

Dialogue Systems: Interaction, Adaptation and Styles of Management

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The two-day workshop will focus on adaptation and learning in intelligent interactive systems and especially on the new and interdisciplinary techniques and applications that are needed to realize such systems. The question of dialogue management style has become an important issue in the field, and the workshop aims at further discussion on how dialogue models in conversational systems should be developed: can dialogue management benefit from a learning strategy and, if so, will the systems be language independent.

As we move towards systems that are more plausibly conversational in nature we are faced with questions and issues that concern how to manage a dialogue. The last 30 years has seen a range of approaches to dialogue systems from the simplicity of Eliza (Weizenbaum 1966) — originally a network but which we would probably now manage with a few simple finite state rules— on up to high functionality multi-modal systems. As we look at the design of dialogue systems over many years, we can ask if the underlying components are now basically agreed and the rest is notational variant or taste in logic? If we are in that state, it may be only a sign of maturity, as in Information Extraction (IE) when Hobbs argued successfully about 1992 that all IE systems were then basically isomorphic.

On one hand, the notions of adaptation and learning have become important issues when working with spoken interactive systems, and on the other hand, machine learning research has matured so as to provide tools and techniques for system designers and developers to build adaptive and learning systems. The workshop provides a forum for discussing how these aspects can be combined in spoken dialogue systems, addressing especially such questions as what kind of adaptation and learning is necessary, desirable, and possible for speech interface systems, and how the new learning techniques can help in achieving these goals.

As it is not only the user who should adapt to the (limits of the) system properties, the question that system builders and designers must also address is where and when the system needs to adapt to the user. One of the workshop aims is to investigate the limits and relation of the user models to interaction models in general. Furthermore, there are various types of architectures and frameworks that have been proposed to accommodate adaptation and learning in spoken language interfaces, and the workshop will share experience and solutions on these work.

The workshop will deal with the unique requirements that the adaptive and learning view-points pose for dialogue research, interface design and system development. It offers a platform for discussion of Dialogue Systems - a topic that is becoming increasingly prominent in the field of Natural Language Processing, and in particular, it will focus on two related issues:

1. The adaptation and learning in intelligent interactive systems and the techniques that are needed to realize such systems.
2. The approaches to Dialogue Management. In particular, whether Dialogue Management Systems are now generic, and if not, whether there are real differences in approach.

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