

Natural Language Processing for Communication Aids

Proceedings of a Workshop
Sponsored by the Association for
Computational Linguistics

Edited by
Ann Copestake, Stefan Langer
and
Sira Palazuelos-Cagigas

12 July 1997
Universidad Nacional de Educación a Distancia
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Introduction

Many people have some sort of disability which impairs their ability to communicate. Work in alternative and augmentative communication (AAC) devices attempts to address this need. For example, people who have speech impairments may use a text-to-speech generator, or a system which synthesises speech based on input using an alternative symbol system. Prosthetic devices of this sort must be usable in a great variety of settings. They should enable the user to be a full participant in ordinary conversations, to lead transactional encounters and to prepare speech for more formal occasions. The extent to which this is possible depends on a number of factors, both physical and cognitive. The speech impairment may be due to a physical disability which has no effect on the person's linguistic ability, or it may be due to a cognitive, language impairment. Often, some combination of physical and cognitive disabilities is involved. Other communication aids include systems designed for deaf users and tools for tutoring and rehabilitation for people with language impairments.

The workshop has two main aims:

- To provide a forum in which researchers in communication aids for people with disabilities can discuss the problems involved in these applications and the solutions being investigated in current research.
- To introduce this class of applications to NLP researchers who are not currently involved in the field. We believe that it would be beneficial for NLP as a whole if more researchers considered applications other than the standard ones (natural language interfaces, machine translation, message understanding and so on) where progress in creating practical systems has been so disappointing.

The papers in these proceedings describe some of the leading research in applying NLP to communication aids. All papers were reviewed by the program committee, which consisted of the organisers plus Marianne Hickey (University of Dundee), Sheri Hunnicutt (KTH, Stockholm), Kathleen McCoy (University of Delaware), to whom we are very grateful for their thoughtful reviewing. The idea for holding the current workshop arose at the Workshop on NLP in Communication Aids for Non-speaking People (NLP & AAC '96) organized by Marianne Hickey and Stefan Langer at the University of Dundee. We are very grateful to the participants at that workshop for their suggestions and also to all the people who commented on the draft proposal for the current workshop. We would also like to thank Susanne Riehemann and Dikran Karagueuzian for their help in preparing these proceedings.

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NLP for Communication Aids

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