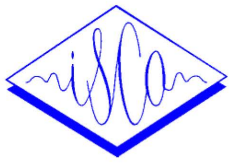

European Conference on
Speech Technology
Edinburgh, Scotland, UK
September 1987

Synthesised Speech from Gestural Input

C. G. Rowden

An investigation into the direct manual control of a speech synthesiser is described. This facility has been identified [1] as a key step in promoting the use of synthesised speech among speech-handicapped people, particularly those who are also mentally handicapped. Earlier work has been extended in two ways.

First, a formal grammar for gestural communication has been investigated, and a grammar which is consistent with some Makaton signs is described. Particular problems that are discussed are (i) the translation of a visual sign into a machine recognisable sign, and (ii) modification of signs to increase the distance between their coded representations.

Second, the design of a sensor for manual signals is being developed in prototype. The sensor provides signals representing finger flexure, and orientation and movement of the palm. Present work establishes possible sensor designs and the interface with a computer, but considerable production engineering will be necessary before a small, robust, and light sensor can be offered.

Reference

[1] C.G.Rowden 'Barriers to the Acceptance of Synthesised Speech as a Communication Aid', Proc. Int. Conf. on Speech Input/Output, Techniques and Applications, Institution of Electrical Engineers, London, March 1986.

Department of Electronic Systems Engineering, University of Essex, UK