CAMMIA: A Context-aware Multimodal Dialog System for Mobile Environments

Jeongwoo Ko[1], Fumihiko Murase[1,2], Teruko Mitamura[1], Eric Nyberg[1]
Masahiko Tateishi[2] and Ichiro Akahori[2]

[1]Language Technologies Institute, School of Computer Science, Carnegie Mellon University, USA
[2]Research Laboratories, DENSO CORPORATION, Japan
{jko,fmurase,teruko,ehn}@cs.cmu.edu,
mtatei@rlab.denso.co.jp, iakahori@its.denso.co.jp,

Dialog systems in mobile environments must notice changes in the user's environment to be effective in dynamic situations. Such systems are described as context-aware, and utilize contextual changes to offer relevant information to users. In this demonstration, we illustrate the functionalities that support dynamic user contexts in the CAMMIA dialog system: (a) providing the user with useful information when he or she moves to a new location (location/time context), (b) robust task management when the communication uplink is lost (network context), and (c) the ability to handle ambiguous user utterances (dialog context). Preliminary experimental results show that context-awareness improved both user performance and user satisfaction in laboratory and driving environments. CAMMIA is a multilingual system, and the demonstration will include both English and Japanese.