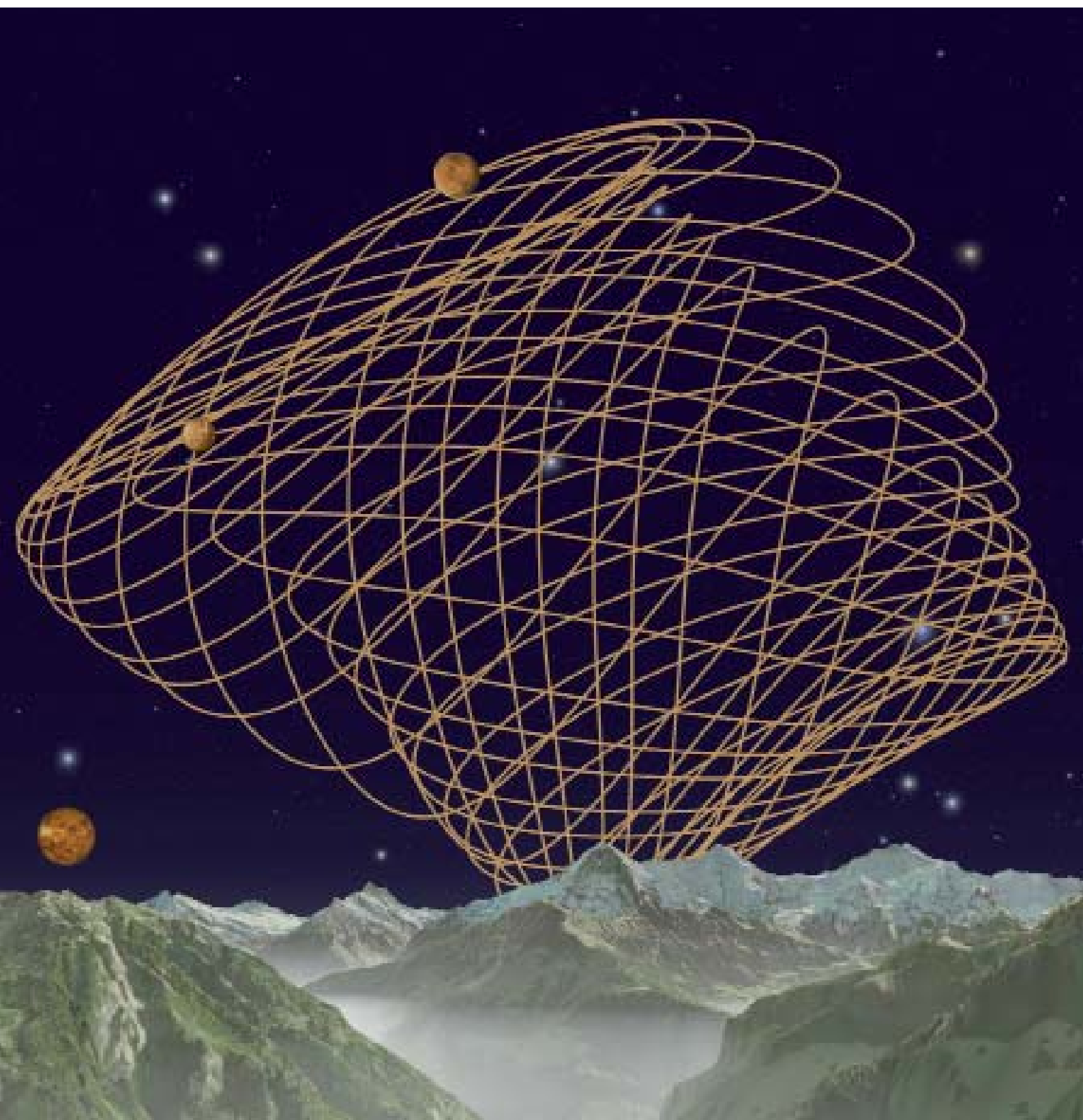


# NATIONAL REPORT

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Cartography in Switzerland 2007–2011



# NATIONAL REPORT

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## Cartography in Switzerland 2007–2011

*Submitted to the 15th General Assembly of the International Cartographic Association in Paris 2011  
Edited by Stefan Räber, Swiss Society of Cartography*

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### Cover Picture

Figure of the Atlas of Switzerland 3. The image shows a virtual 3D panorama of the Bernese Oberland, the night view includes a visualisation of a 10 years epicycle of the planet Mercury. © 2010 swisstopo / ETHZ (BA2008RG)

## Swiss Society of Cartography

[www.cartography.ch](http://www.cartography.ch)  
[www.kartografie.ch](http://www.kartografie.ch)

### Goals of the Society

The Swiss Society of Cartography was founded in 1969. Its main goal is to promote theoretical and applied cartography and to support the education of the corresponding professionals. The society disseminates the latest knowledge in the field of map production, map use and the history of cartography. In addition it assists in the exchange of experience and knowledge among experts and institutions in Switzerland as well as abroad.

### Activities

The Swiss Society of Cartography:

- organises meetings for its members twice a year
- organises workshops, continuing education, and excursions to cartographic enterprises and exhibitions ([www.kartografie.ch/veranstaltungen/veranstaltungen.html](http://www.kartografie.ch/veranstaltungen/veranstaltungen.html))
- publishes textbooks and national reports on cartography ([www.kartografie.ch/publikationen/publications.html](http://www.kartografie.ch/publikationen/publications.html))
- is the official representative for Swiss cartography at the International Cartographic Association (ICA) and in the Swiss Organisation for Geoinformation (SOGI)
- participates actively in commissions and working groups of the ICA ([www.kartografie.ch/commissions/commissions.html](http://www.kartografie.ch/commissions/commissions.html))
- publishes and distributes to its members newsletter bi-monthly ([www.kartografie.ch/mitteilungen/mitteilungen.html](http://www.kartografie.ch/mitteilungen/mitteilungen.html))
- distributes to its members the journal *Kartographische Nachrichten* six times a year

### ICA commissions and working groups and their Swiss representatives

- ICA Commission on Mountain Cartography (Co-chairman: Prof. Dr. Lorenz Hurni)
- ICA Commission in Digital Technologies in Cartographic Heritage (Dr. Bernhard Jenny)
- ICA Commission on Education and Training (Dr. Christian Häberling)
- ICA Commission on National and Regional Atlases (Dr. René Sieber)
- ICA Commission on GeoVisualisation (Prof. Dr. Sara Fabrikant)
- ICA Commission on Map Generalisation and Multiple Representation (Prof. Dr. Robert Weibel)
- ICA Working Group on Cartography on Early Warning and Crisis Management (Dr. Christophe Lienert)
- ICA Working Group on Art & Cartography (Dr. Barbara Piatti)

### Other commissions / working groups

- Permanent Committee on Geographical Names (Alfred Gut)
- SGK working group on Map History (chairman: Dr. Martin Rickenbacher)
- Swiss Organisation for Geographic Information SOGI (Dr. Andreas Neumann)

*Logo of the Swiss Society of Cartography*



## Photograph of the committee members 2007–2011

Figure on the right, from left:  
Christian Häberling, Martin Urech, Nicole  
Brönnimann, Stefan Arn (president), Martin Probst  
(treasurer) and Stefan Räber (secretary).

