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Proceedings of the Workshop on Dialogue in Motion (DM)

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Introduction

Spoken dialogue systems used in call centers and car dashboards reflect years of technological development. But the smart devices that now accompany people throughout their daily activities and the extensive integration of sensors and actuators into people's environments demand new concepts in dialogue modeling and management in order to provide intuitive, proactive, personalized, context-aware, multi-modal, multi-domain dialogue systems.

The past few years have seen the development of many intelligent speech-enabled virtual assistants for mobile users, such as Siri, S Voice, Google Now, SpeakToIt, Vlingo and Iris. These applications use GIS connectivity for navigation and to contextualize tasks such as search. Other multimodal applications (e.g. Wikitude, WikiHood, FieldTrip) can pro-actively present encyclopedic information about the user's surroundings, such as landmarks and points of interest, as the user walks around. Augmented reality and wearable technology such as Google Glass are presenting new opportunities for dialogue systems 'on the go'.

In this proliferation of location-aware systems in the industry, together with research efforts in spatial and mobile contexts, we see a convergence of efforts (e.g. the Word2Actions workshop at NAACL 2012, the Computational Models of Spatial Language Interpretation and Generation workshop series and the Vision and Language workshop at NAACL 2013) towards what we call **Dialogue In Motion**: any form of interaction between a computer/robot and a human in motion - for example a pedestrian or a driver, in the real world or in a simulated environment. Natural language interactions are promoted as a more direct interaction medium, but they raise additional challenges in the context of dynamic spatial environments. This workshop focuses on these challenging issues in language processing for dialogues in motion.

We received 20 submissions; all papers received three reviews from our program committee. We accepted seven papers for oral presentation and six for poster and/or demo presentation. Several of the papers are on in-car dialogue systems, which have a long track record of non-trivial implementations combining voice, GUI, haptic, and gestures with additional constraints on user's cognitive load and environment context. Others are on pedestrian navigation and virtual guides, human-robot interaction, and rapid prototyping and statistical dialogue management for dialogue in motion.

We wish to thank all those who submitted papers. We also gratefully acknowledge the work of the members of our program committee. Special thanks go to Tiphaine Dalmas (University of Edinburgh) for acting as main contact for the workshop, and to Bonnie Webber (University of Edinburgh) for helpful comments along the way.

We hope you enjoy the workshop!

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(09:00-10:30) Session I

09:00-10:00 Invited speaker (TBA)

10:00–10:30 *In-Car Multi-Domain Spoken Dialogs: A Wizard of Oz Study*
Sven Reichel, Ute Ehrlich, André Berton and Michael Weber

(10:30-11:00) Coffee break

(11:00-12:00) Session II

11:00–11:30 *IBM's Belief Tracker: Results On Dialog State Tracking Challenge Datasets*
Rudolf Kadlec, Jindrich Libovicky, Jan Macek and Jan Kleindienst

11:30–12:00 *Click or Type: An Analysis of Wizard's Interaction for Future Wizard Interface Design*
Srinivasan Janarthanam, Robin Hill, Anna Dickinson and Morgan Fredriksson

(13:30-14:30) Posters and demonstrations

Recipes for building voice search UIs for automotive
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14:30–15:00 *Navigation Dialog of Blind People: Recovery from Getting Lost*
Jan Vystrcil, Ivo Maly, Jan Balata and Zdenek Mikovec

15:00–15:30 *Conversational Strategies for Robustly Managing Dialog in Public Spaces*
Aasish Pappu, Ming Sun, Seshadri Sridharan and Alexander Rudnicky

(15:30-16:00) Coffee break

(16:00-17:00) Session IV

16:00–16:30 *Situationally Aware In-Car Information Presentation Using Incremental Speech Generation: Safer, and More Effective*
Spyros Kousidis, Casey Kennington, Timo Baumann, Hendrik Buschmeier, Stefan Kopp and David Schlangen

16:30–17:00 *Human pause and resume behaviours for unobtrusive humanlike in-car spoken dialogue systems*
Jens Edlund, Fredrik Edelstam and Joakim Gustafson