Enhance Speech Text Alignment For Prosody Modeling And Prediction In TTS

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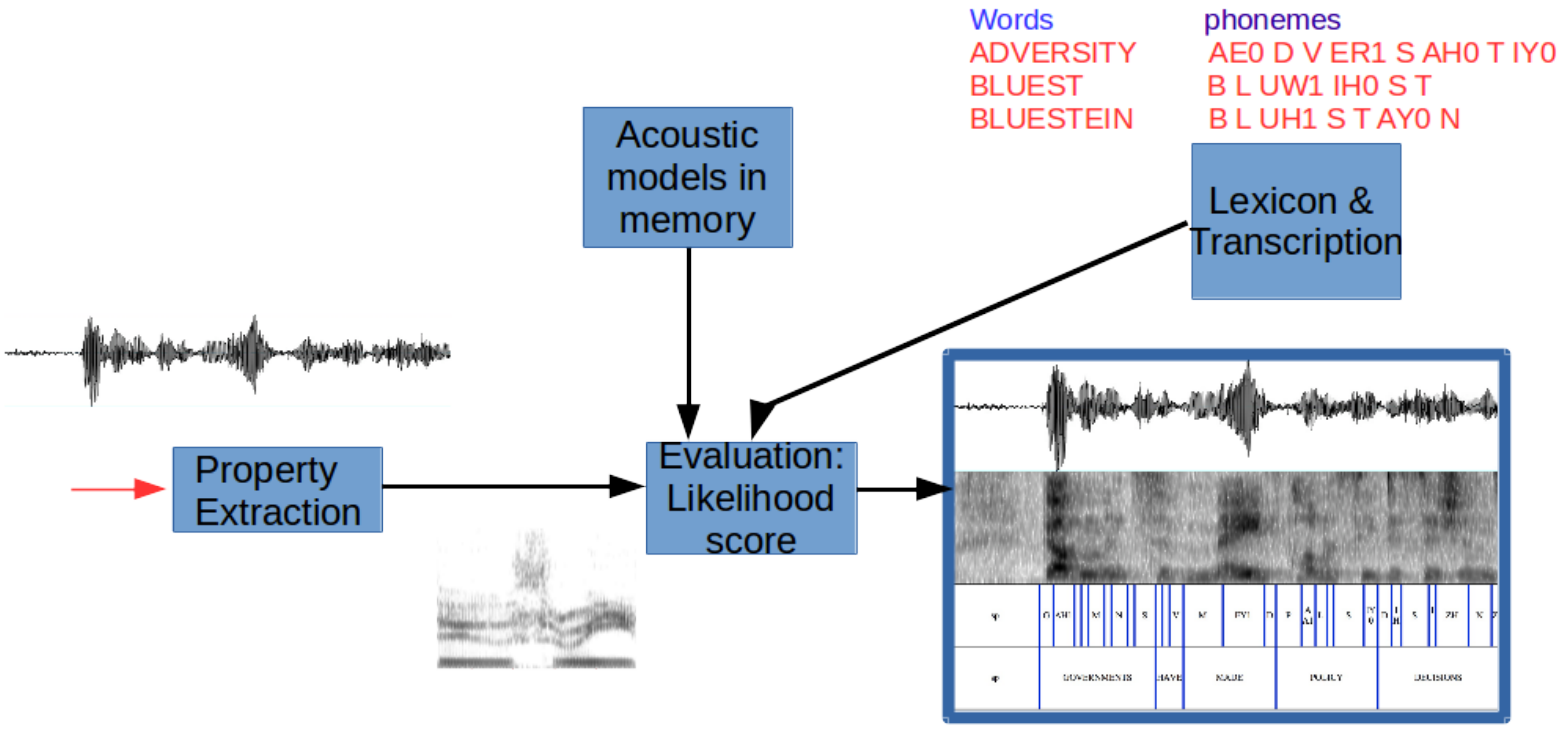
13/01/2017

Forced Alignment



Why?

- Adapt data properties (words, phonemes ...)
- Voice characteristics.
- Take account recording environment (robustness)
- Accurate boundaries (words, silences ...)

