DSP

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Coding environment

-CSIE Workstation (i686-m64)

Execution step

1.Compile

- **make MACHINE_TYPE=i686-m64 SRIPATH=...../srilm-1.5.10** Compile mydisambig.cpp and create executable file.

2.prepare

- **make map** Generate ZhuYin-Big5.map
- **make build_lm** (not necessary if bigram.lm provided) Generate bigram.lm
- **make ngram** (not necessary if testdata provided) Generate testdata/set_i.txt according to testdata/i.txt

3.execute

- **make run** Execute mydisambig to run viterbi algorithm and create i.txt in result1.

Code segment

ZhuYin-Big5.py

- Parse Big5-ZhuYin.map and create a dynamic dictionary.
- If key(ㄅ、ㄆ、ㄇ……仆……) exist, append values to them. Otherwise, create a new key-value pair.
- Write the result to ZhuYin-Big5.map

mydisambig.cpp

- Parse the testdata
- Create VocabMap of ZhuYin and Big5
- Implement Viterbi algorithm (Bigram) $\delta_t(q_i) = maxP(W_1, \ldots, W_{t-1}, W_t = q_i)$ and backtracking to find the best path