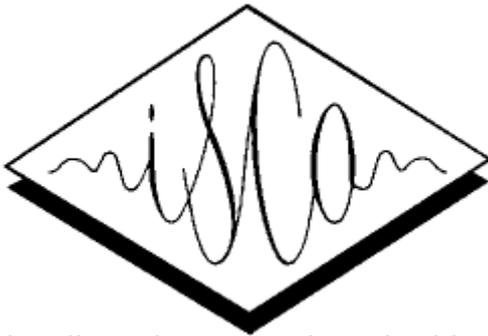


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Integration of ASR and Machine Translation Models in a Document Translation Task

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This paper is concerned with the problem of machine aided human language translation. It addresses a translation scenario where a human translator dictates the spoken language translation of a source language text into an automatic speech dictation system. The source language text in this scenario is also presented to a statistical machine translation system (SMT). The techniques presented in the paper assume that the optimum target language word string which is produced by the dictation system is modeled using the combined SMT and ASR statistical models. These techniques were evaluated on a speech corpus involving human translators dictating English language translations of French language text obtained from transcriptions of the proceedings of the Canadian House of Commons. It will be shown in the paper that the combined ASR/SMT modeling techniques described in the paper were able to reduce ASR WER by 26.6 percent relative to the WER of an ASR system that did not incorporate SMT knowledge.

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