 D=le3 100MSF1.353e-03MSFtr+5.92e-05
21205 N=120 D=le3 100MSF3.817e-04MSFtr+1.26e-04
21206 N=139 D=le3 100MSF4.415e-04MSFtr+4.62e-05
21207 N=140 D=le3 100MSF2.613e-04MSFtr+4.63e-05F07train1e3+tr1000+Tl00-K2+Nl40-NC6+vt0.2+vm3:0+vr5.0+vr0.1+b
atcn ***
21208 N=141 D=le3 100MSF3.148e-04MSFtr+4.84e-05
21209 N=150 D=le3 100MSF3.610e-04MSFtr+3.01e-05
21210 N=200 D=le3 100MSF4.785e-04MSFtr+1.98e-05
21211 N=210 D=le3 100MSF2.941e-04MSFtr+1.77e-05F07train3noise0+tr1000+Tl00-K2+Nl40-NC6+vt0.2+vm3:0+vr5.0+vr0.1+b
atcn
21211 N=300 D=5e3 100MSF3.529e-05MSFtr+3.77e-05>50sspp3.4081e-05 F07train5e3+tr5000+Tl00-K2+N300+NC6+vt0.2+vr
m3:0+vr5.0+vr0.1+batch0.80
21212 N=310 D=5e3 100MSF3.445e-05MSFtr+3.58e-05>86sspp3.3969e-05 F07train5e3+tr5000+Tl00-K2+N310+NC6+vt0.2+vr
m3:0+vr5.0+vr0.1+batch0.80 ***
21213
21214 N=200 D=2e3 100MSF1.946e-04MSFtr+4.98e-05>22aspl.3481e-04
21215 N=150 D=2e3 100MSF1.131e-04MSFtr+7.53e-05>100sspl.1315e-04 E0.80
21216 N=140 D=2e3 100MSF1.059e-04MSFtr+5.33e-05>75sspl.0524e-04 ***
21217 N=130 D=2e3 100MSF9.849e-05MSFtr+6.91e-05>100sspp.8494e-05
21218
21219 N=200 D=3e3 100MSF7.693e-05MSFtr+4.76e-05>59sspp6.5116e-05
21220 N=180 D=3e3 100MSF6.010e-05MSFtr+4.40e-05>8sspp5.6655e-05 0m21.310s***
21221 N=180 D=3e3 100MSF7.779e-05MSFtr+4.43e-05>18sspp6.8473e-05 0m18.940s
21222
21223 N=200 D=4e3 100MSF4.092e-05MSFtr+4.07e-05>98sspp3.9921e-05 0m26.980s
21224 N=210 D=4e3 100MSF4.213e-05MSFtr+3.95e-05>52sspp3.6226e-05 0m29.890s ***E0.8
21225 N=220 D=4e3 100MSF4.960e-05MSFtr+4.33e-05>98sspp4.9259e-05 0m27.250s
21226
21227 N=500 D=le3 100MSF1.185e-03MSFtr+1.40e-05> 5sspp5.8345e-04 F07train1e3+tr1000+Tl00-K2+N500+NC6+vt0.2+vr
m3:0+vr5.0+vr0.1+batch 0m39.010s
21228 N=500 D=2e3 100MSF1.845e-04MSFtr+1.40e-05>21sspl.6589e-04 F07train2e3+tr2000+Tl00-K2+N500+NC6+vt0.2+vr
m3:0+vr5.0+vr0.1+batch 0m53.320s
21229 N=500 D=5e3 100MSF5.300e-05MSFtr+2.79e-05>59sspp5.0089e-05 F07train5e3+tr5000+Tl00-K2+N500+NC6+vt0.2+vr
m3:0+vr5.0+vr0.1+batch 1m39.460s
21230 N=500 D=le4 100MSF2.090e-05MSFtr+3.12e-05>51sspl.8074e-05 F07train1e4+tr10000+Tl00-K2+N500+NC6+vt0.2+
vm3:0+vr5.0+vr0.1+batch 2m59.760s
21231 N=500 D=5e4 100MSF5.368e-06MSFtr+3.52e-05>99sspp5.1274e-06 F07train5e4+tr50000+Tl00-K2+N500+NC6+vt0.2+
vm3:0+vr5.0+vr0.1+batch 13m39.500s
21232 N=500 D=5e4 >96sspp8.3399e-06>>>85sspp8.8341e-06H1.568231e-0F07train5e4+tr50000+Tl00-K2+N500+NC6+vt0.2+
vm3:0+vr5.0+vr0.1+batc E=0.80
21233
21234 Online
21235 N=500 D=le3 100MSF1.010e-03MSFtr+2.75e-06>35sspp9.9502e-04 F07train1e3+tr1000+Tl00-K2+N500+NC6+vt0.5+vr
m3:0+vr5.0+vr0.1+online 1m25.240s
21236 N=500 D=2e3 100MSF3.409e-04MSFtr+1.94e-05>13sspp3.1373e-04 F07train2e3+tr2000+Tl00-K2+N500+NC6+vt0.5+vr
m3:0+vr5.0+vr0.1+online 2m33.280s
21237 N=500 D=5e3 100MSF4.947e-05MSFtr+3.40e-05>17sspp4.5329e-05 F07train5e3+tr5000+Tl00-K2+N500+NC6+vt0.5+vr
```

```
m3:0+vr5.0+vr0.1+online 5m57.060s
21238 N=500 D=le4 100MSF3.110e-05MSFtr+4.00e-05>92sspp3.1103e-05 F07train1e4+tr10000+Tl00-K2+N500+NC6+vt0.5+vr
m3:0+vr5.0+vr0.1+online1m36.500s
21239 N=500 D=5e4 100MSF1.635e-05MSFtr+4.30e-05>56sspl.2118e-05 F07train5e4+tr50000+Tl00-K2+N500+NC6+vt0.5+vr
m3:0+vr5.0+vr0.1+online 57m2.070s
21240
21241 batch noise0
21242 N=500 D=5e4 100MSB6.110e-06MSBTr+5.37e-06>45sspp4.1359e-06 F07train5e4noise0+tr50000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 1m31.560s
21243 N=500 D=le4 100MSF7.185e-06MSKTr+3.25e-06>88sspp5.5664e-06 F07train1e4noise0+tr10000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 2m25.110s
21244 N=500 D=5e3 100MSF2.546e-05MSFtr+2.50e-06>53sspp2.2217e-05 F07train5e3noise0+tr5000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 1m25.580s
21245 N=500 D=2e3 100MSE1.259e-04MSETr+9.35e-07>39sspl.2146e-04 F07train2e3noise0+tr2000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch/ 0m49.170s
21246
21247 N=500 D=le3 100MSE4.348e-04MSETr+1.05e-05>19sspp3.7114e-04 F07train1e3noise0+tr1000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 0m38.140s
21248 N=500 D=le3 100MSB6.482e-04MSBTr+9.12e-06>10sspp6.4818e-04F07train1e3noise0+tr1000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 0m36.640s
21249 N=500 D=le3 100MSE9.466e-04MSETr+5.73e-09>18sspp8.5702e-04 F07train1e3noise0+tr1000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 0m32.080s
21250 N=500 D=le3 100MSF3.651e-04MSEBTr+3.01e-05>14sspp2.8057e-04 F07train1e3noise0+tr1000+Tl00-K2+N500+NC6+vt0.2+vm3:0+vr5.0+vr0.1+batch 0m39.210s
21251 040308
21252 can2
21253 0 #0:timeseries,1:chaos prepare_data() in my_function.c
21254 10 0 #channels
21255 ./data2s.dat
21256 980 1020 #Ttrain,Ttotal: points in time of training and total data
21257 -410 640 0 1 #y0min y0max y1min y1max for normalization
21258 0 #r1 r2
21259 in #
21260 25 #n_cells storing vectors
21261 6 #n_compare
21262 0.2 3 0 #v_thresh vmin vmin2
21263 2 #v_ratio
21264 0.2 #width window width
21265 sr #show training data show_data_parms(train);
21266 n #no
21267 sn #show network params
21268 sb #show batch params
21269 ex
21270 1 le-3 0.90 #<0:online,1:batch>, <gamma0>, <entropy_thresh>
21271 100 #iterations to execute
21272 100 #display
21273 nl
21274 bestmspp.net
21275 msp
21276
21277 040225
21278 (1) 黒木です。INGENNT 0 の問題で 多段予測を指定した時点からの1区間だけでなく、
21279 20(sim.cの#define NN 20 で設定) 時点後の区間まで1時点ずつずらして行い、
21280 そのMSEの平均をgivendata->ljcmn04data->MSEmeanにしようにしました。
21281 プログラムは
21282 http://teraau.cntl.kyutech.ac.jp/~kuro/sotu/2004/ueno/can2b040225.tgz
21283 です
21284 例えば、ruby ./gtest.rb 930 0 0 をすると他のブロックの与えられたデータ
21285 とこの区間の929までのデータを学習し、その学習結果を使って、
21286 多段予測区間として
21287 930~949
21288 931~950
21289 ...
21290 949~968
21291 の20個の各区間をそれぞれその前の時点の時点の情報から多段予測し、それぞれの
21292 MSEを求め平均したものが MSEmeanです。
21293 これは、以前のように一区間のみでパラメタを最適化しても、そのとなりの区間
21294 ではうまく予測できない現象が観測されたからです。Oblockの最適化を行った
21295 結果、FBIはかなり大きな値 548になったがうまくいくようである。
21296 沢さん、他のプログラムでも最適パラメタを求めてくれませんか(このプログラムも
21297 チェックして!)?
21298 上野君:今 test->MSEに 仮に入れて、abisort.rbでMSEmapをソートしているけれど、
21299 MSEmeanでソートできるようにしていませんか?
21300
21301 以下 Oblockを最適化したパラメタである。
21302 なお、GTEST_GNFLAGS="-i-1"はまずいい性質が分った(いつか説明する)ので使わない。
21303 #####GTEST_GNFLAGS="-i-1"#####best params for block0 below
21304 #GTEST_GNFLAGS = ["-i-1"]
21305 #GTEST_BLOCKS = ["-60"]
21306 #GTEST_BLOCKS = ["0"]
21307 GTEST_NCOMPARES = ["6"]
21308
```

```
21309 GTEST_VTHRESHS = ["0.2"]
21310 GTEST_YMINS = ["3"]
21311 GTEST_YMINS2 = ["0"]
21312 GTEST_YMIN2S = ["2"]
21313 GTEST_WIDTHS = ["0.2"]
21314 GTEST_GAMMA0S = ["0.001"]
21315 GTEST_NCHANNELS = ["17","15","16","17","18","19","20","21","22","23"]#GTRES
T_NCHANNELS = ["19"]#GTEST_NCHANNELS = ["19"]
21316 GTEST_NCELLS = ["22"] #GTEST_NCHANNELS = ["19"]
ST_NCELLS = ["22"]#GTEST_NCELLS = ["14"] #
21317 #GTEST_DLASTS = ["-10"]#GTEST_DLASTS = ["-10","-90","-80","-70","-60","-50","-40","-30","-20",
"-10","0"]#GTEST_DLASTS
21318 #GTEST_DLASTS =["-7"] #GTEST_DLASTS=["-5","-6","-7","-8","-9","-11","-12","-13","-14",]
21319 GTEST_FB2S = ["55"]#GTEST_FB2S = ["50","51","52","53","54","55","56","57","58","59","60"]#
GTEST_FB2S = ["56"] #
21320 GTEST_ITERTIMES = ["15"] #GTEST_ITERTIMES = ["50"] #
21321 #GTEST_FB1S=["550"]#GTEST_FB1S=["450","460","470","480","490","500","510","520","530","540","550"]#G
TEST_FB1S=["560","570","580","590","600","610","620","630","640","650",]
21322 GTEST_FB1S=["548"] #GTEST_FB1S=["545","546","547","548","549","551","552","553","554","555"]
21323 #####
21324
21325
21326
21327
21328 (1) can2 のコマンドに mspj (IJCNN04の予測結果出力)を追加。
21329 (2) IJCNN04モードのときはデータファイルではなく
21330 data.txt, data.dat, smooth.dat, smooth_.dat があること
21331 があるパスを指定すること。
21332 (3) dt[] (my_function.c)の計算間違いを修正。MSBdはゼロになることがあ
21333 るので sim.c を修正。
21334
21335 exec_msp_test_IJCNN04_out() で predict.dat 出力するようにした。
21336
21337 (2)上野君より
21338 > 黒木先生
21339 > 先生に言われたメモリーークを起こすバグですが、発見しましたので
21340 > バグをフィックスして更新しました。ダウンロードして試してみ下さい。
21341 > いつものように更新前のファイルは*_origという拡張子をつけています。
21342 > $ wget -v http://cerasu.cmti.kyutech.ac.jp/~ueno/study/can2b040211ueno.tgz
21343 → これをもとに修正。
21344
21345 (1) IJCNN04モードのときと連続した10組の多段階予測テストを行うようにした。
21346 (2) IJCNN04モードの入力をfromのみにした(下のt-t2は読まず、
21347 t-t2=t-t1+19とした)
21348 例:
21349 3 #0:time series,l:function approximation,<3:i:jcmn04>
21350 45 0 #k1,k2 n_channels= k1+ k2
21351 ./smooth_.dat
21352 0 960 980 #<test_block(0.1,2,3,4)>, t_t1,t_t2
21353 -410 640 0 1 #y0min y0max y1min y1max for normalization
21354 -410 640 0 1 #x0min x0max x1min x1max for normalization
21355 0 0 # r1 r2
21356 in #
21357 30 #n_cells storing vectors
21358 6 #n_compare
21359 0.2 3 0 #v_thresh vmin vmin2
21360 2 #v_ratio
21361 0.5 #width
21362 ex #execute
21363 1 le-3 0.90 #<0:online,l:batch>, <gamma0>, <entropy_thresh>
21364 100 #iterations to execute
21365 100 #display
21366
21367
21368 (1) simdata_ability_display()を呼ぶたびにかなりの量のメモリが順次減っ
21369 て行く。
21370 sim.cの次の行を生かしてチェック。
21371 {int *p;p=(int *)malloc(sizeof(int));printf("p0=%p\n",p);free(p);} //malloctest0
21372 上野君、解決を!(sim.dの1211行)
21373
21374 (2) IJCNN04では、従来の逐次逆行列計算より、擬似逆行列を直接計算する
21375 GSLの方が良いことがある。以下の3手法を導入
21376 make clean; make "GSL=1" #jacobi法 遅いが精度がよいはず
21377 make clean; make "GSL=2" #後来法 中程度 戻ってこないことがある
21378 make clean; make "GSL=3" #mod法 速い、戻ってこないことがある
21379 でコンパイル。
21380 GSLで計算された連想行列の要素の値は非常に大きくなることもあるので、
21381 if(net->cell[i].s>1e5) net->cell[i].s=1e5;???for infinite err of GSL //040211
21382 を入れた。
21383
21384
21385 040208e
```

```
21386 (1) ARMA モデルを導入(まだIJCNN04にのみ有効)。
21387 Goodd Params for Block#4
21388 3 #0:time series,l:function approximation,<3:i:jcmn04>
21389 350 1 #k1,k2 n_channels= k1+ k2
21390 ./data.dat
21391 2 961 980 #<test_block(0.1,2,3,4)>, t_t1,t_t2
21392 -410 640 0 1 #y0min y0max y1min y1max for normalization
21393 -410 640 0 1 #x0min x0max x1min x1max for normalization
21394 0 0 # r1 r2
21395 in #
21396 100 #n_cells storing vectors
21397 6 #n_compare
21398 0.2 5 0 #v_thresh vmin vmin2
21399 2 #v_ratio
21400 0.2 #width
21401 ex #execute
21402 1 0.05 0.90 #<0:online,l:batch>, <gamma0>, <entropy_thresh>
21403 10 #iterations to execute
21404 10 #display
21405
21406 Goodd Params for Block#3
21407 3 #0:time series,l:function approximation,<3:i:jcmn04>
21408 350 1 #k1,k2 n_channels= k1+ k2
21409 ./data.dat
21410 2 961 980 #<test_block(0.1,2,3,4)>, t_t1,t_t2
21411 -410 640 0 1 #y0min y0max y1min y1max for normalization
21412 -410 640 0 1 #x0min x0max x1min x1max for normalization
21413 0 0 # r1 r2
21414 in #
21415 100 #n_cells storing vectors
21416 6 #n_compare
21417 0.2 5 0 #v_thresh vmin vmin2
21418 2 #v_ratio
21419 0.2 #width
21420 ex #execute
21421 1 0.05 0.90 #<0:online,l:batch>, <gamma0>, <entropy_thresh>
21422 10 #iterations to execute
21423 10 #display
21424 >>10msp2.6358e+03(1.159992e+00)10msp3.3599e+03(1.4787e+00)10train3.6408e-11(3.6408e-11)NI00k351w0.2v
ms:0
21425
21426 Goodd Params for Block#2
21427 3 #0:time series,l:function approximation,<3:i:jcmn04>
21428 350 1 #k1,k2 n_channels= k1+ k2
21429 ./data.dat
21430 2 961 980 #<test_block(0.1,2,3,4)>, t_t1,t_t2
21431 -410 640 0 1 #y0min y0max y1min y1max for normalization
21432 -410 640 0 1 #x0min x0max x1min x1max for normalization
21433 0 0 # r1 r2
21434 in #
21435 100 #n_cells storing vectors
21436 6 #n_compare
21437 0.2 5 0 #v_thresh vmin vmin2
21438 2 #v_ratio
21439 0.2 #width
21440 ex #execute
21441 1 0.05 0.90 #<0:online,l:batch>, <gamma0>, <entropy_thresh>
21442 10 #iterations to execute
21443 10 #display
21444 >>5ssp5.9145e+02(2.564346e+00)lmsp4.5657e+02(1.9795e+00)10train3.9911e-11(3.9911e-11)NI00k351Goood./
can2
21445
21446 Params for Block#1
21447 Goodd Params for Block#1
21448 ./can2
21449 3 #0:time series,l:function approximation,<3:i:jcmn04>
21450 350 0 #k1,k2 n_channels= k1+ k2
21451 ./data.dat
21452 1 961 980 #<test_block(0.1,2,3,4)>, t_t1,t_t2
21453 -410 640 0 1 #y0min y0max y1min y1max for normalization
21454 -410 640 0 1 #x0min x0max x1min x1max for normalization
21455 0 0 # r1 r2
21456 in #
21457 100 #n_cells storing vectors
21458 6 #n_compare
21459 0.2 5 0 #v_thresh vmin vmin2
21460 2 #v_ratio
21461 0.2 #width
21462 ex #execute
21463 1 0.05 0.90 #<0:online,l:batch>, <gamma0>, <entropy_thresh>
21464 10 #iterations to execute
21465 10 #display
```