More information at  
[www.cartography.ch/contact/contact.html](http://www.cartography.ch/contact/contact.html)

List of all committee members since 1969 at  
[www.cartography.ch/contact/committee.pdf](http://www.cartography.ch/contact/committee.pdf)



## Photographs of events organised by the Swiss Society of Cartography between 2007 and 2011



*Berne, 26 October 2007: Presentations about the new  
Federal Act on Geoinformation (GeoIG)*



*Sissach, 31 May 2008: General assembly – afternoon  
walk after vineyard visit*



*Zurich, 7 November 2008: Symposium “Web mapping”  
at ETH Zurich*



*Neuchâtel, 28 March 2009: General assembly – Ernst  
Spiess, Stefan Arn, Hans-Uli Feldmann, Roland Kuster*



*Muttenz, 21 October 2009: Symposium “Change  
Monitoring” – opening panel with all speaker*



*Muttenz, 21 October 2010: Well-attended Symposium  
at the “Fachhochschule Nordwestschweiz FHNW”*





*Winterthur, 24 April 2010: General assembly at Technorama – The Swiss Science Center*



*Winterthur, 24 April 2010: Guided tour through the “Orbitarium” with a virtual globe*



*Yverdon, 17 November 2010: Symposium “geo.3d”, coffee break*



*Yverdon, 17 November 2010: Among others, a presentation about precision helicopter mapping by Helimap*



*Berne, 26 March 2011: General assembly, voting by show of hands*



*Berne, 26 March 2011: Visit to the Zytglogge – a landmark medieval tower*

### **Photograph of the Swiss delegation at ICC2009 in Santiago de Chile**

Figure on the right, from left:

Tang Xi, Stefan Arn, Anne-Kathrin Reuschel, René Sieber, Melanie Kunz, Olaf Schnabel, Juliane Cron, Samuel Wiesmann, Thomas Schulz, Susanne Bleisch, Lorenzo Oleggini, Stefan Räber.

Absent from the photograph:

Sara Fabrikant, Benedikt Heil, Ionut Iosifescu, Christophe Lienert, Philipp Marty, Barbara Piatti, Silvio Zanola.



## Working Group on the History of Cartography

*Martin Rickenbacher, Swiss Federal Office of Topography swisstopo, Wabern  
www.kartengeschichte.ch*

The Swiss working group on the history of cartography is a section of the Swiss Society of Cartography (SGK) and co-founder of the mutual working group of the German-speaking historians of cartography (Germany–Austria–Switzerland).

The Working group does not have formal terms of reference, but becomes active whenever old maps or the history of cartography are involved or brought up in any way. Informal meetings, which are open for guests as well, are held occasionally. Members of the working group serve as editors of the journal for the history of cartography *Cartographica Helvetica*. Two members act as a web team which supports [www.kartengeschichte.ch](http://www.kartengeschichte.ch), an internet platform publishing detailed information on the History of Cartography of the German-speaking countries, including all links to the retro-digitised online version of *Cartographica Helvetica*. The working group was initiated by Prof. Arthur Dürst in 1977, and since 2000, it is chaired by Martin Rickenbacher. He is also the national representative for Switzerland to *Imago Mundi* in London.

### Activities 2007–2011

The key event of the working group's activities in the last four years was undoubtedly the 22nd International Conference on the History of Cartography 2007 ([www.ichc2007.ch](http://www.ichc2007.ch)) which was held in Berne and organised by a team of members of the Working group (see pages 27, 28. Report in *Cartographica Helvetica*, issue 36, 2007).

Furthermore, seven meetings were held since the ICHC2007, which were guided visits through exhibitions on “Ferdinand Rudolf Hassler und die Vermessung der Schweiz 1791–1803” (Stadtmuseum and Kantonsbibliothek Aarau, 2007), “Karten und Atlanten” (Stiftsbibliothek St. Gallen, 2007) and “Kartenwelten: Die Kartensammlung der Zentralbibliothek Zürich” (2010), as well as presentations/colloquia on “Die Kartensammlung von Albert Knoepfli” (Histori-

sches Museum Bischofszell, 2008), “Napoleons Karten der Schweiz” (swisstopo Wabern, 2009), “Panorama-Studio Winfried Kettler” (Meiringen, 2010) and “Zeitreihen: eine neue Herausforderung” (swisstopo Wabern, 2010). The meetings are usually attended by 20 – 40 persons.

Besides these working group-specific activities, other conferences have also taken place, for instance “Historic maps and imagery for modern scientific applications” (Geological Institute University of Berne, 2008 and 2009), “Herrschaft verorten. Politische Kartographie des Mittelalters und der Frühen Neuzeit” (University of Zürich, 2009) and “Xaver Imfeld (1853–1909): Meister der Alpentopografie” (ETH Zürich, 2009).

Regarding Switzerland, one notices an increasing interest in the history of cartography. According to swisstopo's vision for 2015, this Center for Federal Geo-Information guarantees to provide data and fundamental bases for monitoring spatial development in Switzerland. This requires an integration of history into the current activities of the office, intending to support all the so far published maps as the topographical part of a national “landscape memory”. On <http://map.geo.admin.ch>, the first editions of the “Topographische Karte der Schweiz 1:100,000” (Dufour Map) and the “Topographischer Atlas der Schweiz 1:25,000/1:50,000” (Siegfriedkarte) are now accessible online and can be overlaid with continuous opacity to the current National Maps. Furthermore, in close contacts with the Swiss Federal Archives, a strategy on long term archiving for geodata is being developed. And last but not least the Swiss libraries have created [www.kartenportal.ch](http://www.kartenportal.ch), a direct and central access to the metadata of the different holdings which allows a geographical search.

As you can see, Switzerland is taking the challenge of the future by integrating its past – at least regarding the history of cartography.





*Cornelia Stäheli and Adrian Knoepfli presenting their activities in indexing the map collection of Albert Knoepfli to the working group on 19th April, 2008, in Bischofszell (Photo László Pokorni)*



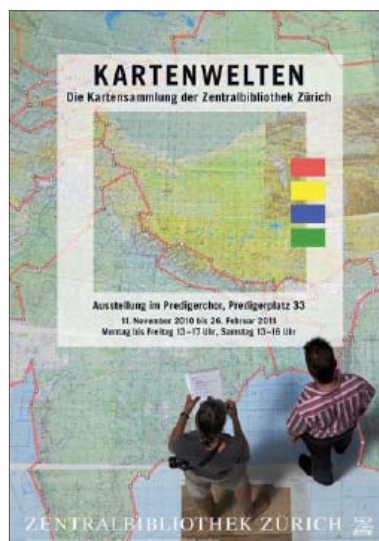
*Meiringen, 3 July 2010: Guided visit to the Panorama-Studio of Winfried Kettler*



*Display of Kettler's panoramas. More information about his work at [www.kettler-panorama.ch](http://www.kettler-panorama.ch)*



*Exhibition / Symposium "Geomatik mit Tradition und Zukunft" (Poster)*



*Exhibition "Kartenwelten" at the Zentralbibliothek Zürich (Poster)*



*Presentations at the ICHC2007 in Berne, see also pages 27 and 28*

## New Federal Law on Geoinformation

Martin Roggli, Swiss Federal Office of Topography swisstopo, Wabern  
[www.admin.ch/ch/d/sr/5/510.62.de.pdf](http://www.admin.ch/ch/d/sr/5/510.62.de.pdf) (wording of the law)

### New Legal Basis

The Federal Council introduced a new legal basis for geoinformation in Switzerland on 1 July 2008. The new Geoinformation Act replaces the legislation dating from 1935 which governed the production of new national maps, and has been adapted to the new requirements and geoinformation strategy of the federal government. In today's information and knowledge society, geodata and geoinformation form the basis for a broad variety of decisions in the areas of planning and research, politics and administration, trade and industry, as well as in the leisure sector. The new Act regulates the various responsibilities and specifies criteria for the collection, modelling and exchange of geodata. It ensures that constantly updated geodata are available throughout the entire country for widespread use over the long term, with the necessary level of quality, in an appropriate form and at an acceptable price. The updated legislation also forms the basis for the development and operation of the federal geodata infrastructure.

