

Tactile Mapping

In the August 2005 ICA contribution to these pages we reported on the increased interest in tactile mapping evident at the International Cartographic Conference (ICC) in A Coruna that month. This was demonstrated once more at the August 2007 ICC in Moscow in August, where a total of fourteen papers on this subject were given under the large (530+ oral presentations) conference umbrella. With emphasis on using innovative devices that make spatial information more widely available to larger numbers of visually impaired people, the conference perhaps marks a turning point in tactile cartography research.

Themed Sessions

Three themed sessions covered the following topics:

- tactile map use, reading and design: cognitive perspectives
- new ways of accessing spatial information in the absence of vision: multi-modal interfaces & virtual mapping
- tactile mapping: further technological developments.

As the topics indicate, great strides are being made in applying new geo-technologies and indicate a move away from the static tactile map. Representatives from local blind organisations in Russia were invited to the presentations and visits to these institutions for commission members took place during the conference.

Innovation

Recent reports of tactile activity have centred on innovation. New designs are evident, with obvious impact on tactile graphics. One is TeDUB (Technical Drawing Understanding for Blind people), a new method providing visually impaired people with an accessible route to diagrams and plans. The system uses speech synthesis and various sounds to provide basic output, but users can also feel characteristics of a graphic via a force feedback mechanism, in this case a joystick. Another new design is Talking Tactile Tablet, currently being promoted in the UK and US, which combines tactile maps with a touch pad that offers verbal instructions and layers of spatial information that would otherwise be inaccessible through touch alone.

Beyond Tactile Maps

Recently, Braille embossers and touch-sensitive screens have been applied to tactile production more generally and as TIMP (the Tactile Inkjet Mapping Project) comes to an end, its findings reveal that novel tactile production methods are coming on-stream. Further contemporary research addresses electronic wayfinding devices, Location-Based Services (LBS), positioning technology and mobile navigation tools. Devices which incorporate these are not tactile maps according to conventional definitions, but they do provide geographic representations of environments in the broadest sense. The appeal of new technology also typifies a widespread notion that expecting a tactile map alone to fulfil the spatial needs of blind and partially sighted users is no longer tenable.

Five Topic Areas

A new website developed by the co-chair of the ICA Commission on Maps and Graphics for Blind and Partially Sighted People will reflect these new developments in technology and the changing nature of tactile mapping. Based on consultations with an expert panel of producers, designers, practitioners, researchers and users of tactile maps, the Commission has broadly identified five essential topic areas that should form the focus for future research consideration. These include technology, particularly new innovations, availability of tactile maps, guidelines to help improve consistency of design, user involvement in all aspects of tactile graphic production process, and training for both makers of tactile material and potential users.