

ITS 2013 Workshop on Visual Adaptation of Interfaces

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ABSTRACT

This workshop proposed to bring together researchers interested in visual adaptation of interfaces. The gaze-tracking community is often constrained to visual adaptation at short distances where gaze data is reliably available. Researchers working on distance-based interfaces tend to work in room-sized environments, with wall-sized displays or multiple displays. Visual adaptation using contextual information or personalisation is relatively independent of the size of the environment but comes with its own set of challenges due to the complexities of dealing with contextual information.

Even though most of these researchers are creating visually adaptive interfaces, their approaches, concerns and constraints differ. The aim of this workshop was to create an opportunity to increase awareness of the diverse research as well as for establishing areas of possible collaboration.

Author Keywords

Visual adaptation; visual; adaptation; user interfaces; proxemics; gaze; models;

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

TOPIC OF THE WORKSHOP

The aim of the workshop was to bring together researchers from communities that look at visually adapting interfaces from diverse perspectives. We were primarily looking at position-contingent, gaze-contingent and person-contingent visual adaptations. Each approach to visual adaptation comes with a set of constraints. As an example, gaze-based adaptive

interfaces are limited to areas where good quality gaze data is available. A similar availability constraint, applies to interfaces that perform visual adaptation based on the distance and orientation of the user to the interaction surface. However, it is possible that some of the techniques used in gaze-based adaptation of interfaces may be applicable or relevant to the distance-based approaches or vice versa.

Thus we were hoping to bring together people performing adaptation based on as many perspectives as possible (proxemics, gaze-based interaction, personalisation and others) to explore if there was anything to be gained at their intersection.

PROGRAM COMMITTEE FOR THE WORKSHOP

- Simon Butscher, University of Konstanz
- Jakub Dostal, University of St Andrews
- Hans-Christian Jetter, ICRI Cities, University College London
- Michael Mauderer, University of St Andrews
- Jens Müller, University of Konstanz
- Miguel Nacenta, University of St Andrews
- Umar Rashid, University of Lincoln
- Roman Rädle, University of Konstanz
- Harald Reiterer, University of Konstanz
- Sophie Stellmach, Microsoft
- Aaron Quigley, University of St Andrews

RELEVANCE TO TABLETOP COMMUNITY

The display real estate offered by tabletops and large displays/walls as well as the challenges related to heterogeneous multi-display environments have been of interest to the ITS community in the past. The goal of this workshop was to provide an opportunity for active exchange of knowledge and ideas within the community by providing a focal point using the topic of visual adaptation.

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NATURE OF THE WORKSHOP

One of the primary goals of the workshop was to foster discussion on the topic among a diverse set of researchers coming from different communities in order to identify areas for collaboration and knowledge transfer between the communities. We also aimed to identify the commonalities within the field to use them as a foundation for creating an active community.

The workshop consisted of short Pecha-Kucha style presentations to introduce everyone to each other's work and approaches. This was followed by brainstorming and discussion sessions in mixed groups to identify challenges, opportunities and directions for future research.

Attendees

We invited researchers who have been involved in research on visual adaptation of user interfaces. Those wanting to attend were required to submit a work-in-progress or a position paper (4 to 6 pages in length, using the SIGCHI Extended Abstracts Template), which they presented at the workshop. Submissions on late breaking results and on-going research projects were highly encouraged.

The workshop welcomed submissions addressing the design, evaluation, modelling and other aspects of one or more of the following topics related to visual adaptation:

- position, distance or proximity based visual adaptation
- gaze-contingent adaptation
- perceptual visual adaptation
- user and/or environments modelling for adaptation
- personalised visual adaptation
- visual adaptation on large displays and tabletops
- adaptation in heterogeneous multi-display environments
- visual adaptation in collaborative work (remote or co-located)
- social aspects of visual adaptation, including privacy and sharing
- novel interaction techniques using visual adaptation
- visual adaptation in information visualisation

OPEN/CLOSED WORKSHOP

This was an open workshop, although participants with accepted submissions were given preference.