There exists no explicit binding for Switzerland but the new Geographic Information Law can be regarded as an INSPIRE-conformant implementation and legal basis for Switzerland. In addition, there are several areas of cooperation between Switzerland and EU member states – especially in the context of the European Environment Agency – where the implementation of the INSPIRE directive is useful also for Swiss institutions. One Swiss INSPIRE contact point was established in order to

- provide information about INSPIRE and its implementation,
- co-ordinate existing and future INSPIRE-related activities in Switzerland,
- use the existing resources and know-how more efficient and effective,

- support the current definition processes for INSPIRE Implementing Rules,
- keep contact on European INSPIRE-related committees and ensure information,
- provide a contact person for Swiss institutions as well as European INSPIRE-related committees and institutions.

More information at

<http://www.admin.ch/ch/e/rs/5/510.62.en.pdf>



*Swiss parliament approved the new federal law on geoinformation.*



## Prix Carto – Swiss Cartography Award

Stefan Räber, Swiss Society of Cartography  
[www.prixcarto.ch](http://www.prixcarto.ch)

One of the aims of the Swiss Society of Cartography is to encourage better mapping by providing a prize to companies or individuals who have shown excellence in this field. Another aim in awarding a prize is to bring due attention and credit to the efforts of those who developed and published an innovative map product. Therefore, the so-called Prix Carto was established for the first time in 2006. Since 2007 the prize is awarded every other year, in the years which ICA conferences take place. This allows all applicants to participate in addition at the ICC map exhibition. Conditions of participation are mainly the same as for the ICC exhibition. A jury – five experts from various areas of the field of cartography and GIS – select the winners from the applicants for their outstanding work. The award ceremony takes place at the “Herbsttagung” (Cartography Symposium) organised by the Society.

### Prix Carto winner 2007

Hydrological Atlas of Switzerland – “Wege durch die Wasserwelt” (Tracks along the Waterworld), Hydrological Excursions in Switzerland. The handy booklet (size 10.5 by 14.5cm) also includes pictures and maps, a selection of literature and all other information necessary for an excursion.



2nd Prix Carto ceremony in Berne, 26 October 2007.  
 Award-winners, from left: Alexander Hermann, Felix Hauser and Rolf Weingartner (far right)

### Prix Carto winner 2009

The awarded product “Swiss Map Mobile 2009 iPhone Edition” integrates the Swiss national maps with the iPhone – from precise and detailed topographic map of swisstopo at scale 1:25,000, 1:100,000, 1:500,000 and 1:1million. With the typical iPhone touches seamless zoom in and out on the map or selection of the desired scale is achieved.



3rd Prix Carto ceremony in Muttensz, 21 October 2009:  
 Award-winners Reto Künzler and Andreas Garzotto.

### Prix Carto winner 2011

On 13 September 2011, the Prix Carto prize will be awarded; 12 map products applied for that. The ceremony is part of the Symposium “Werkschau Kartografie Schweiz” (Showcase Cartography Switzerland) at ETH Zurich.

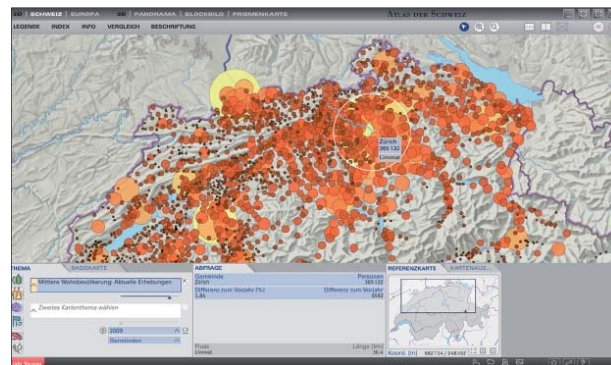
### Logo



## Swiss Map Products – Applied for Prix Carto 2011

### Atlas of Switzerland

The Atlas of Switzerland includes 2,000 themes structured in seven topics, such as transport, energy, nature and environment, economy. These themes are visualised in high-quality and interactive 2D maps of Switzerland and Europe, 3D panoramas, 3D block diagrams and 3D prism maps. Beside a multiplicity of display options (linear network maps, 2D diagrams), several analysis options are available, such as 3D profiles, or the selection and comparison of individual values.



*Institute of Cartography and Geoinformation, Zurich*  
[www.atlasofswitzerland.ch](http://www.atlasofswitzerland.ch)

### Blue Marble 3000

This visualisation shows the Earth in a realistic representation, starting with the last glacial maximum 21,000 years ago, and ends in 1,000 years in the future. The ice coverage, the vegetation, as well as the sea and lake levels are taken into account. Additional information, such as the CO<sub>2</sub>-content of the air, the annual average temperature, and the population density are illustrated. The visualisation is a typical mashup of already existing data.



*zhaw – School of Engineering, Winterthur*  
<http://radar.zhaw.ch/bluemarble3000.html>

### Climbing Map Elbrus

This topographic and thematic map at a scale of 1:50,000 is for climbers and trekking tourists. The backside of the map provides additional information, for example pictures with marked climbing routes, description of hiking routes in three languages with the corresponding elevation profiles, a overview map at 1:670,000, a variety of village maps, a panorama map, and renderings of the local flora and fauna. The map is compatible with GPS devices, and combines information normally found in tourist guides with a map.

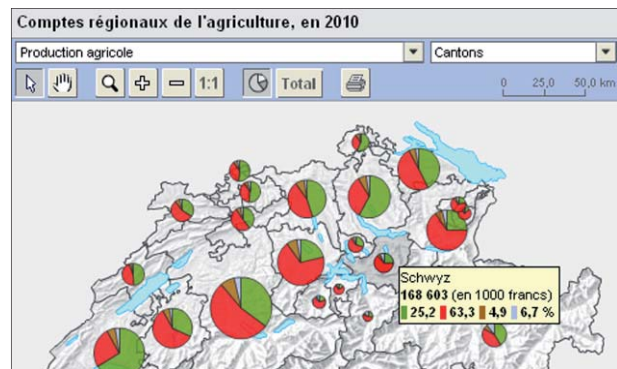


*Sandra Greulich and Sacha Wettstein, Berne*  
[www.climbing-map.com](http://www.climbing-map.com)



## FlashInfo – Easy Visualisation of Statistic Data

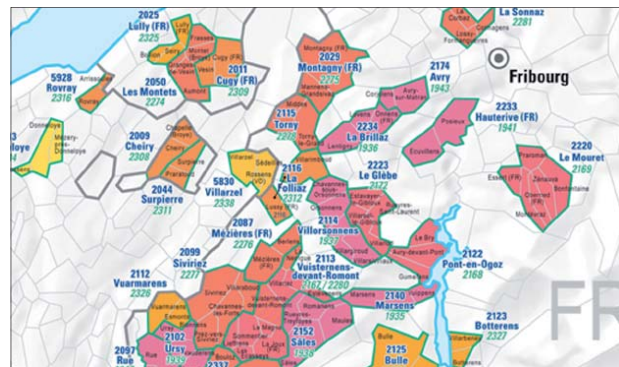
This mapping application can create thematic maps for web pages and other digital media, as well as for print production, using a variety of statistical data. FlashInfo focuses on a correct cartographic presentation and optimal solutions. Currently, the model includes 40 administrative classifications of Switzerland and Europe, and offers the functionality to create interactive presentations. Beside single maps with various chart types, entire (time) series can be composed and played back.