```
21466 MSE> 4ssp2.99e+02(1.24e+00)misp3.13e+02(1.30e+00)MSEtr2.22e-10N100k350+0w0.2vm5:0
21467
21468 Goodd Params for Block#0
21469 ./can2
21470 3
21471 350 1 #k1,k2 n_channels= k1+ k2
21472 ./data/data.dat
21473 0 961 980 #<test_block(0,1,2,3,4)>, t_t1,t_t2
21474 -410 640 0 1 #y0min y0max y1min y1max for normalization
21475 -410 640 0 1 #x0min x0max x1min x1max for normalization
21476 0 0 # r1 r2
21477 in #
21478 100 #n_cells storing vectors
21479 6 #n_compare
21480 0.2 5 0 #v_thresh vmin vmin2
21481 2 #v_ratio
21482 0.2 #width
21483 ex #execute
21484 1 0.05 #<0-online,1:batch>, <gamma0>, <entropy_thresh>
21485 10 #iterations to execute
21486 10 #display
21487 MSE> 1ssp2.17e+02(5.36e-01)misp5.09e+01(1.26e-01)MSEtr2.87e-09N100k350+1w0.2vm5:0
21488
21489 (1)
21490 040207
21491 (1) IJCNN04 用
21492 ./can2
21493 simdata_func_ssp_set <<-変更//kuro040207
21494 simdata_error_ssp_set <<-変更//kuro040207
21495 ./can2
21496 3 #0:time series,1:function approximation,3:ijcnn04
21497 300 #channels
21498 ./data/data.dat
21499 0 961 1000 #<test_block(0,1,2,3,4)>, <t_t1>,<t_t2>
21500 0 0 0
21501 in #
21502 90 #n_cells storing vectors
21503 6 #n_compare
21504 0.2 5 0 #v_thresh vmin vmin2
21505 2 #v_ratio
21506 0.2 #width
21507 ex #execute
21508 1 0.05 0.95 #<0-online,1:batch>, <gamma0>, entropy_thresh
21509 10 #iterations to execute
21510 10 #display
21511 MSE> 1ssp1.12e+02(2.72e-01)misp1.13e+02(2.78e-01)MSEtr4.58e-15N90k300w0.2vm5:0
21512 MSE> 10ssp7.09e+01(1.75e-01)misp7.47e+01(1.84e-01)MSEtr4.24e-17N90k300w0.2vm5:0→best_b0.net
21513
21514 MSE> 3ssp1.58e+02(6.59e-01)misp1.64e+02(6.81e-01)MSEtr3.69e-16N90k350w0.2vm5:0→best_b1.net
21515 MSE> 2ssp1.84e+02(7.65e-01)misp1.90e+02(7.92e-01)MSEtr1.03e-15N90k330w0.2vm5:0
21516 ./can2
21517 3 #0:time series,1:function approximation,3:ijcnn04
21518 300 #channels
21519 ./data/data.dat
21520 0 #test_block 0,1,2,3,4
21521 -410 640 0 1 #y0min y0max y1min y1max for normalization
21522 -410 640 0 1 #x0min x0max x1min x1max for normalization
21523 0 0 # r1 r2
21524 in #
21525 90 #n_cells storing vectors
21526 6 #n_compare
21527 0.2 5 0 #v_thresh vmin
21528 2 #v_ratio
21529 0.2 0.05 #width, gamma0
21530 ex #execute
21531 1 0.05 0.95 #<0-online,1:batch>, <gamma0>, entropy_thresh
21532 50 #iterations to execute
21533 50 #display
21534 MSE>12ssp7.87e+01(1.94e-01)misp7.68e+01(1.89e-01)MSEtr4.35e-11N90k300w0.2vm5:0
21535 MSE>7ssp7.87e+01(1.94e-01)misp7.69e+01(1.90e-01)MSEtr1.12e-10N100k300w0.2vm5:0
21536 MSE>4ssp7.38e+01(1.82e-01)misp7.68e+01(1.89e-01)MSEtr4.45e-10N80k300w0.2vm5:0
21537 MSE>5ssp7.04e+01(2.23e-01)misp1.12e+02(2.76e-01)MSEtr2.81e-10N80k300w0.2vm5:0
21538 MSE>4ssp7.87e+01(1.94e-01)misp7.69e+01(1.90e-01)MSEtr3.25e-10N100k300w0.2vm5:0
21539 MSE>6ssp1.60e+02(3.94e-01)misp1.60e+02(3.95e-01)MSEtr8.05e-11N300k300w0.2vm5:0
21540 MSE>3ssp1.60e+02(3.94e-01)misp1.60e+02(3.95e-01)MSEtr2.49e-10N500k300w0.2vm5:0
21541 MSE>3ssp1.60e+02(3.94e-01)misp1.60e+02(3.95e-01)MSEtr2.79e-10N400k300w0.2vm5:0
21542 ./can2
21543 3 #0:time series,1:function approximation,3:ijcnn04
21544 300 #channels
21545 ./data/data.dat
21546 #test_block 0,1,2,3,4
21547 0
```

```
21548 -410 640 0 1 #y0min y0max y1min y1max for normalization
21549 -410 640 0 1 #x0min x0max x1min x1max for normalization
21550 0 0 # r1 r2
21551 in #
21552 500 #n_cells storing vectors
21553 4 #n_compare
21554 0.2 4 0 #v_thresh vmin
21555 5 #v_ratio
21556 0.2 0.05 #width, gamma0
21557 ex #execute
21558 1 0.01 0.5 #<0-online,1:batch>, <gamma0>, entropy_thresh
21559 50 #iterations to execute
21560 50 #display
21561 sp0 #check the training ability
21562 MSE> 20ssp1.63e+02(4.03e-01)misp1.73e+02(4.26e-01)MSEtr5.23e-12N500k300w0.2vm4:0
21563 040206
21564 (1)
21565 ex のとき gamma0, entropy_threshを読み込むようにした。次のようにする
21566 --
21567 -- #execute
21568 1 0.05 0.4 #<0-online,1:batch>, <gamma0>, entropy_thresh
21569 50 #iterations to execute
21570 50 #frequency of display
21571 --
21572 --
21573 (1)
21574 simdata.c
21575 simdata.h
21576 wrappplot/plot.c
21577
21578 040204
21579 (1) gamma0を読み込むようにした。
21580 --from here 040203vt0.2_..log
21581 net->gamma0
21582 vt=0.2 //see bench2b.sh
21583 Entro[c_times] =(1.-net->entropy)*(MSetrain[c_times]-net->sigma2.bat);
21584 03train5e4 100MSE1.865e-06NMSE01.91e-04MSEtr3.14e-05>>10ssp1.3742e-06H6.191114e-07>>3ssp1.4036e-06H6
.135318e-07N500k2w0.1vm3:0 14m4.4005
21585 11train5e4 100MSE3.716e-06NMSE04.54e-05MSEtr3.25e-05>>36ssp3.3407e-06H7.102311e-07>>43ssp3.4344e-06H
6.25326e-07N500k2w0.1vm3:0 14m18.9905
21586 07train5e4 100MSE4.130e-06NMSE03.38e-05MSEtr3.43e-05>>92ssp4.0859e-06H6.837418e-07>>79ssp4.3245e-06H
6.414648e-07N500k2w0.1vm3:0 13m23.2905
21587 02train5e4 100MSE1.602e-02NMSE06.43e-02MSEtr3.83e-03>>75ssp1.3710e-02H2.099179e-03>>60ssp1.7213e-02H
1.855987e-03N500k2w0.1vm3:0
21588
21589 03train5e4 100MSE2.437e-06NMSE02.47e-04MSEtr3.49e-05>>95ssp2.4156e-06H1.930361e-06>>84ssp2.5536e-06H
1.749298e-06N100k2w0.1vm3:0
21590 11train5e4 100MSE3.391e-05NMSE04.14e-04MSEtr6.37e-05>>96ssp3.3782e-05H6.170366e-06>>83ssp3.5414e-05H
5.967447e-06N100k2w0.1vm3:0
21591 07train5e4 100MSE2.784e-05NMSE02.28e-04MSEtr6.15e-05>>96ssp2.5735e-05H8.469813e-06>>93ssp2.6727e-05H
8.341542e-06N100k2w0.1vm3:0
21592 02train5e4 100MSE1.603e-02NMSE06.43e-02MSEtr8.23e-03>>72ssp1.2218e-02H5.719671e-03>>7asp1.7421e-02H4
.741870e-03N100k2w0.1vm3:0
21593 --to here 040203vt0.2_..log
21594 040203
21595 (1) store_vector_batchを以下のように変更し、my_plinn.cとsim.cを変更た。
21596 calc_voronoi(net,x_train,y_train,n_train);
21597 modify_MBatch(net, x_train, y_train);
21598 net->retl=calc_alpha(net, x_train, y_train,n_train);
21599 までがフェーズ0。
21600 ret2=reinit_cell_batch(net, x_train, y_train,n_train) ;
21601 modify_w_batch(net, x_train, y_train, n_train);
21602 までがフェーズ1とし、MSEの計算はフェーズ1が終わった後行う。
21603
21604 (2) Entroからnet->sigma2_hatを引いたバージョンを付加。
21605
21606 040202
21607 (1)時刻GlobalTimeにおいてnet->entropyとnet->Sは荷重変更前のもの、
MSEは荷重変更後のものである。
21607 訓練誤差MSetrain[c_times]と予測誤差MSrsp[c_times]を同じ荷重に對す
ようにするため sim.cで変更した。
21608 MSetrain[c_times-1] = (1.-net->entropy)*MSetrain[c_times-1]; //entropyは学習前のもの
21610 MSrtro[c_times-1] =(1.-net->entropy)*MSrtro[c_times-1]; //entropyは学習前のもの
とした。
21611 ここでEntro[]は、訓練誤差 MSrtro[]が小さく、かつエントロピーが大
きい時刻を求める→汎化脱差が小さい時刻を見つけることができるか？
21614 →以下の結果のうち一番の>>の後ろがMSEとそのときのH (= min Entro[]t))
21615
21616 --from here 040202vt0.2..log
21617 net->gamma0 =1A(net->n_cells,0.24,100,0.11,500); //see my_plinn.c
21619 vt=0.2 //see bench2b.sh
21620 03train5e4 100MSE1.820e-06NMSE01.84e-04MSEtr3.16e-05>>17ssp1.3744e-06H6.375255e-07>>21ssp1.5999e-06
H5.198208e-07N500k2w0.1vm3:0 12m37.3805
```

```
21621 1ltrain5e4 100MSE3.265e-06NNMSE03.99e-05MSEtr_3.25e-05>>70asp3.0292e-06H6.300738e-07>>90asp3.1611e-06
H5.594500e-07NS00k2w0.1vm3:0 12m24.900s
21622 07train5e4 100MSE5.139e-06NNMSE04.20e-05MSEtr_3.44e-05>>58asp4.3450e-06H6.388476e-07>>67asp4.6355e-06
H6.126711e-07NS00k2w0.1vm3:0 11m41.350s
21623 02train5e4 100MSE1.405e-02NNMSE05.64e-02MSEtr_3.66e-03>>41asp1.3357e-02H2.885501e-03>>77asp1.4618e-02
H1.850593e-03NS00k2w0.1vm3:0 8m48.750s
21624 02train5e4 100MSE1.822e-06NNMSE01.84e-04MSEtr_3.42e-05>>87asp1.7121e-06H1.242313e-06>>49asp2.3326e-06
H1.041464e-06NI00k2w0.1vm3:0 2m44.000s
21625 03train5e4 100MSE2.714e-05NNMSE03.31e-04MSEtr_5.63e-05>>94asp2.6645e-05H4.204073e-06>>92asp2.7240e-05
H4.148212e-06NI00k2w0.1vm3:0 2m45.790s
21626 07train5e4 100MSE5.445e-05NNMSE04.45e-04MSEtr_8.20e-05>>90asp2.7381e-05H9.609455e-06>>88asp2.7723e-05
H8.705378e-06NI00k2w0.1vm3:0 2m5.880s
21627 07train5e4 100MSE1.387e-02NNMSE05.57e-02MSEtr_6.95e-03>>87asp1.2807e-02H6.88662e-03>>97asp1.3793e-02
H3.631797e-03NI00k2w0.1vm3:0 2m3.200s
21628 02train5e4 100MSE1.699e-02NNMSE06.82e-02MSEtr_3.48e-03>>58asp1.3245e-02H2.359568e-03>>98asp1.5514e-02
H1.813462e-03NS00k2w0.1vm3:0 9m35.590s
21629 --to here 040202vt0.2.1log
21630 --from here 040202vt0.2.2log
21631 --from here 040202vt0.2.2log
21632 net->gamma0 =2.6*pow(net->n_cells,-1./net->k); //see my_plim.c
21633 vt=0.2 //see bench2b.sh
21634 03train5e4 100MSE1.767e-06NNMSE01.79e-04MSEtr_3.16e-05>>29asp1.4300e-06H8.492398e-07>>47asp1.6049e-06
H5.993934e-07NS00k2w0.1vm3:0 12m37.500s
21635 07train5e4 100MSE3.028e-06NNMSE03.70e-05MSEtr_3.23e-05>>55asp2.9516e-06H7.103144e-07>>40asp3.2476e-06
H6.445074e-07NS00k2w0.1vm3:0 12m48.270s
21636 07train5e4 100MSE5.684e-06NNMSE04.65e-05MSEtr_3.44e-05>>99asp4.7698e-06H7.006412e-07>>60asp5.4639e-06
H5.706458e-07NS00k2w0.1vm3:0 11m57.010s
21637 02train5e4 100MSE1.699e-02NNMSE06.82e-02MSEtr_3.48e-03>>58asp1.3245e-02H2.359568e-03>>98asp1.5514e-02
H1.813462e-03NS00k2w0.1vm3:0 9m35.590s
21638 03train5e4 100MSE1.749e-05NNMSE01.77e-03MSEtr_3.61e-05>>97asp1.9896e-06H2.247844e-06>>90asp2.2017e-06
H1.687172e-06NI00k2w0.1vm3:0 2m42.230s
21639 11train5e4 100MSE2.796e-05NNMSE03.41e-04MSEtr_5.65e-05>>99asp2.6584e-05H3.751248e-06>>93asp2.7055e-05
H3.742487e-06NI00k2w0.1vm3:0 2m48.090s
21640 07train5e4 100MSE4.191e-05NNMSE03.43e-04MSEtr_6.54e-05>>65asp3.1050e-05H1.949707e-05>>85asp3.9374e-05
H1.151384e-06NI00k2w0.1vm3:0 2m8.660s
21641 07train5e4 100MSE4.191e-05NNMSE03.43e-04MSEtr_6.54e-05>>65asp3.1050e-05H1.949707e-05>>85asp3.9374e-05
H1.151384e-06NI00k2w0.1vm3:0 2m8.660s
21642 02train5e4 100MSE1.564e-02NNMSE06.28e-02MSEtr_7.41e-03>>75asp1.3060e-02H5.204641e-03>>70asp1.5565e-02
H4.009494e-03NI00k2w0.1vm3:0 2m1.140s
21643 --to here 040202vt0.2.1log
21644 --from here 040202vt0.3.log
21645 net->gamma0 =IA(net->n_cells,0.24,100,0.11,500); //see my_plim.c
21646 vt=0.3 //see bench2b.sh
21647 03train5e4 100MSE1.820e-06NNMSE01.84e-04MSEtr_3.16e-05>>17asp1.3744e-06H6.803907e-07>>19asp1.4441e-06
H5.121504e-07NS00k2w0.1vm3:0 12m47.160s
21648 11train5e4 100MSE3.460e-06NNMSE04.22e-05MSEtr_3.26e-05>>39asp3.2742e-06H6.792700e-07>>31asp3.5550e-06
H6.140722e-07NS00k2w0.1vm3:0 13m28.770s
21649 07train5e4 100MSE5.118e-06NNMSE04.19e-05MSEtr_3.56e-05>>83asp4.5473e-06H6.192619e-07>>57asp5.3445e-06
H5.701437e-07NS00k2w0.1vm3:0 12m20.280s
21650 11train5e4 100MSE1.451e-02NNMSE05.82e-02MSEtr_3.09e-03>>80asp1.2607e-02H2.898277e-03>>47asp1.7638e-02
H2.520602e-04NS00k2w0.1vm3:0 9m0.510s
21651 03train5e4 100MSE1.724e-06NNMSE01.74e-04MSEtr_3.43e-05>> 98asp1.6749e-06H1.992528e-06>>94asp1.7750e-0
6H1.7269292e-06NI00k2w0.1vm3:0 2m45.280s
21652 11train5e4 100MSE2.580e-05NNMSE03.15e-04MSEtr_5.92e-05>>100asp2.5804e-05H4.231513e-06>>93asp2.8489e-0
5H3.801207e-06NI00k2w0.1vm3:0 2m48.790s
21653 07train5e4 100MSE2.768e-05NNMSE02.26e-04MSEtr_5.74e-05>> 88asp1.9557e-05H5.966399e-06>>85asp1.9756e-0
5H4.750324e-06NI00k2w0.1vm3:0 2m13.220s
21654 02train5e4 100MSE1.736e-02NNMSE06.97e-02MSEtr_8.13e-03>> 96asp1.4819e-02H9.094911e-03>>89asp1.7716e-0
2H4.244457e-03NI00k2w0.1vm3:0 2m4.780s
21657 --to here 040201vt0.3.log
21658 --from here 040201vt0.3.log
21659 net->gamma0 =2.7*pow(net->n_cells,-1./net->k); //see my_plim.c
21660 vt=0.3 //see bench2b.sh
21661 03train5e4 100MSE1.730e-06NNMSE01.75e-04MSEtr_3.16e-05>>34asp1.4111e-06H7.088306e-07>>22asp1.4973e-06
H5.36269e-07NS00k2w0.1vm3:0 12m32.490s
21662 11train5e4 100MSE3.230e-06NNMSE03.94e-05MSEtr_3.24e-05>>82asp3.0616e-06H6.448023e-07>>45asp3.1794e-06
H5.249424e-07NS00k2w0.1vm3:0 12m14.520s
21663 07train5e4 100MSE4.645e-06NNMSE03.80e-05MSEtr_3.39e-05>>94asp4.4264e-06H8.591442e-07>>39asp9.3832e-06
H5.205725e-07NS00k2w0.1vm3:0 11m51.620s
21664 02train5e4 100MSE1.811e-02NNMSE07.27e-02MSEtr_4.01e-03>>25asp1.4042e-02H3.207108e-03>>88asp1.6589e-02
H1.062542e-04NS00k2w0.1vm3:0 8m30.860s
21665 03train5e4 100MSE2.146e-06NNMSE02.17e-04MSEtr_3.49e-05>>96asp1.9741e-06H2.374129e-06>>83asp2.3518e-06
H2.213097e-06NI00k2w0.1vm3:0 2m38.960s
21667 11train5e4 100MSE2.611e-05NNMSE03.19e-04MSEtr_5.58e-05>>99asp2.6044e-05H3.63253e-06>>72asp2.7572e-05
H3.306237e-06NI00k2w0.1vm3:0 2m47.210s
21668 07train5e4 100MSE2.654e-05NNMSE02.17e-04MSEtr_5.77e-05>>94asp1.9815e-05H9.453194e-06>>95asp2.2158e-05
H6.557589e-06NI00k2w0.1vm3:0 2m14.100s
21669 02train5e4 100MSE1.948e-02NNMSE07.82e-02MSEtr_1.08e-02>>83asp1.5702e-02H9.516260e-03>>81asp1.5786e-02
H2.370611e-03NI00k2w0.1vm3:0 2m6.780s
21670 --to here 040201vt0.3.1log
21671
```

```
21672 040201
(1) 学習パラメタはユニット数に依存すべきとの考えからmy_plim.cに以下の変数を導入。
net->entropy_thresh =A(net->n_cells,0.80,100,0.95,500);//adhoc?
//ユニット数 n_cells が大きいとき大きなエントロピーを実現できる?
net->N_reinit_max =A(net->n_cells,0.10,100,0.30,500)*net->n_cells;//adhoc?
net->gamma0=LA(net->n_cells,0.24,100,0.11,500);
// net->gamma0 =2.5*pow(net->n_cells,-1./net->k);
//ポロノイ領域の半径pow(net->n_cells,-1./net->k)に比例させる
net->Gamma =5;//adhoc?
ただしLA()は線形近似関数#define LA(x,y1,x1,y2,x2) ((y1)+(x)-(x1))*((y2)-(y1))/((x2)-(x1)))
(2) 再初期化 n_cells の重みを
net->cell[rho_i].w[k+1].9*(x[i_xj][k]-net->cell[rho_i].w[k]);//good
とした(以前は1.5)。
```

→(1) ○ 学習誤差 MSEtr はbatch と online共に訓練回数に伴いほぼ単調に減
少。MSEtrの最小値はbatchの方が小さい。
→(2) ○ 汎化誤差 MSE はbatchとonline共に一旦下がって最小になりその後徐々に上がる。MSEの最小値もbatchの方が小さい。
→(3) ○ batch の方が onlineより速い(10倍(N500) , 4倍(N100);誤差計算表
ポルテンを含む)
→(4) × bestな汎化誤差 MSEが達成される時刻は MSEtrをみただけでは分らない。→今後の課題?→エントロピーは何かの目安にならないか?

