1 Phonetic Convergence

- Increase in segmental and suprasegmental similarities between two speakers [1]
- Occurs naturally, like gesture and posture assimilation
- Found in a shadowing experiment with natural and synthetic stimuli [2]

Current research
- Can dialogue systems simulate convergence behavior?
- First integration of convergence model [3]
- Will this lead to an easier and more fluent interaction?

2 Architecture

The ASP module creates a direct link between the ASR and the TTS modules, so that not only plain text output is used.

3 The ASP Module

Audio input

Detect target(s) → Verify context → Extract values → Verify range → Add exemplar

Set new value → Limit adaptation ↔ Calculate value ↔ Pick calc. method ↔ Update if necessary

Overview of the adaptation pipeline integrated into the additional speech processing (ASP) module, with Praat as the signal processing back-end. Mandatory, fixed steps are marked by blue rectangles and parameterized steps by orange diamonds. Dashed arrows mark conditional transitions that terminate the process if they are not fulfilled.

4 Evaluation

![Graph showing evaluation results](graph.png)

- More segmental and suprasegmental features
- Better synthesis technique
- User Evaluation in a task-specific system

5 Future Work

References

