Editorial: Visual Information Communication and Interaction

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Visual information has increasingly been used to enable human-human communication and knowledge discovery with the vast information, not only in typical normal displays but also in immersive environments and small mobile devices. Visual information communication and interaction synergises state-of-the-art research in visual communications, designs and applications. By marrying multi-disciplinary research works in visualization, graphical user-interface, and interaction together with art concepts and designs, it has opened a new opportunity to present and analyse information on different perspectives.

This special issue of the International Journal of Software and Informatics (IJSI) on Visual Information Communication and Interaction includes five selected papers presented at the 7th International Symposium on Visual Information Communication and Interaction (VINCI'14), which was successfully held in Sydney, 5-8 August 2014. The papers have been substantially extended with at least 30% additional contents from the symposium versions. Each was also reviewed by two reviewers through a rigorous review process. They cover a wide range in information visualization, mobile web interface, interaction to design and art.

The first paper by Michael Burch and Daniel Weiskopf presents an interesting work that applies the concept of small multiple visualizations for visually illustrating long and dynamic graph sequences. By adding visual metaphors for adjacency matrics and adjacency lists, it also supports the combination of multiple small hybrid small multiples in the visualization. The effectiveness of the new dynamic graph visualization method has been illustrated by a call graph from software development and a large social network.

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Ruchika S, Susmitha Pulakhandam, Isha Singh Jassi and G Ram Mohan Reddy propose a user-friendly interface for blind users to browsing web pages on mobile devices. The design includes large navigational buttons placing along the edges of the phone to support easy screen-touch targets. It also provides Braille-based text entry and verbal command and read-out to the users. The combination of various supportive methods enables effective navigation for the blinds than the traditional approach, as evaluated by the usability study.

Kiho Sakamoto and Takayuki Itoh show a nice work on photomosaic generation for large scale photograph browsing. Technically, it presents a photo collection as a photomosaic-like image when zooming out, and as individual photographs when zooming in. A user evaluation shows that 1) photomosaic of landmarks is more preferable when the constrast between buildings and 2) backgrounds are clearer while the photomosaic of human faces is not. From the study, the authors introduce a technique for automatic selection of representative photographs for generating photomosaic.

The fourth paper by Alireza Rezaeian and Jared Donovan describes an interesting approach for designing personalized wearable items. The work provides tangile data presentation of personal DNA profile data on jewelry. This iterative process aims to provide an engaging and enjoyable experience to a user with aesthetically pleasing and readable personalized items reflecting the user's identity. The paper highlights the importance of the synergization between technology, art and design.

The final paper by Phillip Gough, Kate Dunn, Tomasz Bednarz and Xavier Ho outlines ideologies of design's assessment in comparison with creative practice and visual analytics. The authors discuss various aspects on the research debate on Chartjunk in related to design, art and communication. The paper also summarizes the current nexus of influences, circumstances. It proposes a set of guidelines for developing visualizations for non-expert users.

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Guest Edtiors:

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