

EURASIP Seminar on „Recent Developments in Statistical Spoken Dialogue Systems“

given by Steve Young, University of Cambridge, UK

at the Institute for Communications Technology, Technische Universität Braunschweig,
Braunschweig, Germany, on Sept. 27, 2012

The format of this EURASIP Seminar was new in the way that it was embedded into a conference: the VDE/ITG Conference on Speech Communication, held at the Institute for Communications Technology, Technische Universität Braunschweig, Braunschweig, Germany. The conference itself addressed a broad view on speech processing and spoken language processing, covering areas such as speech enhancement, automatic speech recognition with multiple sensors in adverse environments, automotive speech applications, hearing aids, speech quality aspects.

But it was not only conference participants who came on this early morning of September 27, 2012, to listen to one of the best known experts in spoken language processing, the highly respected scholar Prof. Steve Young from Cambridge University, UK. Also further guests obviously were attracted to listen to what Steve Young had to tell about recent developments in his probably most influential field of research: Statistical spoken dialogue systems.



Prof. Tim Fingscheidt, Steve Young, and Walter Kellermann at the Braunschweig EURASIP Seminar

The audience learned about the impact of seeing statistical spoken dialogue systems as being a “POMDP”, a partially observable Markov decision process. Steve Young started presenting aspects such as supervised learning, but then focused on belief propagation in relation to Bayesian belief networks. The decision of a statistical spoken dialogue system is then taken applying some stochastic policy. Steve Young pointed out that many state of the art systems still depend on some level of handcrafting of dialogue model parameters, but showed ways how to overcome this drawback. One aspect is that learning directly on human users as opposed to human simulators is now possible. In the near future Prof. Young expects the development of more flexible spoken dialogue systems being capable of adapting to new information content.



An audience mixed from conference participants and further guests

After the seminar participants enjoyed a coffee break and some further discussions with Prof. Steve Young. Prof. Tim Fingscheidt, chair of the ITG Conference and EURASIP local liaison in Germany, is thankful about this successful event and is happy to assist in organizing EURASIP Seminars in different places.