Swiss Federal Statistical Office, Neuchâtel  
[www.bfs.admin.ch](http://www.bfs.admin.ch)

## Map of Municipality Mutations 2000–2010

Already since 1990, the number of municipality mergers is constantly increasing. A general map together with a publication document the increasing dynamics of these fusions and give detailed information about past abolishments, fusions, new foundations and name changes of Swiss municipalities since 2000. Mutation numbers according to the historic municipality index of Switzerland are included, as well as names and numbers of former and new municipalities.



Swiss Federal Statistical Office, Neuchâtel  
[www.bfs.admin.ch](http://www.bfs.admin.ch)

## Globi in the Snow

Globi, a parrot, has been searching the whole of Switzerland for places where one can enjoy all kinds of winter sports. Beside places for skiing and snowboarding there are locations for skating, tobogganing, cross country skiing or snowshoeing. Small, more familiar and cheaper locations are also mentioned. The new map with 100 winter excursions for the whole family is printed on glossy paper and can also be used as a poster.



Hallwag Kümmerly+Frey AG, Schönbühl  
[www.swisstravelcenter.ch](http://www.swisstravelcenter.ch)

## Switzerland during the Last Glacial Maximum

"Switzerland during the Last Glacial Maximum (LGM), 1:500,000" is a paleogeographical map. It shows the topographical surface of Switzerland during the maximum extent of glaciation at the height of the last Ice Age about 24,000 years ago. The latest results of research on the Ice Age in Switzerland are visualised on this map. The LGM map depicts an event in the Earth's history that strongly shaped today's landscape of Switzerland. This event also played a major role in the occurrence and distribution of gravel deposits, which are economically important as raw material and as drinking-water aquifers.



Swiss Federal Office of Topography swisstopo, Wabern  
[www.swisstopo.ch](http://www.swisstopo.ch)



## MapRank Search: Unique Technology to Explore Thousands of Maps in Time

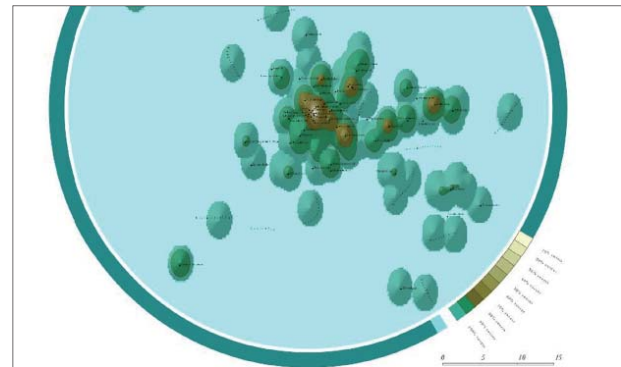
MapRank Search is a central entry point for searching printed and digital maps in map collections and archives by various geodata providers. This unique search technology unites traditional geospatial catalogues and map libraries. It ensures through innovative and user-friendly tools and data bases a quick search result based on different search criteria.



Klokan Technologies GmbH, Baar  
[www.klokantech.com/mapranksearch](http://www.klokantech.com/mapranksearch)

## New City Landscape

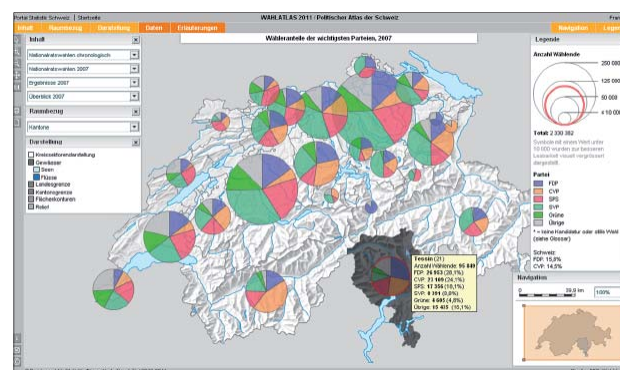
The New City Landscape maps show the Twitter activity of an urban area as a landscape map. The map is based on data with integrated GPS information. The online messages can be spatially references, which in turn allows for the creation of a "city history" in the form of a virtual landscape. The map series shows the increasing virtualisation of our daily life and highlights the changing perception of a predominantly urban space.



Centre for Advanced Spatial Analysis, London  
<http://urbantick.blogspot.com>

## Political Atlas of Switzerland

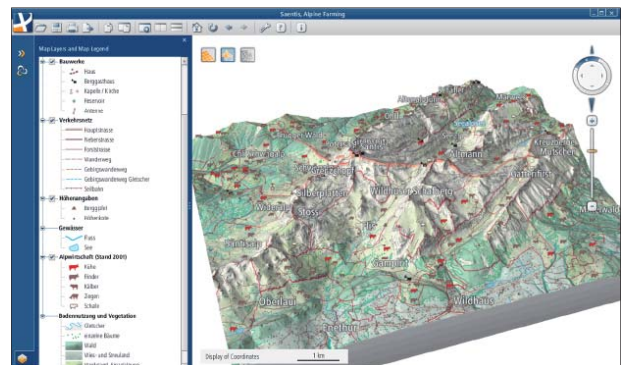
The specialised atlas on Swiss politics contains a comprehensive database and more than 4000 maps that answer almost every question about current or historical Swiss elections and votes. The free online version contains all results since 1991. A supplementary DVD shows all results going back to 1848 (to be published in 2011). Thematic and chronological access to vote and election results, including participation in votes and elections.



Swiss Federal Statistical Office, Neuchâtel  
[www.bfs.admin.ch](http://www.bfs.admin.ch)

## Swiss World Atlas Interactive

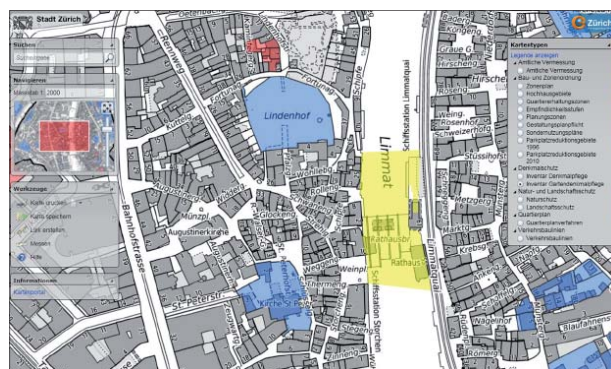
In October 2010, the Swiss World Atlas (SWA) was expanded by an interactive Web Atlas, which further increases the attractiveness of the atlas with new and innovative forms of use. The project team pursued various goals taking the specifics of the Swiss World Atlas into account, for example, to warrant the expectations of teachers regarding current trends and ideas about a modern geography curriculum, as well as sustainability and feasibility. The current version contains more than 70 maps, several block diagrams, and virtual globes..



Institute of Cartography and Geoinformation, Zurich  
[www.swissworldatlas.ch](http://www.swissworldatlas.ch)

## ZueriPlan

Children's playground or retirement home? Heritage conservation or urban development? The location of these zones can be visualised interactively with the ZueriPlan web site, which is online since 2011. The user-friendly application simplifies the handling of a multiplicity of map types and topics which can be combined with search items.



