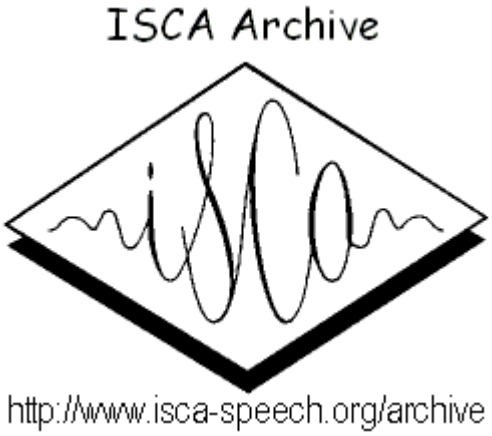

INTERSPEECH 2004 - ICSLP
8th International Conference on Spoken Language Processing

Jeju Island, Korea
October 4-8, 2004

Using Word Latice Information for a Tighter Coupling in Speech Translation Systems

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In this paper we present first experiments towards a tighter coupling between Automatic Speech Recognition (ASR) and Statistical Machine Translation (SMT) to improve the overall performance of our speech translation system. In coventional speech translation systems, the recognizer outputs a single hypothesis which is then translated by the SMT system. This approach has the limitation of being largely dependent on the word error rate of the first best hypothesis. The word error rate is typically lowered by generating many alternative hypotheses in the form of a word lattice. The information in the word lattice and the scores from the recognizer can be used by the translation system to obtain better performance. In our experiments, by switching from the single best hypotheses to word lattices as the interface between ASR and SMT, and by introducing weighted acoustic scores in the translation system, the overall performance was increased by 16.22%.

Full Paper

Bibliographic reference. Schultz, Tanja / Jou, Szu-Chen / Vogel, Stephan / Saleem, Shirin (2004): "Using word latice information for a tighter coupling in speech translation systems", In *INTERSPEECH-2004*, 41-44.