Text Pre-processing(Classical Problems)

Since the texts are too long

- sentence end detection (choice should be done..)
- Dealing with abbreviations.
- Recognizing Acronyms and URLs.
- Processing numbers
- Dealing with idioms and proper name.

Note : I'm trying to solve the above problems using different existing toolkit, this introduce another issues... And I think that we need manual checking ...

NEB Corpus

Gaëlle Vidal Work to Complete!!

CORPUS NEB (monolocuteur)	DUREE	Durée sélection Qualité	words/ sec, *base txt*	% st.dir *base txt*	Durée fichiers annot. man. Expressivité	Durée fichiers annot. Man. personnages	Durée lab. Man st. Dir	Dmoy(sec) lab. man. st. Dir	% st.dir base annot. man	Durée ΔTimbre	% D ΔTimbre /st.dir
mysteres	25:31:34	25:09:09	2,68	68%	07:33:17	07:33:17	04:39:20	7,9	62%	04:24:30	58%
miserables	14:16:15	10:58:50	2,46	16%		14:10:22	02:06:07	5,1	15%	00:51:35	6%
mme Bovary	13:11:41	12:45:32	2,36	20%	00:41:48	00:41:48	00:01:48	4,5	4%	00:00:27	1%
vampire (la)	*10:02:22*	*07:35:55*	*2,47*	*37%*	*00:05:45*	*00:05:45*	*00:00:05*	*2,7*	*1%*		*0%*
fille du pirate	06:29:32	02:09:35	2,52	30%	02:08:47	02:08:47	00:25:27	5,2	20%	00:08:38	7%
roman de la momie	06:32:33	06:32:33	2,40	24%	00:24:00	00:24:00	00:03:44	5,3	16%	00:01:49	8%
carmen	*02:17:50*	*01:24:20*	*2,67*	*23%*	*01:24:02*	*01:24:02*	*00:17:04*	*4,9*	*20%*	*00:06:08*	*7%*
voyage centre terre	*01:51:38*	*01:29:20*	*2,43*	*19%*							
germinal	01:45:50	00:55:30	2,58	14%		01:45:35	00:12:03	4,7	11%	00:03:32	3%
contes cruels	*01:42:47*	*01:17:59*	*2,47*	*32%*		*01:41:45*	*00:26:19*	*6,7*	*26%*	*00:00:48*	*1%*
contes	01:05:47	01:05:47	2,77	27%	00:10:50	01:05:23	00:21:13	5,4	32%	00:12:14	19%
venus	*01:01:44*	*01:01:44*	*2,93*	*43%*	*01:01:32*	*01:01:32*	*00:25:12*	*7,2*	*41%*	*00:07:36*	*12%*
lettres persanes	*00:20:27*	*00:20:27*	2,61	*89%*		*00:20:01*	00:16:49	*144,2*	84%	00:06:26	32%
fables la fontaine	00:18:06	00:13:00	2,53	12%		00:17:37	00:04:01	6,2	23%	00:00:46	4%
chants de maldoror	*00:17:37*	*00:10:38*	2,35	*0%*		00:17:28	*00:00:08*	2,7	1%	*00:00:08*	1%
poemes	00:11:52	00:11:16	2,21	2%		00:11:17	00:06:47	27,1	60%		0%
infernaliana	*00:10:34*	*00:10:34*	2,67	*35%*		00:10:26	00:04:14	7,3	41%	*00:00:29*	5%
cerfvolant	*00:05:49*	*00:00:00*	2,41	*6%*		*00:05:44*	*00:00:18*	*2,9*	5%	*00:00:18*	5%
TOTAL	87:13:58	73:32:09	2,53	38%	13:30:01	33:24:49	09:15:11		28%	06:03:43	18%
Remarques *(italique = lectures à la 1ère personne)*	= durée des fichiers son	Voir Document Description du corpus	= Estimations à partir du texte	= calculs à partir des étiquetages manuels. Les durée totales peuvent légèrement différer des durées de signal du fait de l'absence de labels sur les silences de fin de fichiers.							

Prosody Modeling

Some Related Work

Some Related Work

Raised Questions?

Questions?

Suggested problems to work on

Planning the unplannable?

https://www.officetimeline.com/gantt-chart-template/gantt-download

THANKYOU

References

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