GIS-Zentrum Stadt Zürich  
[www.stadt-zuerich.ch/zueriplan](http://www.stadt-zuerich.ch/zueriplan)

## Map Products Prix Carto 2007

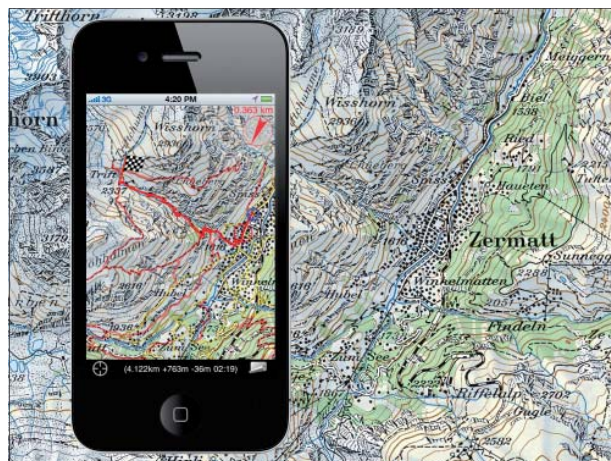
All map products which applied for Prix Carto 2007 are listed and described in brief at [www.cartography.ch/prixcarto/2007](http://www.cartography.ch/prixcarto/2007)



Awarded map booklet in 2007:  
 HADES-Exkursionsführer "Wege durch die Wasserwelt",  
[www.hydrologie.unibe.ch/hades/einfuehrung/wege.html](http://www.hydrologie.unibe.ch/hades/einfuehrung/wege.html)  
 (see also page 9)

## Map Products Prix Carto 2009

All map products which applied for Prix Carto 2009 are listed and described in brief at [www.cartography.ch/prixcarto/2009](http://www.cartography.ch/prixcarto/2009)



Awarded map application in 2009:  
 Swiss Map Mobile 2009 iPhone Edition,  
[www.kartografie.ch/prixcarto/2009/seiten/map\\_mobile.html](http://www.kartografie.ch/prixcarto/2009/seiten/map_mobile.html)  
 (see also page 9)



### Private Map Companies

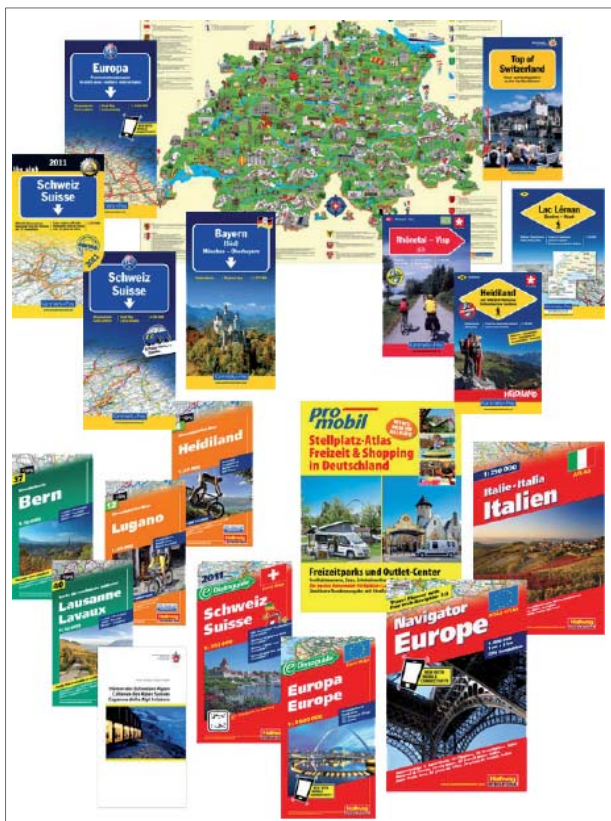
[www.cartography.ch/companies/companies.html](http://www.cartography.ch/companies/companies.html)

#### Companies

The major company's are Hallwag Kümmery+Frey AG in Schönbühl near Berne and Orell Füssli Kartographie AG in Zurich. There are several other companies (with one or more employees) which produce printed maps and digital geodata products. Most of them are listed at [www.cartography.ch/companies/companies.html](http://www.cartography.ch/companies/companies.html).

#### Hallwag Kümmery+Frey AG

Hallwag Kümmery+Frey AG produce the following types of maps: Road maps, regional maps, city maps, travel guides and road atlases, continental and world maps, panoramic maps, hiking guides, excursion and bicycle maps. A wide-ranging series of tourist maps with up-to-date, detailed information.



*New published maps produced by Hallwag Kümmery+Frey in 2011*

#### Orell Füssli Kartographie AG

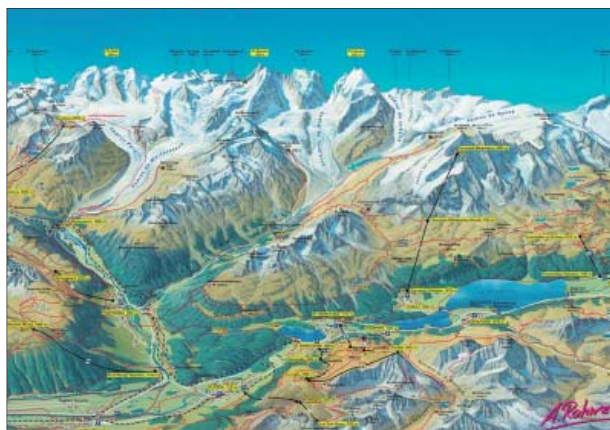
Cartographic production by Orell Füssli Kartographie AG consists more than 80 publications. These include city and town maps, road maps, a variety of school maps (including wall maps, especially with hill shading combined with hypsometric tints), atlas maps (including the "Swiss World Atlas" published for secondary and high schools. More information at [www.orellkarto.ch](http://www.orellkarto.ch).



*Orell Füssli Kartographie AG, Zurich*

#### Arne Rohweder GmbH

Representative for all the small cartographic companies in Switzerland, Arne Rohweder is one of the small but fine map producers: Among others, he creates various types of panoramas for holiday destinations. More information at [www.rohweder.com](http://www.rohweder.com).



*Panorama of the mountain scenery of the Engadin painted by Arne Rohweder*



## Swiss Federal Office of Topography swisstopo

Martin Roggli, Swiss Federal Office of Topography swisstopo, Wabern  
www.swisstopo.ch

### swisstopo

swisstopo was originally established in 1838 by General Guillaume Henri Dufour as the Federal Topographical Bureau. It is a unit of the Ministry of Defence, Civil Protection and Sports, and comprises six divisions plus a support section.