```
--from here 040201.log net->gamma0=LA(net->n_cells,0.24,100,0.11,500);
21697 03train5e4 50MSE1.543e-06NNMSE01.56e-04MSEtr3.19e-05 100MSE1.769e-06NNMSE01.79e-04MSEtr3.16e-05>35asp1
.3908e-06(3.3.2210e-05)N500k2w0.1vm3:0 14m8.530s
21698 11train5e4 50MSE3.329e-06NNMSE04.06e-05MSEtr3.31e-05 100MSE3.645e-06NNMSE04.45e-05MSEtr3.25e-05>55asp3
.1364e-06(3.2938e-05)N500k2w0.1vm3:0 13m51.800s
21699 07train5e4 50MSE5.743e-06NNMSE04.70e-05MSEtr3.44e-05 100MSE3.748e-06NNMSE03.06e-05MSEtr3.36e-05>96asp3
.6555e-06(3.3792e-05)N500k2w0.1vm3:0 14m8.990s
21700 02train5e4 50MSE1.451e-02NNMSE05.82e-02MSEtr2.79e-03 100MSE1.912e-02NNMSE07.68e-02MSEtr1.88e-03>20asp1
3121e-02(4.0101e-03)N500k2w0.1vm3:0 14m29.700s
21702 03train5e4 50MSE2.107e-06NNMSE02.13e-04MSEtr3.47e-05 100MSE1.744e-06NNMSE01.76e-04MSEtr3.40e-05> 93asp
1.5214e-06(3.4140e-05)NI00k2w0.1vm3:0 2m54.390s
21704 11train5e4 50MSE2.880e-05NNMSE03.52e-04MSEtr5.99e-05 100MSE2.683e-03NNMSE03.28e-04MSEtr5.47e-05>100asp
2.6833e-05(5.4715e-05)NI00k2w0.1vm3:0 2m54.530s
21705 07train5e4 50MSE6.712e-05NNMSE05.49e-04MSEtr9.80e-05 100MSE2.574e-05NNMSE02.10e-04MSEtr5.53e-05> 97asp
2.3646e-05(5.6810e-05)NI00k2w0.1vm3:0 2m44.980s
21706 02train5e4 50MSE1.703e-02NNMSE06.84e-02MSEtr1.09e-02 100MSE2.047e-02NNMSE08.22e-02MSEtr1.05e-02> 27asp
1.6019e-02(1.2973e-02)NI00k2w0.1vm3:0 2m35.830s
21707 --to here 040201.log
21708 --from here (ln 040130.log) ---
21709 online
21710 03train5e4 50MSE1.612e-06NNMSE01.63e-04MSEtr3.25e-05 100MSE1.626e-06NNMSE01.65e-04MSEtr3.24e-05> 2asp1
.5544e-06(3.2582e-05)N500k2w0.1vm3:0 user57m23.130s
21711 11train5e4 50MSE4.596e-06NNMSE05.61e-05MSEtr3.53e-05 100MSE4.472e-06NNMSE05.46e-05MSEtr3.51e-05>86asp4
.4580e-06(3.5144e-05)N500k2w0.1vm3:0 user56m22.250s
21712 07train5e4 50MSE1.250e-05NNMSE01.02e-04MSEtr4.42e-05 100MSE1.635e-05NNMSE01.34e-04MSEtr4.30e-05>56asp1
.2118e-05(4.3898e-05)N500k2w0.1vm3:0 user56m34.460s
21713 02train5e4 50MSE1.712e-02NNMSE06.87e-02MSEtr7.66e-03 100MSE1.910e-02NNMSE07.67e-02MSEtr6.98e-03> 9asp1
.2564e-02(8.3905e-03)N500k2w0.1vm3:0 user56m12.360s
21714 03train5e4 50MSE7.153e-06NNMSE07.24e-04MSEtr3.92e-05 100MSE5.771e-06NNMSE05.84e-04MSEtr3.82e-05>100asp
5.7702e-06(3.8202e-05)NI00k2w0.1vm3:0 user11m47.560s
21716 11train5e4 50MSE5.231e-05NNMSE06.39e-04MSEtr8.02e-05 100MSE4.714e-05NNMSE05.75e-04MSEtr7.51e-05>100asp
4.7139e-05(7.5101e-05)NI00k2w0.1vm3:0 user11m47.620s
21717 07train5e4 50MSE3.657e-05NNMSE02.99e-04MSEtr7.26e-05 100MSE3.378e-05NNMSE02.76e-04MSEtr6.64e-05> 96asp
3.2184e-05(6.5579e-05)NI00k2w0.1vm3:0 user11m47.760s
21718 02train5e4 50MSE2.719e-02NNMSE01.09e-01MSEtr1.75e-02 100MSE2.206e-02NNMSE08.86e-02MSEtr1.87e-02> 21asp
1.7484e-02(1.8882e-02)NI00k2w0.1vm3:0 user11m47.480s
21719 --to here (ln 040130.log) ---
21720 03train5e4 50MSE7.153e-06NNMSE07.24e-04MSEtr3.92e-05NN100k2w0.1vm3:0 100MSE5.771e-06NNMSE05.84e-04MSE
r3.82e-05
21721 03train5e4 50MSE12.5.231e-05 1.66e-05 5.09e-05NNMSE06.39e-04MSEtr8.02e-05NI100k2w0.1vm3:0 100MSE5.771e-06NNMSE05.84e-04MSE
r3.82e-05
21722 07train5e4 50MSE12.3.378e-05 1.93e-04 1.61e-06NNMSE02.76e-04MSEtr6.64e-05NI100k2w0.1vm3:0 100MSE0.12
21723 02train5e4 100MSE012.2.719e-02 5.63e-02 6.40e-02NNMSE01.09e-01MSEtr1.75e-02NNMSE01.09e-01MSEtr1.75e-02NI100k2w0.1vm3:0 100MSE0.12
2.206e-02
```

21724	can2online SVR	can2online	can2batch
21725	データ数 5e4	5e4	5e4
21726	N 500	500	500
21727	学習回数 5e5	max1e6	50(*5e4)
21728		w=0.1	
21729	f03	1.830e-06	6.19287e-06 0.0000041 1.543e-06
21730	f01	3.863e-06	1.113e-05 0.0000188 3.329e-06
21731	f07	3.134e-05	1.92884e-05 0.0000529 5.743e-06
21732	f02	1.665e-02	0.01811174 1.451e-02
21733			
21734	can2online SVR	can2online	can2batch

```
21735 データ数 5e4 5e4 5e7 5e4
21736 N 100 500
21737 学習回数 10(*5e4) max1e6 50(*5e4)
21738 f03 7.153e-06
21739 f11
21740 f07
21741 f02
21742
21743
21744 03train5e4 50MSE012 2.392e-06 3.70e-06 3.35e-06NNSE02.42e-04MSEtr3.47e-05N100k2w0.1vm3:0 100MSE012 1.
934e-06
21745 11train5e4 50MSE012 3.191e-05 2.59e-05 3.00e-05NNSE03.90e-04MSEtr6.35e-05N100k2w0.1vm3:0 100MSE012 3.
015e-05
21746 03train5e4 50MSE012 1.944e-06 1.96e-06 2.46e-06NNSE01.97e-04MSEtr3.44e-05N100k2w0.1vm3:0
21747 03train5e4 50MSE012 3.356e-05 3.36e-05 3.22e-05NNSE04.10e-04MSEtr6.22e-05N100k2w0.1vm3:0100MSE012 3.
05e-05
21748 11train5e4 50MSE012 3.029e-05 1.70e-04 3.00e-06NNSE02.48e-04MSEtr6.53e-05N100k2w0.1vm3:0100MSE012 2.
21749 07train5e4 50MSE012 2.294e-02 4.17e-02 4.47e-02NNSE09.21e-02MSEtr1.22e-02N100k2w0.1vm3:0100MSE012 2.
547e-05
21750 02train5e4 50MSE012 2.94e-02 4.17e-02 4.47e-02NNSE09.21e-02MSEtr1.22e-02N100k2w0.1vm3:0100MSE012 2.
505e-02
21751
21752
21753 reinit 1.9*, alpha=0.10 のとき
21754
21755 03train5e4 50MSE012 1.543e-06 1.36e-06 1.81e-06NNSE01.56e-04MSEtr3.19e-05N500k2w0.1vm3:0>35sspl.3908.
e-06
21756 11train5e4 50MSE012 3.329e-06 2.41e-06 3.15e-06NNSE04.06e-05MSEtr3.31e-05N500k2w0.1vm3:0>49sspl3.1653.
e-06
21757 02train5e4 50MSE012 1.451e-02 3.66e-02 3.85e-02NNSE05.82e-02MSEtr2.79e-03N500k2w0.1vm3:0>20sspl.3121.
e-02
21758
21759 reinit 1.9*, alpha=0.10 のとき
21760 03train5e4 50MSE012 1.859e-06 1.86e-06 2.72e-06NNSE01.88e-04MSEtr3.46e-05N100k2w0.1vm3:0>50sspl.8587.
e-06
21761 11train5e4
21762 07train5e4
21763 02train5e4
21764
21765 03train5e4 alpha=0.20 50MSE012 1.419e-06 1.32e-06 1.84e-06NNSE01.44e-04MSEtr3.24e-05N500k2w0.1vm3:0>
38sspl.3481e-06
21766 11train5e4 alpha=0.20 50MSE012 3.586e-06 2.69e-06 3.43e-06NNSE04.38e-05MSEtr3.33e-05N500k2w0.1vm3:0>
49sspl3.2338e-06
21767 07train5e4 alpha=0.20 50MSE012 1.102e-05 6.56e-05 3.57e-06NNSE09.01e-05MSEtr3.67e-05N500k2w0.1vm3:0>
49sspl6.6985e-06
21768 02train5e4 alpha=0.20 50MSE012 1.654e-02 3.96e-02 4.84e-02NNSE06.64e-02MSEtr2.72e-03N500k2w0.1vm3:0>
42sspl.3243e-02
21769
21770
21771 03train5e4 alpha=0.10 50MSE012 1.543e-06 1.36e-06 1.81e-06NNSE01.56e-04MSEtr3.19e-05N500k2w0.1vm3:0>
24sspl3.2687e-06
21772 03train5e4 alpha=0.05 50MSE012 1.749e-06 1.53e-06 2.12e-06NNSE01.77e-04MSEtr3.16e-05N500k2w0.1vm3:0>
12sspl.3338e-06
21773 03train5e4 alpha=0.01 50MSE012 1.782e-06 1.86e-06 2.11e-06NNSE01.80e-04MSEtr3.18e-05N500k2w0.1vm3:0>
1sspl.5762e-06
21774 →
21775 reinit 1.5* のとき
21776 03train5e4 50MSE012 1.749e-06 1.53e-06 2.12e-06NNSE01.77e-04MSEtr3.16e-05N500k2w0.1vm3:0
21777 11train5e4 50MSE012 3.376e-06 2.56e-06 4.15e-06NNSE04.12e-05MSEtr3.30e-05N500k2w0.1vm3:0
21778 07train5e4 50MSE012 8.234e-06 3.33e-05 2.47e-06NNSE06.73e-05MSEtr3.69e-05N500k2w0.1vm3:0
21779 02train5e4 50MSE012 1.642e-02 5.41e-02 4.32e-02NNSE06.59e-02MSEtr2.37e-03N500k2w0.1vm3:0
21780
21781 03train5e4 100MSE012 1.962e-06 1.70e-06 2.27e-06NNSE01.98e-04MSEtr3.15e-05N500k2w0.1vm3:0
21782 11train5e4 100MSE012 3.374e-06 2.80e-06 3.76e-06NNSE04.12e-05MSEtr3.26e-05N500k2w0.1vm3:0
21783 07train5e4 100MSE012 5.308e-06 2.15e-05 1.75e-06NNSE04.34e-05MSEtr3.49e-05N500k2w0.1vm3:0
21784 02train5e4 100MSE012 1.797e-02 5.82e-02 6.10e-02NNSE07.21e-02MSEtr1.78e-03N500k2w0.1vm3:0
21785
21786
21787 03train5e4 100MSE012 2.185e-06 2.91e-06 2.09e-06NNSE02.21e-04MSEtr3.47e-05N100k2w0.1vm3:0
21788 11train5e4 100MSE012 2.731e-05 1.91e-05 2.30e-05NNSE03.33e-04MSEtr3.76e-05N100k2w0.1vm3:0
21789 07train5e4 100MSE012 2.892e-05 9.69e-05 3.49e-06NNSE02.78e-04MSEtr6.92e-05N100k2w0.1vm3:0
21790 02train5e4 100MSE012 1.814e-02 3.42e-02 4.82e-02NNSE07.28e-02MSEtr1.11e-02N100k2w0.1vm3:0
21791
21792 03train5e4 50MSE012 2.212e-06 2.85e-06 3.10e-06NNSE02.24e-04MSEtr3.45e-05N100k2w0.1vm3:0
21793
21794 07train online 3.38e-5
21795 alpha=0.15 net-n_cells*0.10
21796 →100MSE012 2.892e-05 9.69e-05 3.49e-06NNSE02.37e-04MSEtr6.92e-05N100k2w0.1vm3:0
21797 alpha=0.15 *0.06 100MSE012 9.139e-05 5.39e-04 2.28e-05NNSE07.47e-04MSEtr1.38e-04N100k2w0.1vm3:0
21798 alpha=0.15 *0.06 100MSE012 4.298e-05 2.30e-04 3.60e-05NNSE07.51e-04MSEtr7.29e-05N100k2w0.1vm3:0
21799 0.05entropy→100MSE012 5.570e-05 2.65e-04 2.09e-05NNSE04.56e-04MSEtr1.34e-04N100k2w0.1vm3:0
21800
```

```
21801 07train batch →100MSE012 3.415e-05 2.15e-04 5.18e-06NNSE02.79e-04MSEtr6.60e-05N100k2w0.1vm3:0
21802
21803 02train batch0.06→100MSE012 1.822e-02 5.46e-02 4.27e-02NNSE07.31e-02MSEtr2.60e-03N500k2w0.1vm3:0
21804 02train ?? →100MSE012 1.723e-02 6.36e-02 3.60e-02NNSE06.92e-02MSEtr1.80e-03N500k2w0.1vm3:0
21805
21806 040128 r=0.20 C=1000 e=0.001
21807 MSE test MSE train M time
21808 07train5e4 2.40751e-05 5.4908614e-05 9218 410m28.628s***Noconvergence
21809
21810 040127
21811 (1) ニュートン数により 再初期化の基準を変える nentropy_thresh を導入した。
21812 040126
21813 (1)sim.cの表示ルーチンを簡素化した？
21814 //online check
21815 can2
21816 1 #0:timeseries,1:chaos prepare_data() in my_function.c
21817 10 #channels
21818 ./data/train10+10+20.dat #training file
21819 ./data/test10+10+20.dat #prediction file
21820 -410 640 0 1 #y0min y0max y1min y1max for normalization
21821 -410 640 0 1 #x0min x0max x1min x1max for normalization
21822 0 0 # r1 r2
21823 in #
21824 200 #n_cells storing vectors
21825 20 #n_compare
21826 0.3 4 -1 #v_thresh vmin
21827 10 #v_ratio
21828 0.8 0.01 #width, gamma0
21829 sr #show training data show_data_parms(train);
21830 n #no
21831 sn #show network params
21832 sb #show batch params
21833 ex #execute
21834 1 #0:online,1:batch
21835 50 #iterations to execute
21836 50 #display
21837
21838 can2
21839 1 #0:timeseries,1:chaos
21840 2 #channels
21841 ./data/07train5e4.dat #training file
21842 ./data/07test.dat #prediction file
21843 0 0 0 #y0min y0max y1min y1max for normalization
21844 in #init_net
21845 500 #n_cells #storing vectors
21846 6 #n_compare
21847 6 3 0 #v_thresh vmin vmin2
21848 5 #v_ratio
21849 0.1 #width #window width
21850 ex #execute learning, test and prediction
21851 0 #0:online,1:batch
21852 500000 #iterations to execute
21853 100 #d_times #display
21854 07train5e4 500000MSE012 2.265e-05 1.33e-04 1.87e-05NNSE01.85e-04MSEtr5.35e-05N500k2w0.1vm3:0
21855 02train5e4 500000MSE012 1.641e-02 4.70e-02 3.92e-02NNSE06.59e-02MSEtr7.80e-03N500k2w0.1vm3:0
21856
21857 040123
21858 (1) sigma2hatの計算が間違っていたので訂正した。
21859 (2) 正規化エントロピーentropyの計算をして、再初期化のための閾値とした。
21860 nentropy=0.95がよいようだ。
21861 →まず再初期化により歪を均一化し、次に勾配法で微調整するという具合になる。
21862 040122
21863 (1)3つの分布のMSE0の計算を入れた。
21864 (2)訓練データのMSE(MSEtrまたはMSEtrain)を表示するようにした。
21865 07train5e4 では未知のテストデータに対するMSEがMSEtrainより小さくなるが、
21866 これは
21867 ・CAN2は雑音を除いた入力関数fを学習により形成するものであること、
21868 ・MSEtrainは雑音を含む訓練データに対するMSEであること、
21869 ・テストデータは雑音を含まないこと
21870 から理解できる(?)。例えばCAN2が完全に関数を学習できたとして
21871 テストデータに対するMSEは0、訓練データに対するMSEは実際の誤差の分だけ
21872 あるということである。
21873 なお、雑音は-0.01~-0.0-0.1の一樣乱数でその MSEは3.334155e-05
21874 であった。
21875 can2
21876 1 #0:timeseries,1:chaos
21877 2 #channels
21878 ./data/07train5e4.dat #training file
21879
```

