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Φ DM Dialog: an experimental speech-to-speech dialog translation system. *Computer*, vol.24, no.6, June 1991; pp. 36-50.

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Abstract

Φ DM-Dialog, one of the first experimental speech-to-speech systems and the first to demonstrate simultaneous interpretation possibilities, is described. An overview is given of the model behind Φ DM-Dialog. It consists of a memory network for representing various knowledge levels and markers for inferencing. The markers have rich information content. The integration of speech and natural language processing in Φ DM-Dialog and its cost-based scheme of ambiguity resolution are discussed. Its simultaneous interpretation capability, which is made possible by an incremental parsing and generation algorithm, is examined. Prototype system results are reported.

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