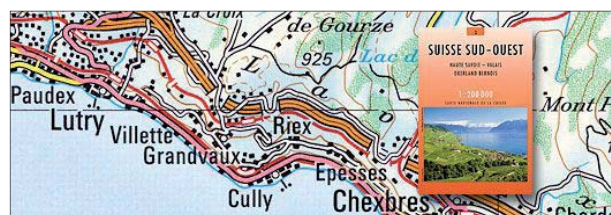
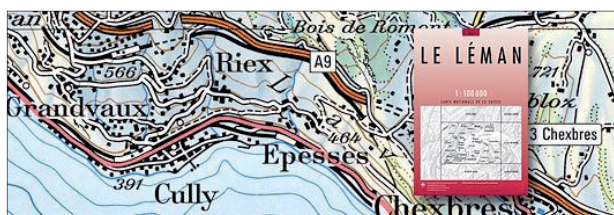
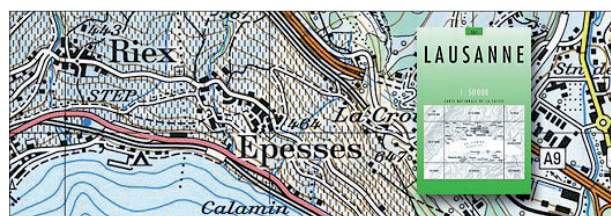
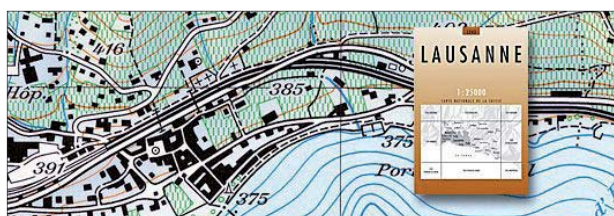
- Geodesy
- Federal Directorate of Cadastral Surveying
- Topography
- Cartography
- Geology
- COGIS
- Support

Staff 2010: 312 employees and 23 apprentices

### Products and services

- Reference systems and map projections
- National survey

- General management of cadastral surveying
- Positioning and information service
- Digital national maps 1:25,000 – 1:1Mio. (raster data)
- Digital topographic bases (vector data)
- Landscape and elevation models
- Boundaries, Toponymy
- Aerial and satellite images and orthophotos
- Archive for historical maps and aerial photos
- Aerial photography
- Topographic maps
- Thematic maps
- Geological maps
- Map applications for PC and mobile phone devices
- Atlases
- Cartographic and topographic services
- Inter-departmental coordination centre COGIS
- Institute of Military Geography



National Maps in different scales: 1:25,000, 1:50,000; 1:100,000; 1:200,000 (from upper left).

## Topographic landscape model

The Swiss Federal Office of Topography swisstopo has been developing and updating its Topographic Landscape Model (TLM). This tool, which takes the form of a huge 3-D database of Switzerland's landscape, has been developed to replace the former VECTOR 25 model, which was based on maps. The data for the TLM are being managed and processed with the aid of the topographic/geographic information system, TOPGIS, into which digital photogrammetry has been fully integrated. In this production model, data relating to both natural and man-made objects have been entered in nine separate sections, and in all cases the geometry is three-dimensional.

Based on this new dataset swissTLM 3D new products have been launched: swissBUILDINGS 3D (building shells without the shape of the roofs) and swissBOUNDARIES 3D (administrative units and borders in vector format).



*swissTLM3D final version combined with Orthophoto SWISSIMAGE*

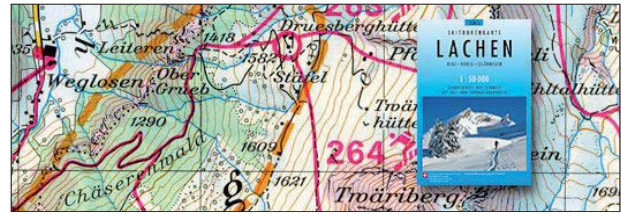
## New map production

For the new National Maps of Switzerland, a new Digital Cartographic Model (DCM) based on the swissTLM 3D will be developed.

## Special map of the Swiss Geological Survey

Switzerland during the Last Glacial Maximum (LGM) 1:500,000 (applied for Prix Carto 2011, see page 11)

## Selected new products published by swisstopo



*Ski Tour Map 1:50,000, sheet 236S Lachen, released on 23 November 2009*



*plan&go! Jungfrau Region Hiking Map 1:25,000 and CD, released on 14 May 2009*



*"Einst und jetzt" (Once and today), Basel and Zurich map, scale 1:25,000. A comparison of the historical and current maps and aerial photographs. This product is aimed at a broad public and shows how the environment has changed over the years, released on 20 October 2008.*



## Swiss Federal Statistical Office ThemaKart – Thematic Mapping Unit

Thomas Schulz, Swiss Federal Statistical Office, Neuchâtel  
www.bfs.admin.ch

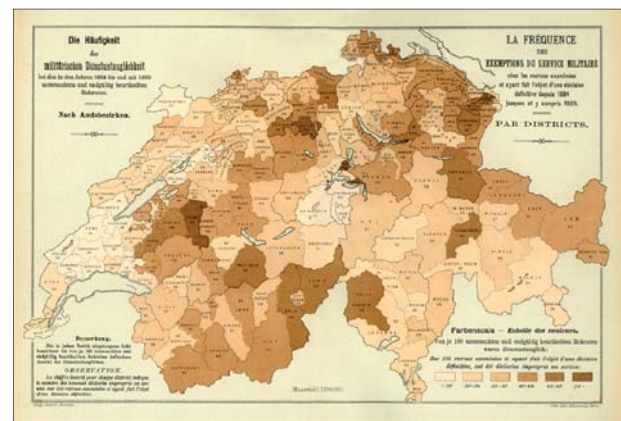
### Overview

Cartographic representations have always been a popular, but at some times also costly element in the public information process of statistical offices. The Swiss Federal Statistical Office (FSO) has made use of thematic maps ever since the publication of its first statistical yearbook in 1891 and has been adding them always in large numbers to its printed standard publications, press releases and, of course, increasingly to its webpages over the last decade.

Maps are used to visualise all 21 statistical topics for which data are being collected. This covers a wide range of topics of socio-economic data for the general public as well as stakeholders. For many statistical topics, e.g. population censuses or elections, maps have in time become indispensable elements and are consecutively used in larger map series or atlases. Maps from the FSO are published for all media that our customers use, including new dissemination channels like smart phones or the Apple iPad. They can cover all administrative geographical levels, grids and special analytical regions for Switzerland, as well as major regions for Europe or thematic country maps of the World.

The increasing number of published data for some surveys and the availability of data for more and more detailed regional levels have subsequently also lead to the compilation of statistical atlases. The Swiss Federal Statistical Office, like many other European offices at the end of the 19th century, published its first atlas, the Graphical-statistical Atlas of Switzerland, in 1897. Since the 1980 population census a comprehensive printed census atlas, called The Structural Atlas of Switzerland, is being published every 10 years. The 1990 and 2000 census have also seen the publication of several mono-thematic online atlases, e.g. on gender and equality issues or the phenomenon of an ageing society. Since 2003, the FSO offers a popular annual Statistical Atlas on DVD, which accompanies

the statistical yearbook with current maps and figures for most statistical topics. The Statistical Atlas of Switzerland was published online in 2009 in three thematic versions (one concentrating on Switzerland, one on political maps of Switzerland and one on European Statistics) and has since then been continuously updated on the Web as new data arrives. All atlases are – like all statistical publications – free of charge for the individual user.