```
21883 ./data/07test.dat #prediction file
21884 0 0 0 #y0min y0max y1min y1max for normalization
21885 in #init_net
21886 500 #n_cells #storing vectors
21887 6 #n_compare
21888 0.5 3 0 #v_thresh vmin vmin2
21889 5 #v_ratio
21890 0.1 #width #window width
21891 ex #execute learning, test and prediction
21892 1 #0:online,1:batch
21893 50 #i_times # iterations to execute
21894 50 #d_times #display
21895
21896 02train5e4 50MSE012 1.46e-02 3.49e-02 3.36e-02NMSE05.86e-02MSEtr2.50e-03N500k2w0.1vm3:0
21897 02train5e4 10MSE012 1.64e-02 4.35e-02 2.88e-02NMSE06.60e-02MSEtr2.01e-03N500k2w0.1vm3:0
21898
21899 07train5e4 100MSE012 6.25e-06 2.82e-05 1.19e-06NMSE05.11e-05MSETr3.47e-05N500k2w0.1vm3:0
21900 07train5e4 50MSE012 6.79e-06 2.99e-05 1.68e-06NMSE05.55e-05MSETr3.63e-05N500k2w0.1vm3:0
21901
21902 03train5e4 50MSE012 1.73e-06 1.42e-06 2.01e-06NMSE01.75e-04MSETr3.16e-05N500k2w0.1vm3:0
21903 11train5e4 50MSE012 6.62e-06 2.98e-06 3.83e-06NMSE04.42e-05MSETr3.29e-05N500k2w0.1vm3:0
21904 07train5e4 50MSE012 5.65e-06 2.48e-05 1.53e-06NMSE04.62e-05MSETr3.55e-05N500k2w0.1vm3:0
21905 02train5e4 50MSE012 1.53e-02 3.95e-02 3.32e-02NMSE06.12e-02MSETr2.41e-03N500k2w0.1vm3:0
21906 02train5e4 50MSE012 1.49e-02 5.08e-02 3.00e-02NMSE05.97e-02MSETr5.64e-03N500k2w0.8vm3:0
21907
21908 07train5e4 100MSE012 4.52e-06 2.00e-05 1.32e-06 NMSE03.70e-05MSETr3.43e-05N500k2w0.1vm3:0
21909 11train5e4 100MSE012 3.82e-06 2.97e-06 4.17e-06NMSE04.66e-05MSETr3.27e-05N500k2w0.1vm3:0
21910 雑音のMSE=3.334155e-05
21911
21912 データ数 5e4 can2online SVR can2online can2batch
21913 学習回数 5e4 5e7 5e7 5e4
21914 max1e6 50>(*5e4)
21915
21916 f03 1.830e-06 6.19287e-06 0.00000041 1.7736e-06
21915 f11 3.865e-06 1.113e-05 0.00000188 3.7047e-06
21917 f07 3.134e-05 1.92884e-05 0.00000529 8.0602e-06
21918 f02 1.665e-02 0.0149962 0.01811174 1.4668e-02
21919 02train5e4 50MSE012 1.46e-02 3.49e-02 3.36e-02NMSE05.86e-02MSETr2.50e-03N500k2w0.1vm3:0
21920 07train5e4 50MSE012 6.79e-06 2.99e-05 1.68e-06NMSE05.55e-05MSETr3.63e-05N500k2w0.1vm3:0
21921 11train5e4 50MSE012 3.8e-06 2.9e-06 4.15e-06NMSE04.12e-05MSETr3.30e-05N500k2w0.1vm3:0
21922 03train5e4 50MSE012 1.75e-06 1.53e-06 2.12e-06NMSE01.77e-04MSETr3.16e-05N500k2w0.1vm3:0
21923
21924 03train5e4 50MSE012 1.73e-06 1.42e-06 2.01e-06 NMSE01.75e-04MSETr3.16e-05N500k2w0.1vm3:0
21925 11train5e4 50MSE012 3.70e-06 2.69e-06 3.59e-06 NMSE04.52e-05MSETr3.32e-05N500k2w0.1vm3:0
21926 07train5e4 50MSE012 6.19e-06 2.11e-05 4.68e-06 NMSE05.06e-05MSETr3.65e-05N500k2w0.1vm3:0
21927 02train5e4 50MSE012 1.88e-02 5.91e-02 4.23e-02 NMSE07.16e-02MSETr2.97e-03N500k2w0.1vm3:0
21928
21929 02train5e4 50MSE012 1.47e-02 2.56e-02 4.38e-02 NMSE05.89e-02MSETr2.56e-03N500k2w0.1vm3:0
21930 03train5e4 50MSE012 1.75e-02 6.74e-02 3.55e-02 NMSE07.03e-02MSETr3.25e-03N500k2w0.1vm3:0
21931 雑音のMSE=3.334155e-05
21932
21933 データ数 5e4 can2online SVR can2online can2batch
21934 学習回数 5e5 5e7 5e7 5e4
21935 max1e6 50>(*5e4)
21936
21937 f03 1.830e-06 6.19287e-06 0.00000041 1.7736e-06
21937 f11 3.865e-06 1.113e-05 0.00000188 3.7047e-06
21938 f07 3.134e-05 1.92884e-05 0.00000529 8.0602e-06
21939 f02 1.665e-02 0.0149962 0.01811174 1.4668e-02
21940
21941 07train5e4 100MSE012 4.95e-06 1.61e-05 2.17e-06 NMSE04.05e-05MSETr3.53e-05N500k2w0.1vm3:0
21942 07train5e4b1 100MSE012 3.21e-02 6.03e-06 1.37e-02 NMSE02.62e-01MSETr3.55e-05N500k2w0.1vm3:0
21943 07train5e4b2 100MSE012 1.25e-01 6.07e-02 7.88e-06 NMSE01.02e+00MSETr3.21e-05N500k2w0.1vm3:0
21944
21945 07train5e4 50MSE012 8.06e-06 3.00e-05 4.94e-06 NMSE06.59e-05 MSETr0.00e+00N500k2w0.1vm3:0
21946 07train5e4b1 50MSE012 1.30e-02 7.93e-06 5.65e-03 MSETr0.01 MSETr0.00e+00N500k2w0.1vm3:0
21947 07train5e4b2 50MSE012 1.41e-01 6.42e-02 5.50e-06 NMSE01.15e+00MSETr3.62e+00N500k2w0.1vm3:0
21948
21949 03train5e4 >50sps1.77e-06(1.43e-06,2.11e-06);1.79e-04N500k2w0.1vm3:0
21950 03train5e4b1 >50sps1.45e-04(1.17e-06,4.14e-05);1.47e-02N500k2w0.1vm3:0
21951 03train5e4b2 >50sps5.14e-05(2.99e-05,1.10e-06);5.20e-03N500k2w0.1vm3:0
21952
21953 07train5e4 >50sps8.06e-06(3.00e-05,4.94e-06);6.59e-05N500k2w0.1vm3:0
21954 07train5e4b1>50sps1.30e-02(7.93e-06,5.65e-03);1.07e-01N500k2w0.1vm3:0
21955 07train5e4b2>50sps1.41e-01(6.42e-02,5.50e-06);1.15e+00N500k2w0.1vm3:0
21956 07train5e4b2>100sps1.11e-02(6.17e-06,5.77e-04);9.04e-02N500k2w0.1vm3:0
21957
21958
21959
21960 040120
21961 (1.) bench2b.shを実行
21962 040119
21963 (1.) 有限個のデータを使うcan2onlineと比較した。
21964 width=0.80 can2batchの結果はf11に対して良くなかった。
```

```
21965 width=0.1とするとcan2onlineより良い結果が得られ、最終時刻でもあま
21966 の結果となった。
21967 can2
21968 1 #0:timeseries,1:chaos
21969 2 0 #channels
21970 ./data/11train5e4.dat #training file
21971 ./data/11test.dat #prediction file
21972 0 0 0 #y0min y0max y1min y1max for normalization
21973 in #init_net
21974 500 #n_cells #storing vectors
21975 6 #n_compare
21976 0.5 3 -1 #v_thresh vmin vmin2
21977 5 #v_ratio
21978 0.1 #width #window width
21979 ex #execute learning, test and prediction
21980 1 #0:online,1:batch
21981 50 #i_times # iterations to execute
21982 50 #d_times #display
21983
21984 040119 f03 50sps1.7736e-06>9sps1.3566e-06(1.3728e-04)N500k2w0.1vm3:0
21985 040119 f11 50sps3.7047e-06>32sps3.5536e-06(4.3379e-05)N500k2w0.1vm3:0
21986 040119 f07 50sps8.0602e-06>44sps7.0511e-06(5.7659e-05)N500k2w0.1vm3:0
21987 040120 f07100sps4.9526e-06>100sps4.9526e-06(4.0499e-05)N500k2w0.1vm3:0
21988 040119 f02 50sps1.4668e-02>49sps1.4405e-02(5.7825e-02)N500k2w0.1vm3:0
21989 040119 f02 50sps1.5255e-02>36sps1.4145e-02(5.6783e-02)N1000k2w0.1vm3:0
21990 040119 f02 50sps1.8856e-06>8sps1.8416e-06(1.8636e-04)N1000k2w0.1vm3:0
21991 040119 f11 100sps3.8879e-06>32sps3.5536e-06(4.3379e-05)N500k2w0.1vm3:0
21992 if (GlobalTime<ReinitTime+5) return(0);のとき
21993 040120 f07 50sps5.4152e-06>50sps5.4152e-06(4.4281e-05)N500k2w0.1vm3:0
21994 040120 f03 50sps1.7329e-06>9sps1.3566e-06(1.3728e-04)N500k2w0.1vm3:0
21995
21996 can2batch can2online SVR can2online
21997 データ数 5e4 5e4 5e4 5e7
21998 学習回数 50>(*5e4) 5e5 max1e6
21999 w=0.1
22000 f03 1.7736e-06 1.830e-06 6.19287e-06 0.00000041
22001 f11 3.7047e-06 3.865e-06 1.113e-05 0.00000188
22002 f07 8.0602e-06 3.134e-05 1.92884e-05 0.00000529
22003 f02 1.4668e-02 1.665e-02 0.0149962 0.01811174
22004
22005 vmin2としてみた (f02が不満足)
22006 040119 f03 50sps1.7329e-06>9sps1.3566e-06(1.3728e-04)N500k2w0.1vm3:0
22007 040119 f11 50sps3.7047e-06>32sps3.5536e-06(4.3379e-05)N500k2w0.1vm3:0
22008 040119 f07 50sps6.1905e-06>50sps6.1905e-06(5.0621e-05)N500k2w0.1vm3:0
22009 040119 f02 50sps1.8839e-02>17sps1.4795e-02(5.9392e-02)N500k2w0.1vm3:0
22010 040119 f02 50sps1.7824e-02>35sps1.3843e-02(5.5572e-02)N500k2w0.1vm3:0
22011
22012 width=0.2でもやってみた (f02の結果が不満足)
22013 040119 f03 50sps1.6149e-06>7sps1.3624e-06(1.3786e-04)N500k2w0.2vm3:0
22014 040119 f11 50sps3.7849e-06>39sps3.6869e-06(4.5006e-05)N500k2w0.2vm3:0
22015 040119 f07 50sps6.9569e-06>45sps6.2591e-06(5.1182e-05)N500k2w0.2vm3:0
22016 040119 f02 50sps1.8785e-02>10sps1.4537e-02(5.8355e-02)N500k2w0.2vm3:0
22017 040119 f02 50sps1.8600e-02>10sps1.4537e-02(5.8355e-02)N500k2w0.2vm3:0
22018 040119 f02 50sps1.7421e-02>10sps1.4537e-02(5.8355e-02)N500k2w0.2vm3:0
22019 040119 f02 50sps1.7292e-02>37sps1.3831e-02(5.5524e-02)N500k2w0.2vm3:0
22020 040119 f02 50sps1.6784e-02>10sps1.4537e-02(5.8355e-02)N500k2w0.2vm3:0
22021
22022 データ数 5e4 can2batch can2online SVR can2online
22023 学習回数 100>(*5e4) 5e5 max1e6
22024 w=0.8
22025
22026 BestResult
22027 03train 1.3808e-06 1.830e-06 6.19287e-06 0.00000041
22028 11train 4.4272e-06 3.865e-06 1.113e-05 0.00000188
22029 07train 1.1927e-05 3.134e-05 1.92884e-05 0.00000529
22030 02train 1.2426e-02 1.665e-02 0.0149962 0.01811174
22031
22032
22033 (1)net_save()とnet_load()の整合性をとった。
22034 GlobalTimeをセーブするようにした。
22035
22036
22037 040115
22038 (1) GSL(正確な最小2乗解法)によるmodify_M_batch のルーチンの誤りを訂正し、実験した。
22039 コンパイル方法は
22040 make "GSL=1"
22041 040109
22042 (1) vがvmin2 以下のユニットは削除。vmin2=-1のとき何もしない。
22043
22044 040108
22045 (1)my_plinn.cで 荷重ベクトルの更新式と学習係数を説明しやすいように
22046 以下のように変更した。
```

```
22047 http://terasu.cntl.kyutech.ac.jp/~kuro/sotu/2004/ueno/docs/03leice_kuro.tex
22048 を参照。
22049 (1-1) my_plinn.cで 荷重ベクトルの更新式を以下のような感じで変えた。
22050
22051 delta_wic = 0.0;
22052 for(j=0; j<n_channels; j++)
22053     delta_wic +=
22054         (FLOAT)square(x[j]-net->cell[si].w[j]);
22055 delta_wic = (FLOAT)sqrt(delta_wic/2);
22056
22057 (1-2)my_plinn.cで学習係数を以下のような感じで変えた。
22058 for(k=0;k<(n_channels)/k++){
22059     // 1/2に注意
22060     if(dwNorm<fabs(net->cell[i].dw[k])){
22061         dwNorm=fabs(net->cell[i].dw[k]);
22062     }
22063     dwNorm=sqrt(dwNorm);
22064
22065 040116
22066 (1) セーブとロードのチェック。
22067 can2
22068 1
22069 #0:timeseries,1:chaos
22070 #channels
22071 ./data/03train5e4.dat #training file
22072 ./data/03test.dat #prediction file
22073 0 0 0 #y0min y0max y1min y1max for normalization
22074 in #init_net
22075 500 #n_cells #storing vectors
22076 6 #n_compare
22077 5 #v_thresh vmin vmin2
22078 0.5 3 -1 #v_ratio
22079 0.1 #width #window width
22080 ex #execute learning, test and prediction
22081 #0:online,1:batch
22082 5 #i_times # iterations to execute
22083 #d_times #display
22084 ns
22085 temp.net
22086 ##sw
22087 qu
```

```
22129 5:1> 6sspl.5107e-06(1.5287e-04)N500k2w0.8vm3:-1
22130 5:3> 6sspl.5696e-06(1.5883e-04)N500k2w0.8vm3:-1
22131 5:5>1lsspl.6103e-06(1.6295e-04)N500k2w0.8vm3:-1
22132
22133
22134 031211
22135 can2
22136 1 #0:timeseries,1:chaos
22137 2 #channels
22138 ./data/03train5e4.dat #training file
22139 ./data/03test.dat #prediction file
22140 0 0 0 #y0min y0max y1min y1max for normalization
22141 in #init_net
22142 500 #n_cells #storing vectors
22143 6 #n_compare
22144 5 #v_thresh vmin vmin2
22145 0.5 3 -1 #v_ratio
22146 0.8 #width #window width
22147 sr #show training data
22148 n #no
22149 sn #show network params
22150 sb #show batch params
22151 ex #execute learning, test and prediction
22152 1 #0:online,1:batch
22153 100 #i_times # iterations to execute
22154 100 #d_times #display
22155 //040115 modify_M_batchでMOのGSLで初期化をする。
22156 040115 03train5e4>17sspl.5097e-06(1.5277e-04)N500k2w0.8vm3:-1GSL
22157 040115 03train5e4>5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:-1
22158 040115 03train5e4 >5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:1 GSL
22159 040115 03train5e4 >5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:2 GSL
22160 040115 03train5e4 >5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:3 GSL
22161 040115 03train5e4 >4sspl.4410e-06(1.4582e-04)N500k2w0.8vm3:4 GSL
22162 040115 03train5e4 >4sspl.4410e-06(1.4582e-04)N500k2w0.8vm3:5 GSL
22163 040115 03train5e4 >4sspl.4410e-06(1.4582e-04)N500k2w0.8vm3:5 GSL
22164
22165 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:-1GSL
22166 040115 1ltrain5e4>0 GSL
22167 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:1 GSL
22168 040115 1ltrain5e4>2 GSL
22169 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:3 GSL
22170 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:4 GSL
22171 040115 1ltrain5e4>10ssp5.3448e-06(6.5244e-05)N500k2w0.8vm3:5 GSL
22172
22173 >18sspl.5833e-06(1.6022e-04)N500k2w0.8vm3
22174 //040115 modify_M_batchでMOの初期化をする。
22175 040115 03train5e4>8sspl.6430e-06(1.6626e-04)N500k2w0.8vm4:-1
22176 040115 03train5e4>18sspl.5833e-06(1.6022e-04)N500k2w0.8vm3:-1
22177 040115 03train5e4>20sspl.5693e-06(1.5880e-04)N500k2w0.8vm3:0
22178 040115 03train5e4>20sspl.5146e-06(1.5327e-04)N500k2w0.8vm3:1
22179 040115 03train5e4>19sspl.5320e-06(1.5503e-04)N500k2w0.8vm3:2
22180 040115 03train5e4>19sspl.5487e-06(1.5672e-04)N500k2w0.8vm3:3
22181 //040110 vmin2<-よりニットの削除
22182 040115 03train5e4>14sspl.3304e-06(1.3463e-04)N500k2w0.8vm5:-1
22183 040115 03train5e4>14sspl.3265e-06(1.3423e-04)N500k2w0.8vm4:-1
22184 040109 03train5e4>14sspl.3229e-06(1.3387e-04)N500k2w0.8vm3:-1
22185 040109 03train5e4>14sspl.3267e-06(1.3425e-04)N500k2w0.8vm3:-1
22186 040109 03train5e4>14sspl.3254e-06(1.3412e-04)N500k2w0.8vm3:0
22187 040109 03train5e4>14sspl.3149e-06(1.3305e-04)N500k2w0.8vm3:2
22188 040114 03train5e4>14sspl.3542e-06(1.3703e-04)N500k2w0.8vm3:3
22189 040114 03train5e4>11sspl.3989e-06(1.4156e-04)N500k2w0.8vm3:4
22190 040115 03train5e4>11sspl.3989e-06(1.4156e-04)N500k2w0.8vm3:3
22191 040115 03train5e4>20sspl.4059e-06(1.4227e-04)N500k2w0.8vm3:5
22192
22193 040114 03train5e4>4sspl.7361e-06(1.7568e-04)N1000k2w0.8vm3:-1
22194 040114 03train5e4>7sspl.7275e-06(1.7482e-04)N1000k2w0.8vm3:0
22195 040114 03train5e4>7sspl.7028e-06(1.7231e-04)N1000k2w0.8vm3:1
22196 040114 03train5e4>7sspl.7009e-06(1.7212e-04)N1000k2w0.8vm3:2
22197 040114 03train5e4>9sspl.7730e-06(1.7941e-04)N1000k2w0.8vm3:3
22198
22199 040109 1ltrain5e4>33ssp4.2675e-06(5.2093e-05)N500k2w0.8vm3:-1
22200 040109 1ltrain5e4>33ssp4.2675e-06(5.2093e-05)N500k2w0.8vm3:0
22201 040109 1ltrain5e4>25ssp4.3813e-06(5.3482e-05)N500k2w0.8vm3:1
22202 040115 1ltrain5e4>35ssp4.1880e-06(5.1123e-05)N500k2w0.8vm3:2
22203 040115 1ltrain5e4>45ssp4.3234e-06(5.2776e-05)N500k2w0.8vm3:3
22204
22205 040109 07train5e4>93ssp1.2617e-05(1.0317e-04)N500k2w0.8vm3:-1
22206 040109 07train5e4>93ssp1.1225e-05(9.1788e-05)N500k2w0.8vm3:0
22207 040109 07train5e4>93ssp1.1585e-05(9.4736e-05)N500k2w0.8vm3:1
22208
22209 040109 02train5e4>12ssp1.2124e-02(4.8669e-02)N500k2w0.8vm3:-1
22210 040109 02train5e4>12ssp1.2124e-02(4.8669e-02)N500k2w0.8vm3:0
```

