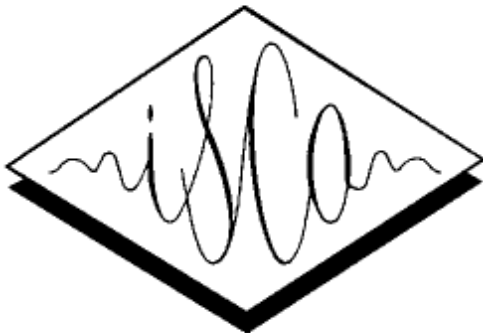


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Stream Decoding for Simultaneous Spoken Language Translation

Muntsin Kolss (1), Stephan Vogel (2), Alex Waibel (1)

(1) Universität Karlsruhe (TH), Germany; (2) Carnegie Mellon University, USA

In the typical speech translation system, the first-best speech recognizer hypothesis is segmented into sentence-like units which are then fed to the downstream machine translation component. The need for a sufficiently large context in this intermediate step and for the MT introduces delays which are undesirable in many application scenarios, such as real-time subtitling of foreign language broadcasts or simultaneous translation of speeches and lectures.

In this paper, we propose a statistical machine translation decoder which processes a continuous input stream, such as that produced by a run-on speech recognizer. By decoupling decisions about the timing of translation output generation from any fixed input segmentation, this design can guarantee a maximum output lag for each input word while allowing for full word reordering within this time window.

Experimental results show that this system achieves competitive translation performance with a minimum of translation-induced latency.

[Full Paper](#)

Bibliographic reference. Kolss, Muntsin / Vogel, Stephan / Waibel, Alex (2008): "Stream decoding for simultaneous spoken language translation", In *INTER_SPEECH-2008*, 2735-2738.