Surveying the High Ground

The active ICA Commission on Mountain Cartography last reported its work in these pages in April 2005. Since then there have been regular business meetings and biannual workshops. The 6th Mountain Cartography Workshop was held in the attractive village of Lenk im Simmental, Switzerland, in 2008. With sixty participants from fifteen countries, the workshop focused on mountain-related topographic and thematic aspects and their depiction in maps and map-related representations.
?In the Physical Geographysessions researchers from universities in Austria, Germany, Italy and Switzerland presented scientific mapping and cartographic projects from all over the world. Other issues covered included terrain evaluation, monitoring techniques, and developments in new interactive maps and 3D-visualisations.

The DEM and Terrain Modelling session presented modern laser technologies and high-resolution satellite image data for measurement, new approaches for the visualisation of hidden geological structures, and derivation of contour lines for small-scale maps. A presentation by cartographers from Catalonia focused on requirements for database-driven relief representations for topographic maps.

The sessions on Relief Depiction were broad. First, the needs of mountain-map users concerning the accuracy and symbolisation of topographic maps were evaluated. The evolution of classical relief maps and perspective views for different cartographic purposes, and more technical projects on the development of new tourist maps with integrated shaded relief were demonstrated by North American participants. The application and effectiveness of 2D versus 3D representations in National Park maps was assessed, and user testing of new cliff drawings and screen representation was described by IGN Paris. Technical methods of relief shading, along with various physical-relief depiction techniques, including the production of models by modern computer-driven drilling machines at ETH Zurich, were also considered.

A short session on the History of Mountain Mapping ranged from biographical studies to a report on laser measurements and geometric analysis performed on a historic relief model to check its accuracy. The impact of Multimedia Application and Mobile Devices was next considered: web applications for data acquisition were addressed in a Slovenian context, whilst spatial communication using Google tools and the visualisation of accessibility visualisation were also covered. An implementation of GPS technology for mountain mapping and tour planning in Spain was demonstrated. Further talks included representational principles of rock depiction, tourist mapping activities in Romania, historical development of panoramic maps, mobile trekking guide devices for Ruwenzori National Park (Uganda), smart interactive maps, multi-date habitat mapping approaches in Quebec, topographic mapping of the Tatra Mountains, and traditional hill-shading for digital maps. A lively discussion forum addressed new graphic design for the Swiss National Topographic Maps.

After this fascinating and extensive programme, the excellent weather allowed active outdoor activities, along with practical insights into the challenges of mountain mapping. The Alpine theme was continued in games of curling and eating the traditional Swiss ‘Raclette dinner’!

The next ICA Mountain Cartography Workshop will take place in Borsa in the Maramures Mountains of Romania from 1st to 5th September 2010. Further details may be found on the Commission’s website at www.mountaincartography.org