```
22047 http://terasu.cntl.kyutech.ac.jp/~kuro/sotu/2004/ueno/docs/03leice_kuro.tex
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22073 0 0 0 #y0min y0max y1min y1max for normalization
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22087 qu
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```
22129 5:1> 6sspl.5107e-06(1.5287e-04)N500k2w0.8vm3:-1
22130 5:3> 6sspl.5696e-06(1.5883e-04)N500k2w0.8vm3:-1
22131 5:5>1lsspl.6103e-06(1.6295e-04)N500k2w0.8vm3:-1
22132
22133
22134 031211
22135 can2
22136 1 #0:timeseries,1:chaos
22137 2 #channels
22138 ./data/03train5e4.dat #training file
22139 ./data/03test.dat #prediction file
22140 0 0 0 #y0min y0max y1min y1max for normalization
22141 in #init_net
22142 500 #n_cells #storing vectors
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22158 040115 03train5e4 >5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:1 GSL
22159 040115 03train5e4 >5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:2 GSL
22160 040115 03train5e4 >5sspl.4595e-06(1.4769e-04)N500k2w0.8vm3:3 GSL
22161 040115 03train5e4 >4sspl.4410e-06(1.4582e-04)N500k2w0.8vm3:4 GSL
22162 040115 03train5e4 >4sspl.4410e-06(1.4582e-04)N500k2w0.8vm3:5 GSL
22163 040115 03train5e4 >4sspl.4410e-06(1.4582e-04)N500k2w0.8vm3:5 GSL
22164
22165 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:-1GSL
22166 040115 1ltrain5e4>0 GSL
22167 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:1 GSL
22168 040115 1ltrain5e4>2 GSL
22169 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:3 GSL
22170 040115 1ltrain5e4>10ssp5.2472e-06(6.4052e-05)N500k2w0.8vm3:4 GSL
22171 040115 1ltrain5e4>10ssp5.3448e-06(6.5244e-05)N500k2w0.8vm3:5 GSL
22172
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22174 //040115 modify_M_batchでMOの初期化をする。
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22176 040115 03train5e4>18sspl.5833e-06(1.6022e-04)N500k2w0.8vm3:-1
22177 040115 03train5e4>20sspl.5693e-06(1.5880e-04)N500k2w0.8vm3:0
22178 040115 03train5e4>20sspl.5146e-06(1.5327e-04)N500k2w0.8vm3:1
22179 040115 03train5e4>19sspl.5320e-06(1.5503e-04)N500k2w0.8vm3:2
22180 040115 03train5e4>19sspl.5487e-06(1.5672e-04)N500k2w0.8vm3:3
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22184 040109 03train5e4>14sspl.3229e-06(1.3387e-04)N500k2w0.8vm3:-1
22185 040109 03train5e4>14sspl.3267e-06(1.3425e-04)N500k2w0.8vm3:-1
22186 040109 03train5e4>14sspl.3254e-06(1.3412e-04)N500k2w0.8vm3:0
22187 040109 03train5e4>14sspl.3149e-06(1.3305e-04)N500k2w0.8vm3:2
22188 040114 03train5e4>14sspl.3542e-06(1.3703e-04)N500k2w0.8vm3:3
22189 040114 03train5e4>11sspl.3989e-06(1.4156e-04)N500k2w0.8vm3:4
22190 040115 03train5e4>11sspl.3989e-06(1.4156e-04)N500k2w0.8vm3:3
22191 040115 03train5e4>20sspl.4059e-06(1.4227e-04)N500k2w0.8vm3:5
22192
22193 040114 03train5e4>4sspl.7361e-06(1.7568e-04)N1000k2w0.8vm3:-1
22194 040114 03train5e4>7sspl.7275e-06(1.7482e-04)N1000k2w0.8vm3:0
22195 040114 03train5e4>7sspl.7028e-06(1.7231e-04)N1000k2w0.8vm3:1
22196 040114 03train5e4>7sspl.7009e-06(1.7212e-04)N1000k2w0.8vm3:2
22197 040114 03train5e4>9sspl.7730e-06(1.7941e-04)N1000k2w0.8vm3:3
22198
22199 040109 1ltrain5e4>33ssp4.2675e-06(5.2093e-05)N500k2w0.8vm3:-1
22200 040109 1ltrain5e4>33ssp4.2675e-06(5.2093e-05)N500k2w0.8vm3:0
22201 040109 1ltrain5e4>25ssp4.3813e-06(5.3482e-05)N500k2w0.8vm3:1
22202 040115 1ltrain5e4>35ssp4.1880e-06(5.1123e-05)N500k2w0.8vm3:2
22203 040115 1ltrain5e4>45ssp4.3234e-06(5.2776e-05)N500k2w0.8vm3:3
22204
22205 040109 07train5e4>93ssp1.2617e-05(1.0317e-04)N500k2w0.8vm3:-1
22206 040109 07train5e4>93ssp1.1225e-05(9.1788e-05)N500k2w0.8vm3:0
22207 040109 07train5e4>93ssp1.1585e-05(9.4736e-05)N500k2w0.8vm3:1
22208
22209 040109 02train5e4>12ssp1.2124e-02(4.8669e-02)N500k2w0.8vm3:-1
22210 040109 02train5e4>12ssp1.2124e-02(4.8669e-02)N500k2w0.8vm3:0
```

```
22211 040109 02train5e4>12spsl1.2124e-02(4.8669e-02)N500k2w0.8vm3:1
22212
22213      int vmin2=2.ii;///040109 for remove Unit
22214 040109 03train5e4>14spsl1.3104e-06(1.3260e-04)N500k2w0.8vm3
22215 040109 11train5e4>35spsp4.3382e-06(5.2956e-05)N500k2w0.8vm3
22216 040109 07train5e4>87spsl1.5499e-05(1.2674e-04)N500k2w0.8vm3
22217 040109 02train5e4>12spsl1.2124e-02(4.8669e-02)N500k2w0.8vm3
22218
22219 040109 03train5e4>14spsl1.3229e-06(1.3387e-04)N500k2w0.8vm3
22220 040109 11train5e4>33spsp4.2675e-06(5.2093e-05)N500k2w0.8vm3
22221 040109 07train5e4>93spsl1.2617e-05(1.0317e-04)N500k2w0.8vm3
22222 040109 02train5e4>12spsl1.2124e-02(4.8669e-02)N500k2w0.8vm3
22223
22224 040107 07train5e4>447spsp7.1086e-06(5.8129e-05)N500k2w0.8vm3
22225
22226 031211 03train5e4>5spsl1.3809e-06(1.3973e-04)N500k2w0.8vm3
22227 031211 11train5e4>35spsp4.4272e-06(5.4042e-05)N500k2w0.8vm3
22228 031211 07train5e4>93spsp1.1927e-05(9.7328e-05)N500k2w0.8vm3
22229 031211 02train5e4>8spsl1.2426e-02(4.9881e-02)N500k2w0.8vm3
22230
22231      can2batch      can2online      can2online
22232      5e4      5e4      5e7
22233      学習回数 100(*5e4)      5e5      max1e6
22234 22233 1.39287e-06 1.830e-06 6.19287e-06 0.00000041
22235 22234 4.4272e-06 3.865e-06 1.113e-05 0.00000188
22236 22235 1.1927e-05 3.134e-05 1.92894e-05 0.00000529
22237 02train 1.2426e-02 1.665e-02 0.0149962 0.01811174
22238
22239 031211 07train5e4>94spsl1.1179e-05(9.1417e-05)N500k2w0.8vm3
22240
22241 030725m 02train5e4>52spsl1.1347e-02(4.4550e-02)N500k2w0.1vm2
22242 030714e 07train5e4>100 MSE1.895141e-05(4.550582e-01 MSE1.549705e-04)3.721126e+00 N500
22243
22244 031110      svrの導入      sim.c
22245 030726m      svrの導入
22246 (1) D.Yu,et al. "Phase space prediction of Chaotic Time Series" の結果
22247 との比較について。
22248 (1-1)
22249 santafe.datの1000-11000の予測誤差NMSE=0.0268は、yu等の結果 NMSE=0.027よ
22250 りもよい。1000-2000の結果は Yuの方が良いのだが、次のようなことが考
22251 えられる：本手法でも訓練データの一段予測の誤差は学習回数3で0になる
22252 ている。ここで訓練データは整数データであるので丸め誤差あること、実データ
22253 でノイズもあることに注意する。丸め誤差の処理偏はyuの方法でもないの
22254 で未知データの多段予測の結果が良いかどうかは、ノイズの処理法(yuでは主
22255 特異値分解(SVD)法？、本手法では逐次最小二乗法)に依存するのだろうか？
22256 (1-2)
22257 Yu等の結果は Lyapunov時間の5倍から10倍の時間まで予測可能だったと報告し
22258 ている。これは例えば初期時刻の誤差E(0)が時刻t=5T~10TでEmaxまで大きくな
22259 るとすると、E(0)/Emax = exp{-5T/T} ~ exp{-10T/T}
22260
22261      =6.737946999090e-3~4.53999297625e-5
22262 程度の初期誤差があったことに相当するものであろうか？(実際の誤差は初期誤差
22263 よりもネットが学習した力学系のシステム誤差であり、各時刻の誤差が発生す
22264 るので、その各時刻のシステム誤差は上よりもっと小さいと考えられる？)
22265
22266 030716e
22267 (1)母差の多段予測で以前より良い結果が得られた(下の a3000.datがある実行
22268 例を参照)。この結果では、テストデータの多段予測時の誤差の最大値は540
22269 程度であり、信号の範囲(0-200)まで誤差は拡大しなかった(これは下にあるよ
22270 うにmspを実行して確かめられる)。また学習誤差(訓練データの一段予測時の
22271 誤差)は0になった。
22272 ただし十分長い時間長では誤差が増えてくる？
22273 (例えば、msp0(訓練データの多段予測)を実行してみてもt=1500程度まで
22274 は50以下の誤差、あるいは、1500までのデータを学習し、1501から3000を予
22275 測させてみよう)。
```

```
22293 うだ。これは後者は無限のデータを使うからと考えると理解できる。しかし同
22294 じデータを使ったSVRの結果(1e1ce0302/mse_N.dat参照)より良くなりすぎた。
22295 (→よくできた。030716)
22296 これはバッチ型CAN2の能力の低さか？(しかし次項参照)
22297 (3)しかしNackey-Glass 時系列予測においては、バッチ型 CAN2の能力はオン
22298 ライン型 CAN2やSVR(jms02?)よりも良い結果が得られた。何故、関数近似の
22299 としと違うのか????原因を追究すべし!!!
22300 1.NG時系列学習でmodify_w_batchを無効にして同様の実験をしても同じ位
22301 まで誤差は減少(> 1000 MSE1.076172e-08?7.584495e-07)
22302 →Mの学習が誤差を下げるのだがデータはほぼ同じなので理論的には何度学習し
22303 ても同じはず?関数近似ではほぼ理論通りだが、chaos時系列のときどうして小
22304 さくなるの???
22305 2.データを同じにするため nl=n, channels+1;としても同様の結果
22306
22307      3.am.cのq(0).pの初期値の影響の可能性
22308 →N=1のとき> 1000 MSE3.541228e-073.230648e-02(AM_VER==1)
22309 →100 MSE9.918831e-093.523091e-06(1=i=j) q(0).P[1][j]=1.0e5;
22310 > 100 MSE2.853535e-093.1052221e-06(1=i=j) q(0).P[1][j]=1.0e4; //original
22311 > 100 MSE8.967474e-061.107123e-06(1=i=j) q(0).P[1][j]=1.0e37
22312 →同じデータの学習を繰り返して誤差が小さくなるのはam.cのq(0).pの初期値
22313 の影響であると判明。大きい(1.0e05)と厳密解に近くなりtest誤差が小さくで
22314 ざるが、predict(汎化)が良くない。逆に小さすぎる(1.0e03)とtest誤差はあ
22315 まり小さくしないし、predict誤差もそんなに小さくならない。
22316 4.厳密解を得るAM_VER==2では次元が7以下でしかうまく働かない?何故か?
22317 AM_VER==2で次元が70のとき、test誤差は小さいがpredict誤差は大きい。
22318 →厳密(理論的)な議論でpredict誤差を小さくはできないの???
22319 4.x1とx2を[0.1,-.9]の範囲に限ったデータ07train5e4B5.datを学習近似する
22320 とバッチCAN2(MSE6.878440e-04)は逐次的CAN2(MSE1.060333e-03)より良い成績
22321 が得られた。→外挿(汎化)能力?→これと同じ原理?
22322 //
22323 --- 変更履歴まとめ(本当はもっと多く変更)--- history
22324 030726m (1) exec_sim( )の途中で一段予測(esp)と多段予測(msp)の最適なネットを保存
22325 するようにした。
22326 030725m (1)nlが変だったのを修正。
22327 030723e (1)解像度をより一般化した。
22328 030723e (2)正規化を導入：正規化した信号で学習と予測を行い、元にもどして誤差を
22329 測るようにした。
22330 元の信号はgivendata->x[t],givendata->y[t],
22331 処理信号はgivendata->xt[t],givendata->ytt]
22332 とし、calc_output( )も変更。
22333 22334 処理信号はgivendata->xt[t],givendata->ytt]
22335 22336 (3)従来のpred は msp(多段予測)、従来のtest はssp(一段予測)の観点から
22337 サブルーチン名や変数名などを変更した(結構大幅な変更)。
22338 030717m
22339 (1) exec_pred( )とexec_test( )をそれぞれexec_msp_test( )とexec_esp_test( )
22340 とした
22341 (2) exec_msp_test( )でデータの解像度が正整数など有的时候、予測値は実数、
22342 誤差はその解像度で評価するようにした。
22343 そのため calc_output( )に第3引数を追加し
22344 NET *net, FLOAT *x, FLOAT *yr)とした。
22345 030716e
22346 (1)母差の解像度は1/15であり、かつ有効数字6桁まで(例えば0.066667⇒1/15)
22347 のようだ。これに対応できるようにcalc_output( )で特殊処理した。
22348 030714e
22349 (1) Santafe data (a.dat,a.cont)のためcalc_output( )で整数型を導入→
22350 exec_simの入力が一つ増えた。
22351 (2) Santafe dataにはnlを別にしたほうが良いみたい。
22352      nl=(V->i2v(i)+3)*(1./GlobalTime-1./GlobalTimeMax);
22353
22354 030713
22355 (1) lorenz や 07train は学習回数が小さく、widthが小さい方が良いみたい?
22356 (2) カオス時系列を発生させるRungeKutta法との検討を行った。
22357 030710e
22358 (1) 短期予測結果を学習して、より長期の予測を行う方法を導入。
22359 コメントは po,使いかたは
22360      mackeypo.sh, rosslerpo.sh, lorenzpo.sh を参照。
22361 030709e
22362 (1) reinit_cell_batch( )を検討した。
22363 030708m
22364 (1)大幅に変えた:
22365      (a)init_net_batch(net, train->x, n_train);の後
22366      (b)store_vector_batch(net, train->x, train->y, n_train)を繰り返す。
22367
22368      init_net_batch(net, train->x, n_train);は3つのルーチンで構成:
22369      (a-1)init_batch_wvector(net, x, n_train);と
22370      (a-2)init_Voronoi(net->v,net->n_cells,net->k,n_train);
22371
22372      store_vector_batch(net, train->x, train->y, n_train)は次のルーチンで構成:
22373      (b-1)calc_Voronoi(net,x_train,y_train, n_train);
22374
```



```
22375 (b-2)modify_M_batch(net, x_train, y_train);
22376 (b-3)calc_alpha(net, x_train, y_train,n_train);
22377 (b-4)reinit_cell_batch(net, x_train, y_train,n_train) ;
22378 (b-5)modify_w_batch(net, x_train, y_train, n_train);
22379
22380 030704m
22381 (1)NSEでなくNMSE(MSEを信号の標準偏差で割ったもの)を出力するようにした。
22382 030702e
22383 (1)時系列データファイルは値のみとする。よって以下の結果を得るには
22384 mackey-glass.datでなくmackey2200.datを使うこと。
22385 030702m
22386 (1) reinit_w_batchを修正。
22387 030701e
22388 (1)my_function.c で
22389 nl=bidata->m[i]+(n_channels+1.-bidata->m[i])*
22390 (1./GlobalTime-1./GlobalTimeMax);
22391 を導入
22392 030629e
22393 (1) modify_w_batchで渡さける処理を導入。
22394 (1) modify_w_batchで err_iの正規化処理を導入。
22395 030629m
22396 (1) modify_w_batch での荷重修正を一括して行うようにした。
22397 030628e
22398 (1)ReinitRandom のところを少し変えた。(ReinitRandomはあまり良くない)
22399 (1)v_iは相対値v_i/v_maxとした→v_threshは0～1の範囲にする。
22400 (2)store_vector_batch (in my_pllmm.c) のy_mの計算が間違ってた。
22401 (3)store_vector_batch (in my_pllmm.c) のソートが逆だった。
22402 (4)init_batch_ivector (in my_function.c)をちよと変えた。
22403 (5)sigma2 батの計算方法を変えた。
22404 (6)net->ymin,ymaxを導入→calc_outputを変えた。
22405 (6)net->xmin,xmaxを導入→modify_w_batchを変えた。
22406 (7)関数近似もできるようにした。
22407 ....
22408 030611
22409 (1)can_20030611.tar.bz2 がオ리지ナル
22410 -- 030722以降の実行例 --examples
22411 ●関数近似 function approximation
22412 can2
22413 0
22414 10 #channels
22415 ./data/rossler10000_le-3_100.dat #training file
22416 2000 4000 #train,Ttotal: points in time of training and total data
22417 0 0 0 #y0min y0max y1min y1max for normalization
22418 in #
22419 320 #n_cells storing vectors
22420 20 #n_compare
22421 0.5 3 #v_thresh v_min
22422 10 #v_ratio
22423 0.9 #width window width
22424 sr #show training data show_data_params(train);
22425 n #no
22426 sn #show network params
22427 sb #show batch params
22428 ex #execute
22429 1 #0:online,l:batch
22430 100 #iterations to execute
22431 10 #display
22432 nl
22433 bestmsp.net
22434 msp
22435
22436 030725e>100ssp2.8990e-05(1.0492e-06)88msp9.1745e-01(3.3904e-02)N320k10w0.9vm3
22437 030725e>72ssp4.3884e-06(1.6217e-07)77msp2.2714e+00(8.3939e-02)N320k10w0.9
22438 030725m>64ssp2.5341e-05(9.3614e-07)4msp1.8634e+00(6.8861e-02)N320k10w0.9
22439 >100ssp2.5986e-05(9.6030e-07)88msp2.7531e+00(1.0174e-01)N320k10w0.9
22440 >10ssp3.2406e-05(1.1976e-06)6msp3.1384e+00(1.1598e-01)N320k10w0.9
22441 >50ssp5.2316e-05(1.9333e-06)3msp3.7621e+00(1.3903e-01)N500k10w0.9
22442 can2
22443 0
22444 9 #channels
22445 ./data/rossler10000_le-3_400.dat #training file
22446 5000 5500 #train,Ttotal: points in time of training and total data
22447 0 0 0 #y0min y0max y1min y1max for normalization
22448 in #
22449 300 #n_cells storing vectors
22450 20 #n_compare
22451 0.5 3 #v_thresh v_min
22452 10 #v_ratio
22453 0.9 #width window width
22454 sr #show training data show_data_params(train);
22455 n #no
22456 sn #show network params
```

したもの、02dataでなくない!