First thematic map published by the Swiss Federal Statistical Office (Statistical Yearbook 1891)



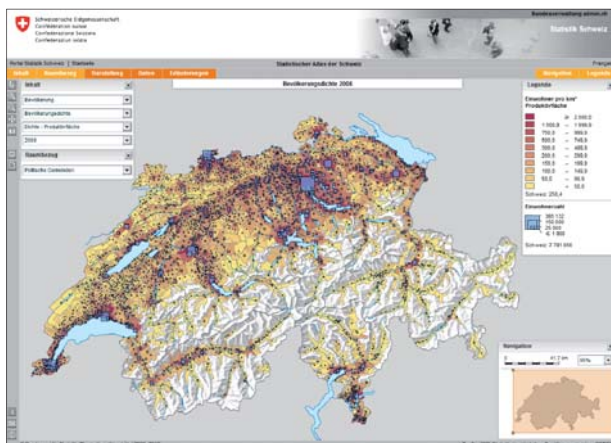
Federal Statistical Office  
Espace de l'Europe 10  
2010 Neuchâtel



## Atlases published from 2007 to 2011

- Stat@las Elections – Atlas of National Council Elections (2007 / 2011), online / DVD
- Stat@las Politics – Political Atlas of Switzerland (2010 –), online / DVD
- Stat@las Switzerland – Statistical Atlas of Switzerland (2010 –), online / DVD

## Statistical Atlas of Switzerland



German: [www.statatlas-schweiz.admin.ch](http://www.statatlas-schweiz.admin.ch)

French: [www.statatlas-suisse.admin.ch](http://www.statatlas-suisse.admin.ch)

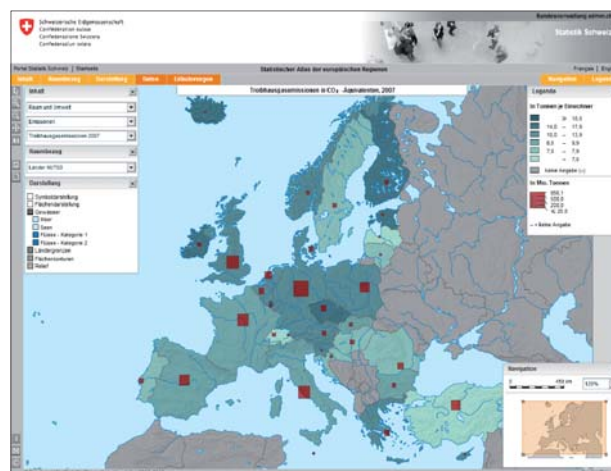
Our standard reference work among statistical atlases. With more than 1500 interactive thematic maps in 13 chapters, the Statistical Atlas of Switzerland offers an up-to-date and captivating overview of regional issues from the whole range of topics covered by official statistics. In addition to current data, historical time series also clarify long-term correlations and regional developments.

Spatial breakdown: most topics are shown at the municipal, district and cantonal levels. Analytical and regional-political divisions are also used for various maps.

Language versions: German and French. Italian edition under preparation.

Updated at least once a year, at the beginning of the year together with the Statistical Yearbook.

## Statistical Atlas of European Regions



[www.statatlas-of-europe.admin.ch](http://www.statatlas-of-europe.admin.ch)

Statistics are not limited by national boundaries – and neither are the social phenomena they measure. With more than 250 interactive maps, the Statistical Statistics are not limited by national boundaries – and neither are the social phenomena they measure. With more than 250 interactive maps, the Statistical Atlas or European Regions presents Swiss numbers in an international context. In addition to international comparisons of hundreds of topics, interesting differences within individual countries are shown clearly and vividly.

Spatial breakdown: the atlas shows most data both at the level of countries and of regions of the European statistical system (Nomenclatures des unités territoriales statistiques).

Language versions: German and French. Italian edition is being planned.

Updated every other year on even-numbered years (2010, 2012, etc.), always at the beginning of the year together with the Statistical Yearbook.

## Political Atlas of Switzerland

Applied for Prix Carto 2011, see page 12 or

[www.statatlas-politik.admin.ch](http://www.statatlas-politik.admin.ch) (German),

[www.statatlas-politique.admin.ch](http://www.statatlas-politique.admin.ch) (French)

## Institute of Cartography and Geoinformation

[www.karto.ethz.ch](http://www.karto.ethz.ch)

### About the Institute

The Institute of Cartography was founded in 1925 by Professor Eduard Imhof. It is the oldest university institute in cartography world-wide. Eduard Imhof is considered the founder of modern academic cartography. Traditionally, research has focused on topographic cartography (relief representation), thematic cartography and atlas cartography (school atlases, national atlases). These domains are still considered the main fields of application but adapted to new demands, media and technologies.

The institute strives to maintain its leading position in cartography by exploiting existing cartographic knowledge and adapting it to new application domains. The main aim in research is the development of new cartographic information and interaction methodologies. In teaching, students should learn how to use and apply cartographic knowledge in spatially-related applications such as GIS.

In May 2011 the institute was renamed into the Institute of Cartography and Geoinformation.

### Ph.D dissertations written in English

- Real-time cartography in operational hydrology. by Christophe Charles Edouard Lienert, 2010
- Spatial, temporal and thematic navigation. by Andreas Neumann, 2010
- Automated cartographic techniques for terrain representation, map distortion analysis, projection design, and interactive mapping. by Bernhard Jenny, 2010
- Novel drawing algorithms and application of texture mapping for 2D cartographic line symbolisation by Fei He, 2008

Link to all Ph.Ds and further links to the full text at [www.karto.ethz.ch/publications/dissertations](http://www.karto.ethz.ch/publications/dissertations)

### Relief model exhibition

In 2009, a small permanent relief model exhibition was officially opened at the Institute of Cartography. Displayed is among others, the Bietschhorn relief model at scale 1:2,000, restored by Toni Mair, surrounded by exhibition panels describing briefly the history and the construction of relief models. The Bietschhorn relief model was originally built by Eduard Imhof for the Swiss National Exhibition of 1939.



*Relief model exhibition panels*



*Members of the Institute in April 2009*

## Software development at the Institute

This is an overview of recently developed and made available software from the Institute of Cartography and Geoinformation or in conjunction with the Institute. Some software programs are still ongoing projects and may be updated occasionally. All applications are freeware and are intended for use mainly for cartographic purposes:

### Flex Projector

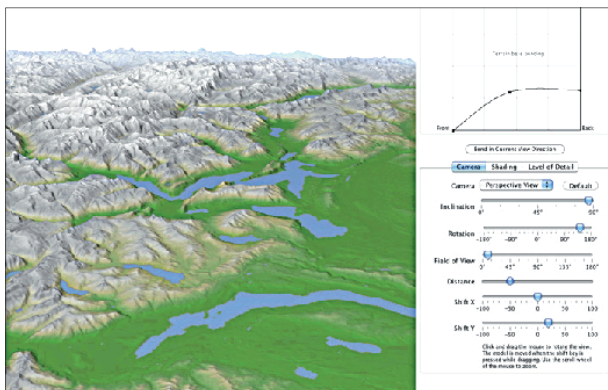
Flex Projector is a freeware, cross-platform application for creating custom world map projections. The intuitive interface allows users to easily modify dozens of popular world map projections – the possibilities range from slight adjustments to making completely new projections. Flex Projector is intended as a tool for practicing mapmakers and students of cartography.

Authors: Bernhard Jenny, Tom Patterson  
[www.flexprojector.com](http://www.flexprojector.com)

### Terrain Bender

Terrain Bender applies progressive bending to digital terrain models for 3D cartography. It offers interactive tools to add a bent base to a digital terrain model.

Authors: Helen Jenny, Bernhard Jenny  
[www.terraincartography.com/terrainbender](http://www.terraincartography.com/terrainbender)



*User interface of the Terrain Bender software*

### Color Oracle

Color Oracle is a colorblindness simulator for Windows, Mac and Linux. It takes the guesswork out of designing for color blindness by showing the user in real time what visually impaired people will see.

