Commission on Cognitive Visualization
Commission on Use and User Issues

Workshop on
Designing & Conducting User Studies

16 September 2012 @ AutoCarto 2012,
Columbus, Ohio, USA

We invite you to participate in a workshop on designing and conducting user studies experiments that will be held at the start of the 2012 AutoCarto conference. While aimed primarily at (post)graduate students, the workshop may also be of interest to established researchers who are new to user studies.

Workshop location: Sheraton Hotel, Legislative A Room

Approximate timetable
8.30 - 9.00	Registration/setup
9.00 - 9.15	Introduction to the day & the work of the two ICA Commissions
9.15 - 10.30	Module 1
10.30 - 11.00	Coffee break (sponsored by ICA)
11.00 - 12.15	Module 2
12.15 - 13.45	Lunch (off site, on your own, a map of local restaurants will be provided)
13.45 - 15.00	Module 3
15.00 - 15.30	Coffee break (sponsored by ICA)
15.30 - 16.45	Module 4
16.45 - 17.00	Wrap-up and final words

Module 1 (Kristien Ooms & Corné van Elzakker, ICA Commission on Use and User Issues, University of Ghent and ITC, University of Twente)

Methods and techniques of use, user and usability research in geo-information processing and dissemination.
The first module will introduce you to use, user & usability research in geo-information processing and dissemination. Reasons for doing such research are to understand and explain how GI tools work for their users and to design more usable tools. In this first module, the focus will be on the latter. The concept of User Centred Design will be presented and an overview will be given of the most commonly applied research techniques, along with tips & tricks on how and when to use them. Experiences will be shared in interactive sessions.

Module 2 (Amy Griffin, ICA Commission on Cognitive Visualization, University of New South Wales-Canberra)

Designing your user study or experiment.
The second module will walk through some of the common questions a researcher must ask himself or herself when designing a user study: which (and how many) variables to manipulate and to measure, what type of study design to choose (e.g., within- or between-subjects designs), how many

participants to recruit, and what type of analytical methods to use. These questions will be explored through interactive discussion of several case study examples.

Module 3 (Amy Lobben, ICA Commission on Cognitive Visualization, University of Oregon)

Research instrument integrity.
This third module will focus on some of the issues researchers may want to consider when designing (and using) instruments intended to measure some construct of human cognition. Most cartographic research that explores human response to or use of spatial information is conducted with such instrumentation. However, much of this same research is lacking discussion of how the novel instruments were scrutinized for their reliability and validity. This module presents different types of reliability and validity and discusses methods that can be used to assess each.

Module 4 (Robert Roth, ICA Commission on Use and User Issues, University of Wisconsin, Madison)

Working with the card sorting method.
The final module will explore one of the use and user research techniques in greater detail: the card sorting method. Card sorting is a knowledge elicitation technique designed to reveal the conceptual structures of targeted end users, requiring participants to organize a set of instances (i.e., *cards*) into internally-homogeneous groups (i.e., *categories*) according to similarity along an identified sorting principle (i.e., the *sorting criterion*). The module will be organized into three sections: (1) historical and conceptual background on the method, (2) review of a trio of case studies applying card sorting for Cartography, and (3) a card sorting activity in which attendees configure, complete, and analyze an example card sort. **Please bring a laptop to this session for the card sorting activity!**

Questions can be directed to Amy Griffin (a.griffin at adfa.edu.au) or Corné van Elzakker (elzakker at itc.nl).