```
22457 sb #show batch params
22458 ex #execute
22459 1 #0:online,l:batch
22460 100 #iterations to execute
22461 10 #display
22462 nl
22463 bestmsp.net
22464 msp
22465 >86ssp1.0633e-05(3.9526e-07)5msp1.2673e+00(4.7109e-02)N350k9w0.9vm3
22466 >32ssp2.1494e-05(7.9901e-07)7msp1.3992e+00(5.2013e-02)N340k9w0.9vm3
22467 >75ssp3.6781e-05(1.3673e-06)15msp5.7966e-01(2.1548e-02)N330k9w0.9vm3
22468 >100ssp3.1966e-05(1.1883e-06)30msp1.3315e+00(4.9496e-02)N320k9w0.9vm3
22469 >100ssp1.1277e-04(4.1919e-06)8msp1.9397e+00(7.2107e-02)N300k9w0.9vm3
22470
22471
22472
22473 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22474 10 #channels
22475 ./data/rossler10000_le-3_400.dat #training file
22476 2000 4000 #train,Ttotal: points in time of training and total data
22477 0 0 0 #y0min y0max y1min y1max for normalization
22478 in #
22479 300 #n_cells storing vectors
22480 20 #n_compare
22481 0.5 4 #v_thresh v_min
22482 10 #v_ratio
22483 0.9 #width window width
22484 sr #show training data show_data_params(train);
22485 n #no
22486 sn #show network params
22487 sb #show batch params
22488 ex #execute
22489 1 #0:online,l:batch
22490 100 #iterations to execute
22491 10 #display
22492 nl
22493 bestmsp.net
22494 msp
22495 030725e>100ssp3.6684e-04(1.4258e-05)37msp4.4382e+00(1.7250e-01)N300k10w0.9vm4
22496 >93ssp2.8408e-04(1.0820e-05)68msp5.0046e+00(1.9061e-01)N480k10w0.9
22497 >95ssp3.6629e-04(1.4027e-05)61msp4.2901e+00(1.6340e-01)N490k10w0.9
22498 >53ssp3.2631e-04(1.2429e-05)49msp5.6514e+00(2.1525e-01)N510k10w0.9
22499 >52ssp5.6690e-04(2.1592e-05)91msp6.3061e+00(2.4019e-01)N600k10w0.9
22500 >73ssp3.0289e-04(1.1536e-05)100msp6.0206e+00(2.2931e-01)N400k10w0.9
22501 030723e>41ssp2.2592e-04(8.6049e-06)20msp5.8173e+00(2.2157e-01)N320k10w0.9
22502 >10 MSE2.848007e-04(9.813702e+00 NMSE1.084743e-05(3.737824e-01 N300k10
22503 > 10 MSE2.770285e-04(9.177966e+00 NMSE1.055141e-05(2.733930e-01 N300k10
22504 > 10 MSE2.484028e-04(9.377020e+00 NMSE9.461118e-06(3.571501e-01 N500k10
22505 > 10 MSE1.748636e-04(1.564719e+01 NMSE6.660172e-06(5.959669e-01 N500k12
22506 > 10 MSE5.1049713e-04(9.782534e+00 NMSE1.923325e-05(3.725952e-01 N500k8
22507 can2
22508 1
22509 1 #0:timeseries,l:chaos
22510 2 0 #channels
22511 ./data/07train5e4.dat #training file
22512 ./data/07test.dat #prediction file
22513 0 0 0 #y0min y0max y1min y1max for normalization
22514 in #init_net
22515 500 #n_cells #storing vectors
22516 6 #n_compare
22517 0.5 3 #v_thresh v_min
22518 5 #v_ratio
22519 0.8 #width #window width
22520 sr #show training data
22521 n #no
22522 sn #show network params
22523 sb #show batch params
22524 ex #execute learning, test and prediction
22525 1 #0:online,l:batch
22526 100 #i_times # iterations to execute
22527 100 #q_times #display
22528 nl
22529 bestasp.net
22530 ssp
22531 040107>96asp1.1927e-05(9.7528e-05)N500k2w0.8vm3
22532 >94asp1.1179e-05(9.1417e-05)N500k2w0.8vm3
22533 0312044100asp7.6526e-06(6.2577e-05)msp4.5490e-01(3.7198e+00)ssp03.2510e-04N500k2w0.8vm3
22534
22535
22536
22537 030725m> 71ssp1.1116e-05(9.0896e-05)N500k2w0.8vm3
22537 030723e> 77ssp1.173389e-05 9.595103e-05 N500k2w0.8
```

```
22538 030717e> 77 MSE1.173389e-05;4.550532e-01 NMSE9.595103e-05;3.721085e+00 N500k2
22539 030714e>100 MSE1.895141e-05;4.550582e-01 NMSE1.549705e-04;3.721126e+00 N500
22540 030708>100 MSE3.191986e-05;4.550516e-01 NMSE2.610167e-04;3.721072e+00 N500
22541 030708> 50 MSE2.636177e-05;4.550214e-01
22542 NMSE2.155668e-04;3.720825e+00 N500
22543
22544 can2
22545 1 #0:timeseries,l:chaos
22546 2 #channels
22547 ./data/02train5e4.dat #training file
22548 ./data/02test.dat #prediction file
22549 0 0 0 #y0min y0max y1min y1max for normalization
22550 in #init_net
22551 500 #n_cells #storing vectors
22552 6 #n_compare
22553 0.5 2 #v_thresh vmin
22554 5 #v_ratio
22555 0.1 #width #window width
22556 sr #show training data
22557 n #no
22558 sn #show network params
22559 sb #show batch params
22560 ex #execute
22561 1 #0:online,l:batch
22562 100 #l_times # iterations to execute
22563 100 #d_times #display
22564 nl
22565 bestssp.net
22566 sep
22567 030725m> 52sspl.13477e-02(4.5550e-02)N500k2w0.1vm2
22568 030723e> 83sspl.185377e-02 4.758460e-02 N500k2w0.1
22569 030718> 10 MSE1.297887e-02;4.699419e-01 NMSE5.210109e-02;1.882474e+00 N500k2w0.1
22570 030714e> 54 MSE1.265124e-02;4.687315e-01 NMSE5.078589e-02;1.881629e+00 N500
22571 030714e> 10 MSE1.297887e-02 (width=0.1)
22572 Cf bestSVR MSE1.4996e-02 =0.014996 #ofdata=2e3
22573 onlineCM2 MSE1.990468e-02=0.01990468
22574
● 時系列 timeseries
22575 can2
22576 1 #0:timeseries,l:chaos prepare_data() in my_function.c
22577 5 #channels
22578 ./data/lorenz10000_le-4_500.dat #training file
22579 #ttrain,Ttotal: points in time of training and total data
22580 10000 10300 #y0min y0max y1min y1max for normalization
22581 0 0 0 #
22582 in #n_cells storing vectors
22583 400 #n_compare
22584 20 #v_thresh
22585 0.5 3 #v_ratio
22586 10 #width window width
22587 0.9 #show training data show_data_params(train):
22588 sr #no
22589 n #show network params
22590 sn #show batch params
22591 ex #execute
22592 sb #0:online,l:batch
22593 1 #iterations to execute
22594 100 #display
22595 nl
22596 nl
22597 bestmsp.net
22598 msp
22599 >100asp4.4000e-06(7.1368e-08)7msp2.7110e+01(4.3974e-01)N400k5w0.9vm3
22600 >100asp4.2920e-06(6.9617e-08)3msp3.2089e+01(5.2049e-01)N500k5w0.9vm3
22601
22602
22603 can2
22604 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22605 10 #channels
22606 ./data/lorenz10000_le-4.dat #training file
22607 4000 4500 #ttrain,Ttotal: points in time of training and total data
22608 0 0 0 #y0min y0max y1min y1max for normalization
22609 in #
22610 500 #n_cells storing vectors
22611 20 #n_compare
22612 0.5 3 #v_thresh
22613 10 #width window width
22614 0.9 #show training data show_data_params(train):
22615 sr #no
22616 n #show network params
22617 sn #show batch params
22618 sb #execute
22619 ex
```

```
22620 1 #0:online,l:batch
22621 100 #iterations to execute
22622 10 #display
22623 nl
22624 bestmsp.net
22625 msp
22626 ld
22627 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22628 10 #channels
22629 ./data/lorenz10000_le-4.dat #training file
22630 4000 5000 #ttrain,Ttotal: points in time of training and total data
22631 0 0 0 #y0min y0max y1min y1max for normalization
22632
030725m>>100sspl.4081e-05(2.2362e-07)l5msp3.8052e-01(6.0430e-03)N500k10w0.9vm3
100ssp2.0189e-05(3.2062e-07)2msp2.7902e+01(4.4310e-01)N500k10w0.9vm4
>100sspl.1517e-06(1.8291e-08)7msp4.6041e-01(7.3117e-01)N200k10w0.9vm4
>100sspl.1793e-06(8.2252e-08)msp5.689957e+01(5.8600e-01)N400k10w0.9vm4
>53ssp7.1028e-06(1.1280e-07)4msp5.5793e+01(6.8605e-01)N400k10w0.9vm3
>100sspl.6170e-05(2.5679e-07)20msp2.9930e+01(4.7531e-01)N500k10w0.9vm4
>100sspl.9434e-05(3.0863e-07)6msp2.4456e+01(3.8838e-01)N600k10w0.9vm3
>70sspl.9020e-05(3.0206e-07)10msp3.3998e+01(5.3992e-01)N700k10w0.9vm3
030723e>88sspl.2917e-04(2.0513e-06)50msp2.3147e+00(3.6760e-02)N800k10w0.9
030717> 47 MSE1.336571e-04;2.357905e+01 NMSE2.122590e-06;3.744558e-01N800k10
↑ この誤差は sigma=1e-5 ~ 1e-6 のシステム誤差が加わった 応答とほぼ等しい。
(.../gmp/examples_kuro/で gnuplot を実行し、
plot [2000:5000] "mackey10000_le-3_pl28.dat" using 0:1,"mackey5000_le-3_pl28_2000+1e-5.dat" using 0:1
として確かめよ。
22648 22649 22650 22651 22652 22653 22654 22655 22656
)
030717>12 MSE1.712460e-04;3.371515e+01 NMSE2.719536e-06;5.354259e-01 N800k10
030712e>10 MSE1.268072e-05;1.588170e+01 NMSE1.013809e-07;2.522153e-01N800W0.1
030712e>10 MSE1.867260e-06;5.820007e+01 NMSE1.249389e-07;9.242678e-01N500
Rungskutta刻み幅 1e-4 で生成した時系列 ./data/lorenz10000_le-4.dat の CAN2
この予測は Rungskutta刻み幅 1e-5 で生成した時系列よりも良い、
22656 Cf plot [4000:4500] "lorenz10000_le-4.dat" using 5:1,"lorenz5000_le-4_le-5.dat" using 5:1
学習
22657 #define SIMODE 1 で chaosmp 1002 10000 le-4 250 > lorenz10000_le-4.dat
22658 #define SIMODE -1 で chaosgmp 1002 10000 le-3 25 > lorenz10000_le-4_le-3.dat
22659 #define SIMODE -1 で chaosgmp 1002 5000 le-5 2500 > lorenz5000_le-4_le-5.dat
22660 plot [4000:4500] "lorenz10000_le-4.dat" using 5:1,"lorenz10000_le-4_le-3.dat" using 5:1
22661 plot [4000:4500] "lorenz10000_le-4.dat" using 5:1,"lorenz5000_le-4_le-5.dat" using 5:1
22662 can2
22663 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22664 40 0 #channels
22665 ./data/mackey10000_le-3_pl28.dat #training file
22666 2000 4000 #number of training data get_data_parms in my_function.c
22667 0 0 0 #y0min y0max y1min y1max for normalization
22668 in #
22669 200 #n_cells storing vectors
22670 20 #n_compare
22671 0.5 4 #v_thresh vmin
22672 10 #v_ratio
22673 0.2 #width window width
22674 sr #show training data show_data_parms(train);
22675 n #no
22676 sn #show network params
22677 sb #show batch params
22678 ex #execute
22679 1 #0:online, l:batch
22680 100 #iterations to execute
22681 100 #display
22682 ****最適多段予測結果を示すネットの読み込み
22683 nl
22684 bestmsp.net
22685 msp
22686 ****より長期予測
22687 ld
22688 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22689 40 0 #channels
22690 ./data/mackey10000_le-3_pl28.dat #training file
22691 2000 8000 #number of training data get_data_parms in my_function.c
22692 0 0 0 #y0min y0max y1min y1max for normalization
22693 msp
22694 ****
22695 Minimum MSE(NMSE) for asp and msp:
030725m>100ssp5.2378e-08(1.0196e-06)84mspl.3808e-05(2.6880e-04)N200k40w0.2
22696 030725m>50sspl.15615e-06(3.0397e-05)26msp1.1989e-04(2.3338e-03)N500k40w0.2
22697 030723e> 50sspl.6840e-06(3.2782e-05)28msp1.3052e-04(2.5409e-03)N500k40w0.2
22698 030717 > 28 MSE1.734424e-06;1.305244e-04 NMSE3.376386e-05;2.540906e-03N500k40
22700 030718e> 14 MSE3.193041e-06;1.208829e-02NMSE1.318319e-05;4.990925e-02 N500k40w0.2
```

```
22701 can2
22702 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22703 50 #channels j k
22704 ./data/santafe.dat #training file
22705 1000 1100 #train,total: points in time of training and totaldata
22706 0 255 0 1 #y0min y0max y1min y1max for normalization
22707 1 1 #integers r1 r2 for the resolution r1/r2
22708 in # init net
22709 320 #n_cells storing vectors
22710 10 #n_compare
22711 0.5 4 #v_thresh
22712 10 #v_ratio
22713 0.9 #width window width
22714 sr #show training data show_data_params(train);
22715 n #no
22716 sn #show network params
22717 sb #show batch params
22718 ex #execute
22719 1 #i j k :i=0:online,i=1:batch, j/kは分解能(resolution)
22720 50 #iterations to execute
22721 10 #display
22722 n1
22723 bestmsp.net
22724 msp
22725 030725m>25ssp9.8380e+01(3.1959e-02)2msp8.2610e+01(2.6836e-02)N320k50w0.9vm4
22726 030723e>3ssp9.6810e+01(3.1449e-02)6msp8.4820e+01(2.7554e-02)N320k50w0.9
22727 030723e>3ssp9.6810e+01(3.1449e-02)32msp8.5000e+01(2.7612e-02)N320k50w0.9
22728 030722e> 50 MSB9.802000e+01;8.500000e+01 NMSB3.184178e-02;2.761223e-02 N320k50w0.9
22729 best online CAN2 pr3.44e-02N300p51q2
22730 best Sauer 0.080
22731 best Wo 0.028
22732 030717m>10 MSB9.783000e+01;9.441000e+01 NMSE3.178000e-02;3.066907e-02 N320k50
22733 030716e>10 MSB9.783000e+01;9.494000e+01 NMSE3.178000e-02;3.084124e-02 N320k50
22734 030714e>10 MSB9.662000e+01;9.757000e+01 NMSE3.138699e-02;3.169559e-02 N320
22735 030714e>100 MSE8.641000e+01;1.369540e+03 NMSE2.807027e-02;4.448948e-01 N320
22736 can2
22737 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22738 80 #channels
22739 ./data/a3000.dat #training file
22740 2001 3000 #number of training data get_data_params in my_function.c
22741 0 255 0 255 #y0min y0max y1min y1max for normalization
22742 1 15 #integers r1 r2 for the resolution r1/r2
22743 in
22744 300 #n_cells storing vectors
22745 20 #n_compare
22746 0.5 4 #v_thresh
22747 10 #v_ratio
22748 0.1 #width window width
22749 sr #show training data show_data_params(train);
22750 n #no
22751 sn #show network params
22752 sb #show batch params
22753 ex #execute
22754 1 #0:online,l:batch
22755 50 #iterations to execute
22756 100 #display
22757 n1
22758 bestmsp.net
22759 msp
22760
22761 msp #multi-step prediction of test data
22762 msp0 #multi-step prediction of training data
22763 ssp0 #single-step prediction of training data
22764 030726m>1ssp2.8643e+01(2.7002e-02)5msp1.3356e+02(1.2590e-01)N300k80w0.lvm4255
22765 030725m>1ssp2.7978e+01(2.6375e-02)2msp1.3687e+02(1.2903e-01)N300k80w0.lvm4
22766 030723e>1ssp2.7651e+01(2.6067e-02)1msp1.3373e+02(1.2607e-01)N300k80w0.1
22767 030717> 3 MSE2.861706e+01;1.364132e+02 NMSE2.697767e-02;1.285984e-01 N300k80w0.1
22768 030716e> 3 MSE2.914907e+01;1.356175e+02 NMSE2.747921e-02;1.279029e-01 N300k80
22769 030716e> 44 MSE4.057070e+00;4.472215e+02 NMSE2.824653e-03;4.216015e-01 N2
22770 030714e> 38 MSE1.168617e+01;5.058930e+02 NMSE1.101670e-02;4.769118e-01 N8
22771 030714e> 36 MSE1.626241e+01;6.992439e+02 NMSE1.533078e-02;6.591862e-01 N12
22772 030714e> 9 MSE1.591293e+01;8.132485e+02 NMSE1.500132e-02;7.665999e-01 N12
22773 030714e> 9 MSE7.013160e+00;1.087398e+02 NMSE1.500132e-03;1.025104e-01 N10
22774 030714e> 6 MSE6.992606e+00;9.966561e+01 NMSB6.592020e-03;9.395606e-02 N10
22775 --- 030709以降の実行例 ---
22776 ● 関数近似
22777 can2
22778 1 #0:timeseries,l:chaos
22779 20 #channels
22780 ./data/07train5e4.dat #training file
22782 ./data/07test.dat #prediction file
```

```
22783 in #init_net
22784 500 #n_cells #storing vectors
22785 6 #n_compare
22786 0.5 #v_thresh
22787 5 #v_ratio
22788 0.8 #width #window width
22789 sr #show training data
22790 n #no
22791 sn #show network params
22792 sb #show batch params
22793 ex #execute learning, test and prediction
22794 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能(resolution)
22795 100 #i_times # iterations to execute
22796 100 #d_times #display
22797 ns #net_save
22798 07net.dat
22799 qu
22800
22801 can2 #0:timeseries,l:chaos
22802 1 #channels
22803 2 #training file
22804 ./data/07train5e4.dat #prediction file
22805 ./data/07test.dat
22806 n1
22807 07net.dat #execute learning, test and prediction
22808 ex #0:online, l:batch //init_net
22809 1 #i_times # iterations to execute
22810 100 #d_times #display
22811 100
22812 qu
22813 030714e> 100 MSE1.895141e-05;4.550582e-01 NMSE1.549705e-04;3.721126e+00 N500
22814 030708> 100 MSE3.191986e-05;4.550516e-01 NMSE2.610167e-04;3.721072e+00 N500
22815 030708> 50 MSB2.636177e-05;4.550214e-01 NMSB2.155668e-04;3.720825e+00 N500
22816 030702m> SVR MSE3.669258e-05
22817 Cf MSE1.92884e-05
22818 030702m> 50 MSE3.225098e-05 (width=0.9)
22819 030702m> >50 MSE3.528878e-05
22820 030702m> >50 MSE3.665258e-05
22821 達次CAN2 f07 LM05 MSE4.987910e-05
22822 after030701e> 100 MSB6.853463e-05 コメントは下
22823
22824 ./data/07train5e4B5.dat #training file
22825 > 100 MSE8.061614e-04;1.844380e-01 NMSE6.592186e-03;1.508196e+00 N500width0.8
22826 > 100 MSE8.055997e-04;1.883815e-01 NMSE6.587593e-03;1.540443e+00 N500 width0.1
22827 onlineCAN2>>f07 LM05 MSE012:1.060333e-03,1.330766e-06,4.390513e-03 MaxAbs0.38677 MeanAbs0.00761 Nois
e0.010 N500 AV1 b5
22828
22829 can2 #0:timeseries,l:chaos
22830 1 #channels
22831 2 #training file
22832 ./data/02train5e4.dat #prediction file
22833 ./data/02test.dat in #init_net
22834 in #n_cells #storing vectors
22835 500 #n_compare
22836 6 #v_thresh
22837 0.5 #v_ratio
22838 5 #width #window width
22839 0.1 #show training data
22840 sr #no
22841 n #show network params
22842 sn #show batch params
22843 sb #execute
22844 ex #i_times # iterations to execute
22845 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能(resolution)
22846 54 #d_times #display
22847 100 MSE1.297887e-02;4.689419e-01 NMSE5.210109e-02;1.882474e+00 N500k2w0.1
22848 030718> 10 MSE1.297887e-02;4.689419e-01 NMSE5.210109e-02;1.882474e+00 N500k2w0.1
22849 030717e> 87 MSE1.191414e-02;4.687109e-01 NMSE4.782696e-02;1.881547e+00 N500k2
22850 030714e> 54 MSE1.265124e-02;4.687315e-01 NMSE5.078589e-02;1.881629e+00 N500
22851 030714e> 10 MSE1.297887e-02 (width=0.1)
22852 Cf.bestSVR MSE1.4996e-02 =0.014996 #ofdata=2e3
22853 onlineCAN2 MSE1.990468e-02=0.01990468
22854 030713> 10 MSE1.300175e-02 (width=0.1)
22855 030710m> 50 MSE1.388465e-02; 不安定
22856 030709e> 50 MSE1.325553e-02; 不安定
22857 030708e> 100 MSE1.428304e-02
22858 030702m> > 100 MSE1.412979e-02
22859 030702m> > 100 MSE1.303592e-02
22860 after030701e> 100 MSE1.311778e-02;
22861 after030629e> 100 MSE1.354559e-02
22862 before030629e> 100 MSE1.335028e-02
22863
```

