

CALL FOR PAPERS

SKALID 2012

Workshop on Spatial Knowledge Acquisition with Limited Information Displays

In conjunction with Spatial Cognition 2012

August 31, 2012 – in Abbey Kloster Seeon, Germany

<http://maps4vips.info/skalid/>

Submission Deadline: July 1, 2012

We invite you to join SKALID (“Scale-it”) 2012 - The international workshop on Spatial Knowledge Acquisition with Limited Information Displays, held in conjunction with Spatial Cognition 2012 at Kloster Seeon, Germany, on August 31, 2012.

Workshop topic and goals

The workshop focuses on the challenges and opportunities of geographic spatial knowledge acquisition from visual, haptic, and multimodal maps with limited information displays. As we envisage it here, limited information displays are characterized by the restriction in size or resolution of the interface. One example are maps displayed on small screens of smartphones or navigation systems. Another example are haptic maps for orientation providing a coarse overview of environmental relations such as for complex railway stations or street networks.

Our aim in this workshop is to explore the common technological and methodological concepts, challenges, and problems related to the design and use of visual, haptic and multimodal maps on limited information displays in mobile and stationary settings. With the availability of affordable technologies like powerful smartphones, force feedback devices, vibro-tactile displays, or computer-driven embossers, the range of limited information displays and their usage will become more diversified. As different as the technologies and displays are, they share a common challenge: it is not possible to communicate geographic information without careful adaptation to the specifics of the display and the human user. Graphical elements need a certain size to be readable and their semantics need to be understood regardless of their size. Usable interfaces are

constraint by the expressiveness of the technology, by the limits of the human sensory organs (such as resolution of the eyes and the skin) and by the map-users' perceptual and cognitive abilities.

Our intention is to bring together people from different communities, including both researchers and practitioners developing and using displays that communicate only limited spatial information. During the workshop, we will discuss which transfers could be made between different types of displays such as visual mobile maps and haptic maps, and what is fundamentally different between them. We believe that this interactive exchange will both provide the opportunity to discuss what can be learned from our disparate backgrounds and also forge new connections to address current problems and future needs in this rapidly growing domain. We hope that an outcome of this workshop will be to facilitate a joint research agenda about how the development of different types of limited information displays can benefit from each other's insights, solutions, and joint challenges.

The goal of this workshop is to investigate commonalities and differences of visual, haptic, and multimodal maps and the related spatial knowledge acquisition processes by approaching the topic from different backgrounds such as geography, spatial cognition, cartography, computer science, assistive technology research, mobile design, human computer interaction, and psychology. Therefore we invite contributions from researchers and practitioners in any or all of these fields.

Themes

This workshop seeks for contributions including (but not limited to) the following themes:

- Low information density display cartography, such as haptic, vibro-tactile, visual and any other small display maps
- Navigation support with haptic, vibro-tactile, visual and any other maps on limited information displays
- Hybrid-Cartography: Bridging the gap between survey representations and route representations, or between physical, static maps and virtual, interactive maps
- Measures for the influence of visual or tactile clutter: why presenting more information does not mean a better understanding of places
- Approaches for identifying the relevant information in a map and to adaptively reducing map complexity
- Approaches for ontology guided map schematization or for cognitively plausible algorithmic schematization
- Creating or fostering spatial awareness by using limited information displays
- Psychological, ethnographic or sociological findings about the usage of limited information displays
- Measures, psychological studies and empirical results of the usability of limited information displays
- Usability and cognitive integration of multiple low detail maps or across different levels of granularity/scales

- Novel information visualization algorithms for geographic information with limited information displays
- Formal or psychophysical models of spatial complexity measures and empirical results about measuring (perceived) spatial complexity

Submissions

We will accept various types of submissions to this workshop, including work-in-progress, completed research, case studies, position papers, and concepts or technology prototypes related to spatial knowledge acquisition from limited information displays. Contributions advancing practical or conceptual challenges, creative new ideas, and critical questions triggering discussion and debate are highly welcomed.

Contributions between 4-6 pages should be prepared in the Springer LNCS/LNAI Proceedings style as PDF. You can find [authors guidelines](#), a [LaTeX template](#), and different Word templates at the [Springer LNCS website](#). All submissions are to be done through the [workshop submission system](#). Submissions will be fully reviewed by the program committee. All accepted contributions will be published in the workshop proceedings.

Depending on the quality of the submissions and depending on how the discussion evolves during the workshop, we are also investigating the option to open a call for a special issue in a related journal.

Important Dates

- Submission of papers until July 1, 2012
- Notification of acceptance from July 25, 2012
- Camera-ready version until August 15, 2012
- Workshop on August 31, 2012

Workshop Chairs

[Christian Graf](#) – University of Bremen, Germany

[Dr. Falko Schmid](#) – University of Bremen, Germany

[Prof. Dr. Nicholas Giudice](#) – University of Maine, USA

Program committee

To be confirmed on a rolling basis. For the current status see
<http://maps4vips.info/skalid/Committee.shtml>

Contacts

If there are questions please feel free to get in contact with the workshop chairs via skalid@maps4vips.info. Or visit us at <http://maps4vips.info/skalid/>.

Looking forward to see you at Spatial Cognition 2012 in the Workshop on Spatial Knowledge Acquisition with Limited Information Displays!