



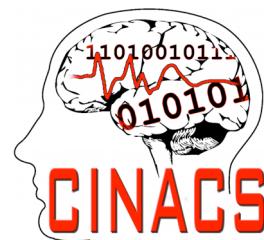
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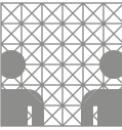
Learning, Reasoning, and Talking about Space

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Supervised by Prof. Habel



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WSV - Wissens- und Sprachverarbeitung
Cross-modal Interactions in Natural and Artificial Cognitive Systems



Key Facts



- Organized by Uni Freiburg/Uni Bremen & Spatial Intelligence and Learning Center at Philadelphia and Chigago
- Biennial conference
- Audience
 - Computer Scientists
 - Cognition Scientists
 - Geographers
 - Psychologists



Structure



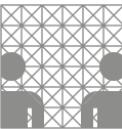
- Single Track Conference (most the time)
- 5 days
- Contents:
 - 4 Workshops
 - 27 Technical Papers
 - 4 Tutorials
 - 2 Doctoral Colloquium
 - 1 Poster Session
 - Social Activities



Topics > Full List of Papers



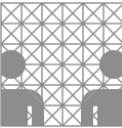
- Spatial Orientation
- Spatial Navigation
- Spatial Learning
- Maps and Modalities
- Spatial Communication
- Spatial Language
- Similarity and Abstraction
- Concepts and Reference Frames
- Spatial Modeling and Spatial Reasoning



Invited Talks



- Heinrich H. Bülthoff, Jennifer L. Campos, Tobias Meilinger
“Virtual Reality as a Valuable Research Tool for Investigating Different Aspects of Spatial Cognition”
- Laura A. Carlson
“On the "Whats" and "Hows" of "Where": The Role of Salience in Spatial Descriptions”
- Dedre Gentner
“Learning about Space”



Talks That Have a Meaning to My Work 1



- Lynn S. Liben, Lauren J. Myers, Kim Kastens
 - “Locating oneself on a map in relation to person qualities and map characteristics”
 - Evaluation with program “Where are we?” vs. natural maps
 - Personal qualities employed in natural maps were different to computer maps
 - Artificial Maps are NOT the same as real maps!
 - Implications for research and education

Talks That Have a Meaning to My Work 2



- Nicholas Guidice and Jerome Tietz
"Learning with virtual verbal displays:
Effects of interface fidelity on cognitive
map development"
 - Locomotion without vision but with verbal input
 - Spatialized Verbal Description vs. Spatial Language
 - Comparison via a complex spatial learning tasks
 - Spatialized Audio approx. 50% better than spatial language
for target localization accuracy and as good as vision cond.
 - Implications for real time speech based interfaces



WSV Contributions



- Paper & Presentation for Workshop “You-Are-Here Maps”
 - Habel & Graf
 - “You-are-here Maps as Navigation Aids for Visually Impaired People”
- Extended Abstract & Presentation for Doctoral Colloquium
 - Graf
 - “Design Concepts for Tactile Maps to Support Visually Impaired Persons”



People That Provided Some Feedback to Our Work



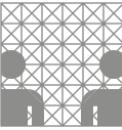
- Dedre Gentner
- Kim Kastens
- Lynn Liben
- Tobias Meilinger
- Drew Dara-Abrams
- Martin Raubal
- Rod Bera
- Kenneth Forbus
- Nicholas Giudice



My Personal Conclusion



- Conference attendance generated many ideas for own work
- Interdisciplinary audience points to works from other domains
- Environment was enlightening



References

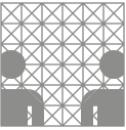


- Christian Freksa, Nora S. Newcombe, Peter Gärdenfors, Stefan Wölfl (Eds.): Spatial Cognition VI. Learning, Reasoning, and Talking about Space, International Conference Spatial Cognition 2008, Freiburg, Germany, September 15-19, 2008. Proceedings. Lecture Notes in Computer Science 5248 Springer 2008, ISBN 978-3-540-87600-7

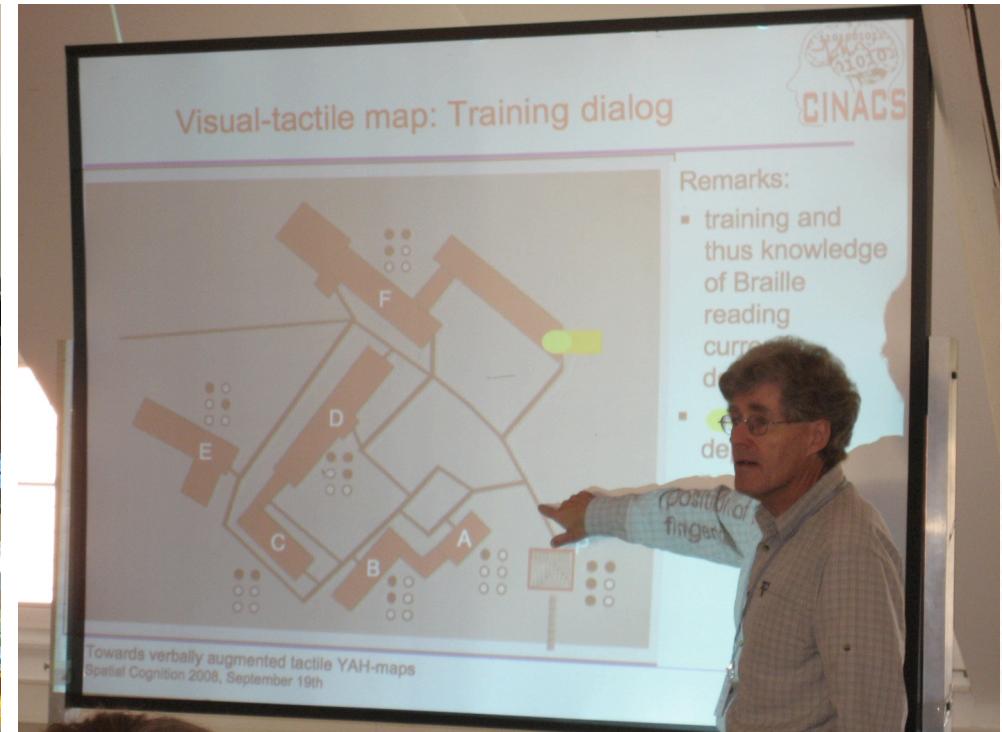


Impression of the Conference: Social Program





Impression of the Conference: Workshop on You-Are-Here Maps



Christopher Habel explains to the audience how visual-tactile maps are trained



Schematic You-Are-Here Maps in the Real World



Photo taken in the railway station Hannover (2008)



Photo taken in the Hotel FT Sport Park in Freiburg (2008)



Artistic You-Are-Here Maps in the Real World



Courtesy of Robert Firth, Informing Design, Pittsburgh, PA, USA