```
22864 ●時系列
22865 can2
22866 0
22867 50 1 1 #0:timeseries,l:chaos prepare_data() in my_function.c
22868 ./data/santafe.dat #training file
22869 1000 1100 #ttrain,Ttotal: points in time of training and total data
22870 in #
22871 320 #n_cells storing vectors
22872 10 #n_compare
22873 0.5 #v_thresh
22874 10 #v_ratio
22875 0.9 #width window width
22876 sr #show training data show_data_parms(train);
22877 n #no
22878 sn #show network params
22879 sb #show batch params
22880 ex #execute
22881 1 1 1 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
22882 10 #iterations to execute
22883 10 #display
22884 best online CAN2 pr3.44e-02N30300p51q2
22885 best Sauer 0.080
22886 best Wo 0.028
22887 030717m>10 MSE9.783000e+01;9.441000e+01 NMSE3.178005e-02;3.066907e-02 N320k50
22888 030716e>10 MSE9.783000e+01;9.494000e+01 NMSE3.178005e-02;3.084124e-02 N320k50
22889 030714e>10 MSE9.662000e+01;9.757000e+01 NMSE3.138699e-02;3.169559e-02 N320
22890 030714e>100 MSE8.641000e+01;1.369540e+03 NMSE2.807027e-02;4.448948e-01 N320
22891 can2
22892 0
22893 80 1 15 #channels
22894 ./data/a3000.dat #training file
22895 2001 3000 #number of training data get_data_parms in my_function.c
22896 in #
22897 300 #n_cells storing vectors
22898 20 #n_compare
22899 0.5 #v_thresh
22900 10 #v_ratio
22901 0.1 #width window width
22902 sr #show training data show_data_parms(train);
22903 n #no
22904 sn #show network params
22905 sb #show batch params
22906 ex #execute
22907 1 1 15 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
22908 3 #iterations to execute
22909 100 #display
22910 msp #multi-step prediction of test data
22911 msp0 #multi-step prediction of training data
22912 sep0 #single-step prediction of training data
22913 030717> 3 MSE2.914907e+01;1.356753e+02 NMSE2.747921e-02;1.279029e-01 N300k80
22914 030716e>3 MSE2.914907e+01;1.356175e+02 NMSE2.747921e-02;1.278484e-01 N300k80
22915 030714e> 44 MSE4.057070e+00;4.472216e+02 NMSE3.824653e-03;4.216015e-01 N2
22916 030714e> 38 MSE1.168617e+01;5.058930e+02 NMSE1.101670e-02;4.769118e-01 N8
22917 030714e> 36 MSE1.626241e+01;6.992439e+02 NMSE1.533078e-02;6.591862e-01 N12
22918 030714e> 9 MSE1.591293e+01;8.132485e+02 NMSE1.500132e-02;7.666599e-01 N10
22919 030714e> 9 MSE7.013160e+00;1.087398e+02 NMSE6.611396e-03;1.025104e-01 N10
22920 030714e> 6 MSE6.992606e+00;3.965651e+01 NMSE6.592020e-03;3.395606e-02 N10
22921 can2
22922 0
22923 10 #channels
22924 ./data/lorenz10000_le-4.dat #training file
22925 4000 4500 #ttrain,Ttotal: points in time of training and total data
22926 in #
22927 800 #n_cells storing vectors
22928 20 #n_compare
22929 0.5 #v_thresh
22930 10 #v_ratio
22931 0.9 #width window width
22932 sr #show training data show_data_parms(train);
22933 n #no
22934 sn #show network params
22935 sb #show batch params
22936 ex #execute
22937 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
22938 47 #iterations to execute
22939 10 #display
22940
```

```
22941 030717> 47 MSE1.336571e-04;2.357905e+01 NMSE2.122590e-06;3.744558e-01N800k10
22942 ↑この誤差は sigma=1e-5~1e-6のシムス公誤差が加わった応答とほぼ等しい。
22943 (../gmp/examples/kuro/で gnuplotを実行し
22944 plot [4000:5000] "mackey10000_le-3_p128.dat" using 0:1,"mackey5000_le-3_p128_2000+le-5.dat" using 0:
```

```
22945 をして確かめよ。
22946 )
22947 030717>12 MSE1.712460e-04;3.371515e+01 NMSE2.719536e-06;5.354259e-01 N800k10
22948 030712e>10 MSE1.268072e-05;1.588170e+01 NMSE2.013809e-07;2.522153e-01N800k0.1
22949 030712e>10 MSE7.867260e-06;5.820007e+01 NMSE1.249389e-07;9.242678e-01N500
22950 Rungekutta刻み幅1e-4で生成した時系列 ./data/lorenz10000_le-4.datのCAN2
22951 での予測は Rungekutta刻み幅1e-5で生成した時系列よりも良い。
22952 Cf. plot [4000:4500] "lorenz10000_le-4.dat" using 5:1, "lorenz5000_le-4_le-5.dat" using 5:1
22953 学習
22954 #define SIMODE 1 ㊦ chaosmp 1002 10000 le-4 250 > lorenz10000_le-4.dat
22955 #define SIMODE -1 ㊦ chaosgmp 1002 10000 le-3 25 > lorenz10000_le-4_le-3.dat
22956 #define SIMODE -1 ㊦ chaosgmp 1002 5000 le-5 2500 > lorenz5000_le-4_le-3.dat
22957 plot [4000:4500] "lorenz10000_le-4.dat" using 5:1, "lorenz10000_le-4_le-3.dat" using 5:1
22958 plot [4000:4500] "lorenz10000_le-4.dat" using 5:1, "lorenz5000_le-4_le-5.dat" using 5:1
22959
```

```
can2
22960
22961 0 #0:timeseries,l:chaos prepare_data() in my_function.c
22962 10 #channels
22963 ./data/lorenz10000_le-4_p128.dat #training file
22964 9000 10000 #ttrain,Ttotal: points in time of training and total data
22965 in #
22966 300 #n_cells storing vectors
22967 20 #n_compare
22968 0.5 #v_thresh
22969 10 #v_ratio
22970 0.8 #width window width
22971 sr #show training data show_data_parms(train);
22972 n #no
22973 sn #show network params
22974 sb #show batch params
22975 ex #execute
22976 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
22977 10 #iterations to execute
22978 10 #display
22979
```

```
22980 030716m>10 MSE1.061265e-06;1.027629e+02 NMSE1.672778e-08;1.619761e+00 N300
22981 set data style lines
22982 plot [9000:10000] "lorenz9000_10000_le-3_p128.dat" using 0:1,"lorenz10000_le-4_p128.dat" using 0:1
22983
22984
22985 can2
22986 0
22987 10 #channels
22988 ./data/lorenz10000_le-4_p64.dat #training file
22989 1500 2000 #ttrain,Ttotal: points in time of training and total data
22990 in #
22991 300 #n_cells storing vectors
22992 20 #n_compare
22993 0.5 #v_thresh
22994 10 #v_ratio
22995 0.1 #width window width
22996 sr #show training data show_data_parms(train);
22997 n #no
22998 sn #show network params
22999 sb #show batch params
23000 ex #execute
23001 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
23002 100 #iterations to execute
23003 10 #display
23004 10
```

```
./data/rossler4000.dat #training file
23011 2000 4000 #ttrain,Ttotal: points in time of training and total data
23012 in #
23013 500 #n_cells storing vectors
23014 20 #n_compare
23015 0.5 #v_thresh
23016 10 #v_ratio
23017 0.9 #width window width
23018 sr #show training data show_data_parms(train);
23019 n #no
23020 sn #show network params
23021 sb #show batch params
23022 ex #execute
23023 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
23024 10 #iterations to execute
23025 10 #display
23026

030715> 100 MSE2.509255e-04;8.770646e+01 NMSE3.983612e-06;1.392399e+00 N300
23005 030715> 100 MSE1.427048e-04;1.253523e+02 NMSE2.285535e-06;1.990052e+00 N300
23006
23007 can2
23008 0
23009 10 #0:timeseries,l:chaos prepare_data() in my_function.c
23010 10 #channels
23011 ./data/rossler4000.dat #training file
23012 2000 4000 #ttrain,Ttotal: points in time of training and total data
23013 in #
23014 500 #n_cells storing vectors
23015 20 #n_compare
23016 0.5 #v_thresh
23017 10 #v_ratio
23018 0.9 #width window width
23019 sr #show training data show_data_parms(train);
23020 n #no
23021 sn #show network params
23022 sb #show batch params
23023 ex #execute
23024 1 0 1 #i j k :i=0:online,i=1:batch, j/kは分解能 (resolution)
23025 10 #iterations to execute
23026 10 #display
```

```
23207 > 10 MSE2.848007e-04;9.813702e+00 NMSE1.084743e-05;3.737824e-01 N500k10
23208 > 10 MSE2.770285e-04;7.177966e+00 NMSE1.055141e-05;2.733930e-01 N400k10
23209 > 10 MSE2.484028e-04;9.377020e+00 NMSE9.461118e-06;3.571501e-01 N500k10
23210 > 10 MSE1.748636e-04;1.564719e+01 NMSE6.660172e-06;5.959669e-01 N500k12
23231 > 10 MSE1.049713e-04;9.782534e+00 NMSE1.923325e-05;3.725952e-01 N500k8
23232 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23233 10 #channels
23234 ./data/lorenz500_le-7.dat #training file
23235 499 500 #ttrain,ttotal: points in time of training and total data
23236 in #
23237 500 #n_cells storing vectors
23238 20 #n_compare
23239 0.5 #v_thresh
23240 1.0 #v_ratio
23241 0.9 #width window width
23242 sr #show training data show_data_parms(train);
23243 n #no
23244 sn #show network params
23245 sb #show batch params
23246 ex #execute
23247 1 #0:online, l:batch init_net() in my_plinn.c
23248 10 #iterations to execute
23249 10 #display
23250 -----
23251 23051
23252 23052
23253 23053
23254 can2
23255 0 #channels
23256 10 #0:timeseries,1:chaos prepare_data() in my_function.c
23257 ./data/lorenz500.dat #training file
23258 5000 5500 #number of training data get_data_parms in my_function.c
23259 in #
23260 500 #n_cells storing vectors
23261 20 #n_compare
23262 0.5 #v_thresh
23263 1.0 #v_ratio
23264 0.8 #width window width
23265 sr #show training data show_data_parms(train);
23266 n #no
23267 sn #show network params
23268 sb #show batch params
23269 ex #execute
23270 1.0 #0:online, l:batch init_net() in my_plinn.c
23271 10 #iterations to execute
23272 10 #display
23273 10 MSE1.873005e-05;5.502901e+01 NMSE3.361462e-07;9.875994e-01 N500k10w0.9
23274 030710> 10 MSE1.961903e-05;5.311001e+01 NMSE3.521006e-07;9.531593e-01 N500k10w0.8
23275 030710> 10 MSE1.369495e-05;1.202579e+02 NMSE2.457817e-07;12.158255e+00 N500k12
23276 23077
23277 can2
23278 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23279 40 0 #channels
23280 ./data/mackey5000_le-3.dat #training file
23281 2000 4000 #number of training data get_data_parms in my_function.c
23282 in #
23283 500 #n_cells storing vectors
23284 20 #n_compare
23285 0.5 #v_thresh
23286 1.0 #v_ratio
23287 0.2 #width window width
23288 sr #show training data show_data_parms(train);
23289 n #no
23290 sn #show network params
23291 sb #show batch params
23292 ex #execute
23293 1 0 1 #0:online, l:batch init_net() in my_plinn.c
23294 28 #iterations to execute
23295 100 #display
23296 030717 > 28 MSE1.734424e-06;1.305244e-04 NMSE3.376386e-05;2.540906e-03 N500k40
23297 030718e> 14 MSE3.193041e-06;1.208829e-02 NMSE1.318319e-05;4.990925e-02 N500k40w0.2
23298
23299 このあと
23300 1d
23301 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23302 40 #channels
23303 ./data/mackey5000_le-3.dat #training file
23304 2000 5000 #number of training data get_data_parms in my_function.c
23305 mSP
23306 > 28 MSE1.734424e-06;1.305244e-04 NMSE3.376386e-05;2.540906e-03 N500k40w0.2
23307 ↑ この誤差はsigma=1e-5~1e-6のシズム誤差が加わった応答とほぼ等しい。
23308 (.../gmp/examples.kuro/でgnuplotを実行し、
```

```
23109 plot [4000:4500] "lorenz10000_le-4_pl28.dat" using 0:1,"lorenz5000_le-4_pl28_4000+1e-3.dat" using 0:1
23110 をして確かめよ。)
23111 または、↑で
23112 po
23113 temp.dat
23114 をしたあと、shellで
23115 ../gmp/examples.kuro/yyhat2mse ./data/mackey5000_le-3.dat ./temp.dat 2001 5000 > mse.dat
23116 gnuplot
23117 set data style lines
23118 plot [2001:5000] "mse.dat" using 6:1 t "rmse", "mse.dat" using 6:3 t "e"
23119 を行い、
23120 ../gmp/examples.kuro/で
23121 yyhat2mse mackey10000_le-3_pl28.dat mackey5000_le-3_pl28_2000+1e-5.dat 2001 5000 > mse.dat
23122 をし
23123 gnuplot
23124 set data style lines
23125 plot [2001:5000] "mse.dat" using 6:1 t "rmse", "mse.dat" using 6:3 t "e"
23126 として比較。
23127
23128 030717> 56 MSE1.260689e-08;2.381440e-03 NMSE2.454171e-07;4.635927e-02 N100k40
23129 > 8 MSE4.173779e-08;3.928764e-03 NMSE8.125056e-07;7.648088e-02N100k40
23130
23131 can2
23132 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23133 20 #channels
23134 ./data/mackey4000.dat #training file
23135 2000 4000 #number of training data get_data_parms in my_function.c
23137 in #
23138 100 #n_cells storing vectors
23139 20 #n_compare
23140 0.5 #v_thresh
23141 1.0 #v_ratio
23142 0.2 #width window width
23143 sr #show training data show_data_parms(train);
23144 n #no
23145 sn #show network params
23146 sb #show batch params
23147 ex #execute
23148 1 0 1 #0:online, l:batch
23149 10 #iterations to execute
23150 10 #display
23151 po #pred_out
23152 ./mackey4000_2000_2200.dat #filename
23153 200 #steps
23154 23154 qu #finish
23155 030709e>10 MSE1.459719e-07;2.295136e-02 NMSE2.837617e-06;4.461625e-01 N100
23156 030709e>10 MSE1.148912e-07;8.871068e-03 NMSE2.233425e-06;1.724490e-01 N100
23157 030709e>10 MSE1.165091e-07;8.446379e-03 NMSE2.264877e-06;1.641932e-01 N100
23158 > 100 MSE4.455066e-08;9.641944e-02 NMSE8.560418e-07;1.874344e+00 N100
23159
23160 030709e> 1000 MSB6.932338e-09;3.994570e-07
23161 030708e> 1000 MSE1.027852e-08;5.133564e-06
23162 030707 > 1000 MSF9.272000e-09;2.553664e-06(width=0.2)
23163 after030701e> 1000 MSE7.481811e-09;9.824534e-06(width=0.3)
23164 after030701e> 1000 MSE1.320137e-08;8.406145e-07 (width=0.1)
23165 after030701e > 1000 MSE1.003213e-08;5.891454e-07(pred0)MSB2等重?width=0.2)
23166 after030629m > 1000 MSB6.783600e-09;7.151643e-06 nokeinitrandom v_thresh0.5
23167 after030629m > 1000 MSB6.727869e-09;2.394590e-06 nokeinitrandom v_thresh0.9***
23168 before030629m> 1000 MSF5.282576e-09;3.824018e-06 nokeinitrandom
23169 v_thresh0.9
23170
23171 can2
23172 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23173 50 #channels
23174 ./data/a.dat #training file
23175 2001 #number of training data get_data_parms in my_function.c
23176 in
23177 10 #n_cells storing vectors
23178 20 #n_compare
23179 0.5 #v_thresh
23180 1.0 #v_ratio
23181 0.2 #width window width
23182 sr #show training data show_data_parms(train);
23183 n #no
23184 sn #show network params
23185 sb #show batch params
23186 ex #execute
23187 1 #0:online, l:batch init_net() in my_plinn.c
23188 100 #iterations to execute
23189 100 #display
```

```
23190 030704m> 100 NMSE3.788421e-03;3.119250e-01(k90N1)
23191 030704m> 100 NMSE4.016951e-03;2.835835e-01(k90N2)
23192 030704m> 100 NMSE3.751651e-03;9.901982e-01(k90N3)
23193 030704m> 100 NMSE4.031632e-03;8.618851e-01(k90N4)
23194 030704m> 100 NMSE4.291529e-03;1.910695e+00(k90N5)
23195 030704m> 100 NMSE6.118483e-03;1.561021e+00(k50N10)
23196
23197 --- 030702m以前の実行例 ---
23198
23199 ●関数近似
23200 can2
23201 1 #0:timeseries,1:chaos
23202 2 #channels
23203 ./data/07train5e4.dat #training file
23204 ./data/07test.dat #prediction file
23205 1 #0:online,1:batch //init_net
23206 50 #i_times # iterations to execute
23207 100 #d_times #display
23208 500 #n_cells #storing vectors
23209 6 #n_compare
23210 0.5 #v_thresh
23211 5 #v_ratio
23212 0.8 #width #window width
23213 sr #show training data
23214 n #no
23215 sn #show network params
23216 sb #show batch params
23217 ex #execute
23218 030708> 50 MSE2.636177e-05;4.550214e-01 NMSE2.155668e-04;3.720825e+00 N500
23219 >50 MSE3.669258e-05
23220 Cf. SVR MSE1.92884e-05
23221 030702m> 50 MSE3.225098e-05(width=0.9)
23222 030702m> >50 MSE3.528878e-05
23223 030702m> >50 MSE3.669258e-05
23224 渡次CAN2 f07 LM05 MSE4.987910e-05
23225 after030701e> 100 MSE6.853463e-05 コメントは下
23226 can2
23227 1 #0:timeseries,1:chaos
23228 2 #channels
23229 ./data/07train5e4.dat #training file
23230 ./data/07test.dat #prediction file
23231 1 #0:online,1:batch
23232 100 #i_times # iterations to execute
23233 100 #d_times #display
23234 500 #n_cells #storing vectors
23235 6 #n_compare
23236 0.5 #v_thresh
23237 5 #v_ratio
23238 0.2 #width #window width
23239 sr #show training data
23240 n #no
23241 sn #show network params
23242 sb #show batch params
23243 ex #execute
23244 Cf beetsVR MSE1.4996e-02 =0.014996
23245 onlineCN2 MSE1.990468e-02=0.01990468
23246 030709e> 50 MSE1.388465e-02; 不安定
23247 030708e> 50 MSE1.325553e-02; 不安定
23248 030702m> 100 MSE1.428304e-02
23249 030702m> > 50 MSE1.417297e-02
23250 after030701e> 100 MSE1.303592e-02
23251 after030629e> 100 MSE1.311778e-02; alpha=0.02*(1.-GlobalTime/GlobalTimeMax)//
23252 after030629e> 100 MSE1.354559e-02
23253 before030629e> 100 MSE1.335028e-02
23254
23255 ●時系列
23256 can2
23257 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23258 50 #channels
23259 ./data/a.dat #training file
23260 2001 #number of training data get_data_parms in my_function.c
23261 1 #0:online,1:batch init_net() in my_plinn.c
23262 100 #iterations to execute
23263 100 #display
23264 10 #n_cells storing vectors
23265 20 #n_compare
23266 0.5 #v_thresh
23267 10 #v_ratio
23268 0.2 #width window width
23269 sr #show training data show_data_parms(train);
23270 n #no
23271 sn #show network params
```

