

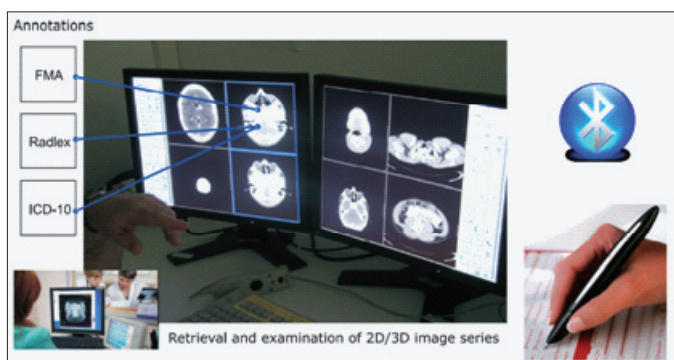
DFKI-Siemens Demo at IUI 2011

Contact: DFKI, Dr. Daniel Sonntag, sonntag@dfki.de

CTC-WP4: Situation Aware Dialogue Shell for the Semantic Access to Media and Services

MEDICO-RadSpeech: A Semantic Speech Dialogue System for Radiologists

This THESEUS CTC-WP4 and MEDICO-RadSpeech demonstration presents a pen-based interface for clinical radiologists, allowing them to create structured reports, available to others within seconds, rather than hours. “Structured” means the report is not stored in the patient record as free text which lacks structure; instead the information is standardized and presented in a clear, organized format which is readable to both humans and machines. With a special pen on normal paper, radiologists can 1) provide the structured images and image region annotations, 2) provide free text entries, and 3) select / correct structured annotations. This pen-based interface and new writing modality is called **interactive paper**. Special features include the possibility to mark regions (circles, checkmarks, or arrows) on images and refer to them in the handwritten annotations.



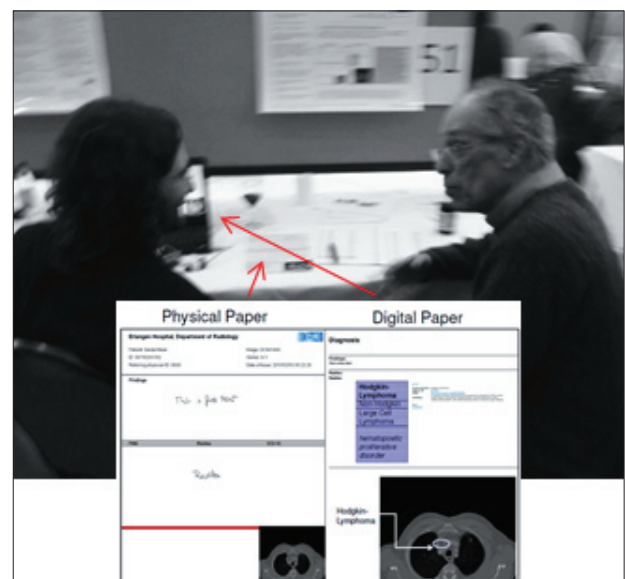
Distributed interactive paper architecture for user interaction using Bluetooth connections

Acknowledgements:

Thanks go out to Robert Nesselrath, Yajing Zang, Günter Neumann, Matthieu Deru, Simon Bergweiler, Gerhard Sonnenberg, Norbert Reithinger, Gerd Herzog, Alassane Ndiaye, Tilman Becker, Norbert Pflieger, Alexander Pfalzgraf, Jan Schehl, Jochen Steigner, and Colette Weihrauch for the implementation and evaluation of the dialogue infrastructure. Special thanks to Markus Weber and Marcus Liwicki for the implementation of the Anoto Pen Interactive Paper Software.

The demonstration system was very successfully presented at IUI 2011 in Palo Alto / Stanford (13-16 February 2011). IUI (<http://www.iuiconf.org/>) is the annual meeting of the intelligent interfaces community and serves as the principal international forum for reporting outstanding research and development on intelligent user interfaces. The corresponding IUI paper “Interactive Paper for Radiology Findings” is available online (<http://portal.acm.org/citation.cfm?id=1943498>).

In summer 2011, we plan to test the interactive paper annotation framework at the University Hospital in Erlangen together with Siemens in the context of a clinical study of the Radspeech/MEDICO dialogue system (<http://www.dfk.de/RadSpeech/>). This will also open up the opportunity for several medical PhD students and senior radiologists to conduct usability studies with us.



(Left) Daniel Sonntag, DFKI (Right) Daniel Bobrow, PARC at IUI 2011