Machine translation of spoken English into Czech
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Call Alex Translate
Prototype using 3rd-party ASR & MT available at
+420 277 278 178
More information:
http://ufal.mff.cuni.cz/alex#alex-translate

ASR model training

Speech recognition (ASR)

where is the nearest tram stop

Machine translation (MT)

kde je nejbližší zastávka tramvaje

Text-to-speech (TTS)

Recognizing Czech words

We add Czech place names to the pronunciation lexicon, representing them using the English phoneme set. The Czech phonemes that do not have English equivalents are mapped as follows:

This extension of the lexicon slightly improves the performance on an artificial test set (cstest) containing Czech place names:

Automatic evaluation (end-to-end, ASR, MT)

Baseline: simple pre-processing, random data selection
STEM-ALI: parallel corpus aligned on stems
SELECT-*: perplexity-based data selection
GASR-CHIMERA: third-party models (Google ASR & Chimera) for comparison

Training data normalization

Uniform, ‘speech-friendly’ pre-processing for all training data:

In baseline experiments, simpler pre-processing is used:

In a speech before 100,000 of these people, Gottwald threatened a general strike unless [President] agreed to form a new communist-dominated government.

In a speech before one hundred thousand of these people, Gottwald threatened a general strike unless [President] agreed to form a new communist-dominated government.

ASR: uniform, speech-friendly pre-processing

MT: uniform, speech-friendly pre-processing

Manual evaluation (end-to-end)

at least as good as the other

Baseline 41.40% 28.60% 33.77%

SELECT-100A 61.70% 28.10% 33.77%