```
23272 sb #show batch params
23273 ex #execute
23274 030704m> 100 NMSE3.788421e-03;3.119250e-01(k90N1)
23275 030704m> 100 NMSE4.016951e-03;2.835835e-01(k90N2)
23276 030704m> 100 NMSE3.751651e-03;9.901982e-01(k90N3)
23277 030704m> 100 NMSE4.031632e-03;8.618851e-01(k90N4)
23278 030704m> 100 NMSE4.291529e-03;1.910695e+00(k90N5)
23279 030704m> 100 NMSE6.118483e-03;1.561021e+00(k50N10)
23280
23281 can2
23282 1 #0:timeseries,1:chaos
23283 2 #channels
23284 ./data/07train5e4.dat #training file
23285 ./data/07test.dat #prediction file
23286 1 #0:online,1:batch
23287 50 #i_times # iterations to execute
23288 100 #d_times #display
23289 500 #n_cells #storing vectors
23290 6 #n_compare
23291 0.5 #v_thresh
23292 5 #v_ratio
23293 0.8 #width #window width
23294 sr #show training data
23295 n #no
23296 sn #show network params
23297 sb #show batch params
23298 ex #execute
23299 030709e> 50 MSE1.745168e-05
23300 Cf. SVR MSE1.92884e-05
23301 030702m> 50 MSE3.225098e-05(width=0.9)
23302 030702m> >50 MSE3.528878e-05
23303 030702m> >50 MSE3.669258e-05
23304 渡次CAN2 f07 LM05 MSE4.987910e-05
23305 after030701e> 100 MSE6.853463e-05 コメントは下
23306
23307 --- 030701e以前の実行例 ---
23308 (1)時系列
23309 can2
23310 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23311 20 #channels
23312 ./data/mackey2000.dat #training file
23313 2001 #number of training data get_data_parms in my_function.c
23314 1 #0:online,1:batch init_net() in my_plinn.c
23315 1000 #iterations to execute
23316 100 #display
23317 100 #n_cells storing vectors
23318 20 #n_compare
23319 0.5 #v_thresh
23320 10 #v_ratio
23321 0.2 #width window width
23322 sr #show training data show_data_parms(train);
23323 n #no
23324 sn #show network params
23325 sb #show batch params
23326 ex #execute
23327 030709e> 1000 MSE6.932338e-09;3.994570e-07
23328 030708e> > 1000 MSE1.027852e-08;5.133564e-06
23329 030707e> > 1000 MSE9.272000e-09;2.553664e-06(width=0.2)
23330 after030701e> 1000 MSE7.481811e-09;9.824534e-06(width=0.3)
23331 after030701e> 1000 MSE1.320137e-08;8.406145e-07 (width=0.1)
23332 after030629e> > 1000 MSE1.009213e-08;5.891452e-07(predofMSE& 尊重 ?width=0.2)
23333 after030629m> > 1000 MSE6.783600e-09;7.154643e-06 noReinitRandom v_thresh0.5
23334 after030629m> > 1000 MSE6.727869e-09;2.394590e-06 noReinitRandom v_thresh0.9***
23335 before030629m> 1000 MSE5.282576e-09;3.824018e-06 noReinitRandom v_thresh0.9
23336 --- 030701e以前の実行例 ---
23337 (1)時系列
23338 can2
23339 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23340 20 #channels
23341 ./data/mackey-glass.dat #training file
23342 2001 #number of training data get_data_parms in my_function.c
23343 1 #0:online,1:batch init_net() in my_plinn.c
23344 1000 #iterations to execute
23345 100 #display
23346 100 #n_cells storing vectors
23347 20 #n_compare
23348 0.5 #v_thresh
23349 10 #v_ratio
23350 0.2 #width window width
23351 sr #show training data show_data_parms(train);
23352 n #no
23353 sn #show network params
```



```
23516 n #no
23517 sn #show network params
23518 sb #show batch params
23519 ex #execute
23520 qu
23521 > 100 MSE3.772715e-05; function no.07
23522 > 100 MSE1.651665e-02; function no.02
23523 030625
23524 can2
23525 1 #0:timeseries,1:chaos
23526 2 #channels
23527 ./data/02train2e3.dat #training file
23528 ./data/02test.dat #prediction file
23529 1 #0:online,1:batch
23530 100 #i.times # iterations to execute
23531 100 #d.times #display vectors
23532 500 #n_cells #storing vectors
23533 6 #n_compare
23534 10 #v_thresh
23535 2 #v_ratio
23536 0.1 #width #window width
23537 sr #show training data
23538 n #no
23539 sn #show network params
23540 sb #show batch params
23541 ex #execute
23542 > 100 MSE2.33e-02<<
23543 > 100 MSE2.35e-02 <<.v=n0_ivectors
23544 > 100 MSE2.33e-02<<.v=n_ivectors
23545 can2
23546 1 #0:timeseries,1:chaos
23547 2 #channels
23548 ./data/07train5e4.dat #training file
23549 ./data/07test.dat #prediction file
23550 1 #0:online,1:batch
23551 100 #i.times # iterations to execute
23552 100 #d.times #display vectors
23553 500 #n_cells #storing vectors
23554 6 #n_compare
23555 10 #v_thresh
23556 2 #v_ratio
23557 0.1 #width #window width
23558 sr #show training data
23559 n #no
23560 sn #show network params
23561 sb #show batch params
23562 ex #execute
23563 > 100 MSE6.84e-05/4.55e-01 <<n2=nl*2-n0&& use bidata->m0 myrandom
23564 > 90 MSE6.75e-05/4.55e-01<<n2=nl*2-n0&& use bidata->m0
23565 > 100 MSE6.76e-05/4.55e-01
23566 can2
23567 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23568 20 #channels
23569 ./data/mackey-glass.dat #training file
23570 2001 #number of training data get_data_params()in my_function.c
23571 1 #0:online,1:batch init_net() in my_plinn.c
23572 100 #iterations to execute
23573 100 #display
23574 100 #n_cells storing vectors
23575 20 #n_compare
23576 1000.0 #v_thresh
23577 1000.0 #width window width
23578 0.2 #show training data show_data_params(train);
23579 sr #no
23580 n #show network params
23581 sn #show batch params
23582 sb #execute
23583 ex
23584 > 1000 MSE6.21e-09/5.30e-05 <<n2=nl*2-n0&& use bidata->m0
23585 > 1000 MSE6.80e-09/2.98e-05 <<n2=nl-n0
23586 > 1000 MSE7.56e-09/2.58e-05 <<n2=nl*2-n0
23587 030624
23588 (1) new modify_w_batch
23589 can2
23590 0 #channels
23591 20 #data/mackey-glass.dat #training file
23592 2001 #number of training data get_data_params()in my_function.c
23593 1 #0:online,1:batch init_net() in my_plinn.c
23594 100 #iterations to execute
23595 100 #display
23596 100 #n_cells storing vectors
23597 100
```

```
23598 20 #n_compare
23599 1000.0 #v_thresh
23600 1000.0 #v_ratio
23601 0.2 #width window width
23602 sr #show training data show_data_params(train);
23603 n #no
23604 sn #show network params
23605 sb #show batch params
23606 ex #execute
23607 !->1000 MSE6.52e-09/8.71e-06
23608 <<if (GlobalTime<=2) n=(n_channels+1)+10; in my_function.c
23609
23610 !->1000MSE5.44e-09/1.25e-05
23611 <<alphasum=0.9/(GlobalTime*50+1);if (alphasum<1e-5)alphasum=1e-5;
23612 <<after modified calc output and
23613 <<n=(n_channels+1)+50./(GlobalTime+1);//kuro: in my_function.c
23614 !-> 1000 MSE6.62e-09/8.22e-06<<< if (alphasum<1e-5) alphasum=1e-5;//
23615 !-> 1000 MSE6.62e-09/8.22e-06<<< if (alphasum<1e-6) alphasum=1e-6;//
23616 !-> 1000 MSE1.62e-08/8.69e-06<<< if (alphasum<1e-4) alphasum=1e-4;
23617 can2
23618 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23619 20 #channels
23620 ./data/mackey-glass.dat #training file
23621 2001 #number of training data get_data_params()in my_function.c
23622 1 #0:online,1:batch init_net() in my_plinn.c
23623 1000 #iterations to execute
23624 100 #display
23625 100 #n_cells storing vectors
23626 20 #n_compare
23627 20.0 #v_thresh
23628 1000.0 #v_ratio
23629 0.2 #width window width
23630 sr #show training data show_data_params(train);
23631 n #no
23632 sn #show network params
23633 sb #show batch params
23634 ex #execute
23635 030623
23636 (1)for time series
23637 can2
23638 0 #0:timeseries,1:chaos prepare_data() in my_function.c
23639 20 #channels
23640 ./data/mackey-glass.dat #training file
23641 2001 #number of training data get_data_params()in my_function.c
23642 1 #0:online,1:batch init_net() in my_plinn.c
23643 1000 #iterations to execute
23644 100 #display
23645 100 #n_cells storing vectors
23646 20 #n_compare
23647 20.0 #v_thresh
23648 100.0 #v_ratio
23649 0.2 #width window width
23650 sr #show training data show_data_params(train);
23651 n #no
23652 sn #show network params
23653 sb #show batch params
23654 ex #execute
23655 #v_ratio5.0 > 1000 MSE1.23e-08/1.15e-05 c -1  $\alpha$  (min 59 NGO) T_R10.0e+00 tau_E8.0e+04
23656 #v_ratio100.0> 1000 MSE8.28e-09/7.67e-05 c -1  $\alpha$  (min 81 NGO) T_R10.0e+00 tau_E8.0e+04
23657 #can2_2003061>1000 MSE1.23e-08/1.15e-05 c -1,  $\alpha$  (min59, NGO),T_R10.0e+00,tau_E8.0e+04
23658 > 960 MSE6.30e-09/3.61e-06 c -1  $\alpha$  (min 82 NGO) T_R10.0e+00 tau_E8.0e+04
23659
23660 (2)function approximation
23661 can2
23662 1 #0:timeseries,1:chaos
23663 2 #channels
23664 ./data/07train1e4.dat #training file
23665 ./data/07test.dat #prediction file
23666 1 #0:online,1:batch
23667 10 #i.times # iterations to execute
23668 100 #d.times #display
23669 100 #n_cells #storing vectors
23670 6 #n_compare
23671 5 #v_thresh
23672 1000.0 #width #window width
23673 0.1 #show training data
23674 sr #no
23675 n #show network params
23676 sn #show batch params
23677 sb #execute
23678 ex
23679
```



```
23680 can2
23681 1
23682 2
23683 ./data/02train2e3.dat
23684 #training file
23685 #prediction file
23686 #0:online, 1:batch
23687 #i_times # iterations to execute
23688 #d_times #display
23689 #n_cells #storing vectors
23690 #n_compare
23691 #v_thresh
23692 #v_ratio
23693 #width #window width
23694 #show training data
23695 #no
23696 #show network params
23697 #show batch params
23698 #execute
23699
23700 can2
23701 1
23702 2
23703 ./data/07train1e4.dat
23704 #training file
23705 #prediction file
23706 #0:online, 1:batch
23707 #i_times # iterations to execute
23708 #d_times #display
23709 #n_cells #storing vectors
23710 #n_compare
23711 #v_thresh
23712 #v_ratio
23713 #width #window width
23714 #show training data
23715 #no
23716 #show network params
23717 #show batch params
23718 #execute
23719
23720 can2
23721 1
23722 2
23723 ./data/02train2e3.dat
23724 #training file
23725 #prediction file
23726 #0:online, 1:batch
23727 #i_times # iterations to execute
23728 #d_times #display
23729 #n_cells #storing vectors
23730 #n_compare
23731 #v_thresh
23732 #v_ratio
23733 #width #window width
23734 #show training data
23735 #no
23736 #show network params
23737 #show batch params
23738 #execute
23739
23740 can2
23741 1
23742 2
23743 ./data/07train2e3.dat
23744 #training file
23745 #prediction file
23746 #0:online, 1:batch
23747 #i_times # iterations to execute
23748 #d_times #display
23749 #n_cells #storing vectors
23750 #n_compare
23751 #v_thresh
23752 #v_ratio
23753 #width #window width
23754 #show training data
23755 #no
23756 #show network params
23757 #show batch params
23758 #execute
23759
23760 can2
23761 0
23762 0
23763 #channels
23764 #number of training data
23765 #0:online, 1:batch
23766 #iterations to execute
23767 #display
23768 #n_cells storing vectors
23769 #n_compare
23770 #v_thresh
23771 #v_ratio
23772 #width window width
23773 #show training data show_data_params(train);
23774 #no
23775 #show network params
23776 #show batch params
23777 #execute
23778
23779 --- test_batch.dat
23780 #(1) get_function_id(&fid, fname);
23781 .c
23782 1000 #fid
23783 ./chaos/mackey-glass.dat # data file name
23784 #(2) init_time_data(fid, fname);
23785 .c for chaos?
23786 #(3) get_data_params(&n_channels, &train_steps, total_steps);
23787 .c
23788 23785 2001 #n_train
23789 #n_channels
23790 #(4) train =init_data(tdata->x, TRAIN, fid, n_channels, train_steps, total_steps);
23791 .c
23792 #(5) test =init_data(tdata->x, TEST, fid, n_channels, train_steps, total_steps);
23793 .c
23794 #(6) pred =init_data(tdata->x, PRED, fid, n_channels, train_steps,total_steps);
23795 .c
23796 #(7) remove_time_data(tdata);
23797 .c
23798 #(8) net = init_net(&node, n_channels);
23799 #Learning Mode 0:online,1:batch
23800 1009 #iteration times?
23801 100 #Display Times In Learning?
23802 100 #Number Of Storing Vectors?
23803 20 #Number Of Compare Cells?
23804 20.0 #Value Threshold?
23805 5.0 #Value Ratio?
23806 0.2 #Window Width?
23807 #(9) show_data_params(train);
23808 .c
23809 sr
23810 n
23811 #(10) show_net_params(net);
23812 sn
23813 #(11) show_batch_data_params(bdata);
23814 sb
23815 #(12) exec_sim(net, train, aprx, test, pred);
23816 ex
23817 qu
23818
23819 -----
23820 Subject: Re: needs data
23821 From: Takamasa UENO <ueno@terasu.cntl.kyutech.ac.jp>
23822 To: S.Kurogi <kuro@cntl.kyutech.ac.jp>
23823 Cc: sawa@terasu.cntl.kyutech.ac.jp
23824 Date: Wed, 18 Jun 2003 15:35:06 +0900
23825 X-Mailer: Sylpheed version 0.8.11 (GTK+ 1.2.10; i386-debian-linux-gnu)
23826 Organization: Kyushu Inst. of Tech.
23827
23828 上野です。
23829
23830 On Tue, 17 Jun 2003 16:33:28 +0900
23831 S.Kurogi <kuro@cntl.kyutech.ac.jp> wrote:
23832
23833 > 沢さんと上野君に以下のデータをお願いします。
23834 >
23835 SKIP,,,
23836
23837
23838
23839 > (2)上野君
23840 > 前からお願ひしてますが、batchのCAN2の program:
23841 > (ノールスと使用例だけがいいです。readmeは特に要りません)
23842 >
23843 > 以上、よろしくお願ひします。
```

```
23762 20 #channels
23763 ./data/mackey-glass.dat #training file
23764 2001 #number of training data
23765 1 #0:online, 1:batch
23766 1000 #iterations to execute
23767 100 #display
23768 100 #n_cells storing vectors
23769 20 #n_compare
23770 20.0 #v_thresh
23771 5.0 #v_ratio
23772 0.2 #width window width
23773 #show training data show_data_params(train);
23774 #no
23775 #show network params
23776 #show batch params
23777 #execute
23778
23779 --- test_batch.dat
23780 #(1) get_function_id(&fid, fname);
23781 .c
23782 1000 #fid
23783 ./chaos/mackey-glass.dat # data file name
23784 #(2) init_time_data(fid, fname);
23785 .c for chaos?
23786 #(3) get_data_params(&n_channels, &train_steps, total_steps);
23787 .c
23788 23785 2001 #n_train
23789 #n_channels
23790 #(4) train =init_data(tdata->x, TRAIN, fid, n_channels, train_steps, total_steps);
23791 .c
23792 #(5) test =init_data(tdata->x, TEST, fid, n_channels, train_steps, total_steps);
23793 .c
23794 #(6) pred =init_data(tdata->x, PRED, fid, n_channels, train_steps,total_steps);
23795 .c
23796 #(7) remove_time_data(tdata);
23797 .c
23798 #(8) net = init_net(&node, n_channels);
23799 #Learning Mode 0:online,1:batch
23800 1009 #iteration times?
23801 100 #Display Times In Learning?
23802 100 #Number Of Storing Vectors?
23803 20 #Number Of Compare Cells?
23804 20.0 #Value Threshold?
23805 5.0 #Value Ratio?
23806 0.2 #Window Width?
23807 #(9) show_data_params(train);
23808 .c
23809 sr
23810 n
23811 #(10) show_net_params(net);
23812 sn
23813 #(11) show_batch_data_params(bdata);
23814 sb
23815 #(12) exec_sim(net, train, aprx, test, pred);
23816 ex
23817 qu
23818
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23836
23837
23838
23839 >
23840 ソースをここに用意して起きました。
23841 http://terasu.cntl.kyutech.ac.jp/~ueno/study/
23842 can_20030611.tar.bz2をダウンロードし、
23843 \$ tar jxfvp can_20030611.tar.bz2
23844 \$ cd can_20030611/
23845 \$ make
23846 \$./test_batch.sh
23847
23848 で、プログラムが実行されます。
23849
23850 各パラメータは、./test_batch.sh で調整するようになっているので
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23865 -----
23866 上野 貴雅 (Takamasa UENO)
23867 九州工業大学 大学院工学研究科 機械知能工学専攻
23868 修士課程2年 制御分野・風木研究室
23869 E-Mail: ueno@terasu.cntl.kyutech.ac.jp
23870 -----
23871 scp -r * kuro@terasu.cntl.kyutech.ac.jp:/home/kuro/public_html/sotu/2004/ueno/can2b
23872 scp can2b.tgz kuro@terasu.cntl.kyutech.ac.jp:/home/kuro/public_html/sotu/2004/ueno/