



Trajectory Modelling Meeting

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HTS

- HMM-based Speech Synthesis System (Triple S)
→ HTS
- Patch of HTK (Currently HTK-3.2.1)
- Developed by Nagoya Institute of Technology and Tokyo Institute of Technology
- Released from <http://hts.ics.nitech.ac.jp/>
- Small group



Working Group

- Keiichi Tokuda [NIT]
- Heiga Zen [NIT]
- Junichi Yamagishi [TIT,EDN]
- Takashi Nose [TIT]
- Shinji Sako [Tokyo University]



HTS officially provides

- Parameter generation algorithm
- MSD(Multi-Space Distribution)-HMM
- MDL-based decision-tree clustering
- Duration modelling & clustering
- hts_engine (compact synthesizer)
- Postfilter



Unofficial HTS

- Trajectory HMM for ASR(Heiga)
- Hidden-Semi Markov Model: HSMM (Heiga & Junichi)
- Variational Bayes (Heiga & Junichi, unfinished,,)
- Decision-tree-based multi-stream speaker adaptation (Junichi)
- AMCC, SMAP, SMAPLR, MLLR, CMLLR, CSMAPLR, CAT, ESAT, SAT(model/feature) (Junichi)
- MR(multiple linear regression)-HMM (Takahsi)
- and so on.



HTS-2.0 will include

- Decision-tree-based MLLR, CMLLR & SAT
- Several parameter generation algorithms
- Parameter generation of arbitrary feature
- Dec. 2006



Issues

- No Manual
- HTS lacks text-analysis tool
(It needs Festival)



Reference

- Text-to-Speech Synthesis: New Paradigms and Advances, Shrikanth Narayanan, Abeer Alwan (Eds.)
- <http://hts.ics.nitech.ac.jp/publications.html>



Demo

- HTS-1.1.1 + several unofficial functions including adaptation +SPTK-3.0 + IFAS-based F0 extraction
- Demo of a female speaker SLT (CMU-ARCTIC)
`/group/cstr/projects/galatea/Yamagishi/HTS-Englishdemo`
- Demo of all the speakers of CMU-ARCTIC
Local disk of “supergrass” (What is “supergrass”?)
`/home/vljamag/work/HTS-AVSS.tar.gz`
- Demo of synthetic speech using speaker-dependent model
Target: awb (Scottish English speaker) (1096 sentences)
- Demo of synthetic speech using adapted model
SI model: 5 US English speakers + 1 Canadian English speaker
Target of adaptation: awb (Scottish English speaker) (100 sentences)





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