Author: Bernhard Jenny  
<http://colororacle.cartography.ch>

### Scree Painter

Scree Painter generates scree patterns for topographic maps. It fills polygons with scree stones for Swiss-style maps of mountainous areas.

Author: Bernhard Jenny  
[www.screepainter.com](http://www.screepainter.com)

### Terrain Sculptor

Terrain Sculptor is a specialised application for the generalisation of terrain models for relief shading. Terrain Sculptor removes irrelevant terrain detail and accentuates important terrain features.

Authors: Bernhard Jenny, Anna Leonowicz  
<http://terraincartography.com/terrainsculptor>

### Adobe Illustrator Plugins for Cartographic Composition

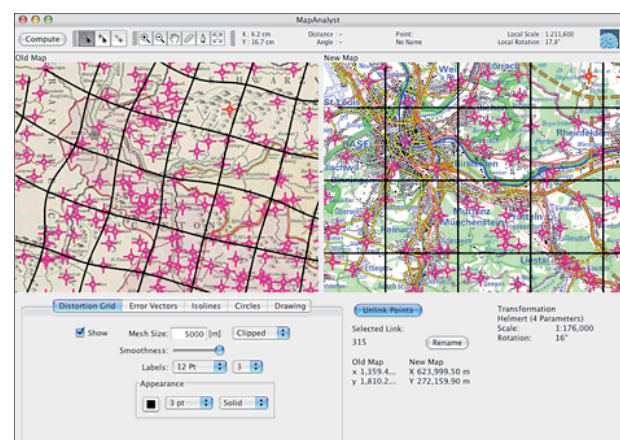
Adobe Illustrator Plugins to generalise, symbolise and exchange of cartographic data sets. Plugins are for PC only.

Author: Ernst Hutzler  
[www.ika.ethz.ch/plugins](http://www.ika.ethz.ch/plugins)

### MapAnalyst

MapAnalyst is a software for the accuracy analysis of old maps. Its main purpose is to compute distortion grids and other types of visualisations that illustrate the geometrical accuracy and distortion of old maps.

Authors: Bernhard Jenny, Adrian Weber  
<http://mapanalyst.cartography.ch>



*Screenshot of the user interface. The left side of the window shows the old map to be analysed, while the right side shows a modern reference map.*



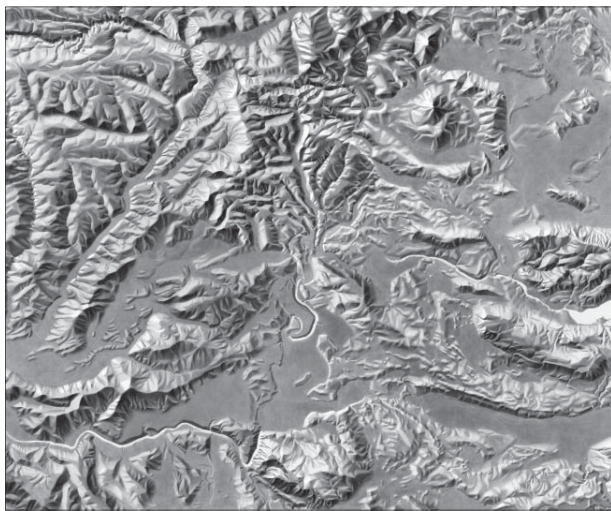
## Web-Services

The Institute provides some information online to assist mapmakers with the presentation of shaded relief, terrain models or data related to cartography.

### Shaded Relief Archive

This website offers an archive of scanned manual shaded relief for use by digital mapmakers. Much of the relief art found here is georeferenced and customised to fit modern drainage vectors. All shaded relief data are free and useable for commercial and other purposes.

Authors: Tom Patterson, Bernhard Jenny  
[www.shadedreliefarchive.com](http://www.shadedreliefarchive.com)

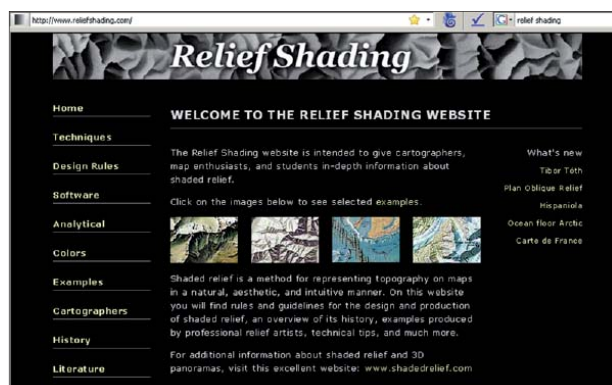


*Relief used for the school map of the Canton Schaffhausen (Downloaded from [shadedreliefarchive.com](http://shadedreliefarchive.com))*

### reliefshading.com

The Relief Shading website is intended to give cartographers, map enthusiasts, and students in-depth information about shaded relief.

Authors: Bernhard Jenny, Stefan Räber  
[www.reliefshading.com](http://www.reliefshading.com)

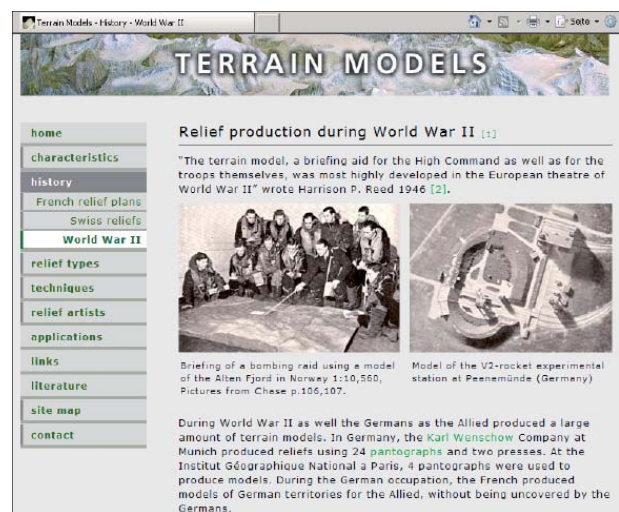


*Screenshot of [www.reliefshading.com](http://www.reliefshading.com)*

## Terrain model website

Terrain models give a fast overview over a landscape, and are often fascinating overwhelmingly beautiful works of artists who invest all their affection and an immense amount of work and know-how, combined with a distinctive sense for the portrayed landscape. This website provides information about different relief types and production techniques, about the history and the artists, as well as about applications of terrain models.

Authors: Felix Sutter, Stefan Räber, Bernhard Jenny  
[www.terrainmodels.com](http://www.terrainmodels.com)



*Screenshot of [www.terrainmodels.com](http://www.terrainmodels.com)*

## A literary atlas of Europe

Where is the setting of literature? This supposedly simple question uncovers an area of research so far only established in its rudiments: literary geography.

Literary geographical methods form the basis of an entirely new, spatially structured, cartographically supported literary history – a literary atlas of Europe. This interactive mapping project makes visible the multiple relationships between real and imaginary geographies, and adequately represents the spaces of fiction.

The following institutions are participants in the pilot version of the Literary Atlas of Europe: Institute of Cartography and Geoinformation, ETH Zurich; Georg August University, Göttingen (D), Charles University, Prague (CZ).

Authors: Barbara Piatti, Anne-Kathrin Reuschel et. al  
[www.literaturatlas.eu](http://www.literaturatlas.eu)

## Cartographer and Geomatician – Vocational Education and Training

Stefan Arn, Federal Institute of Topography swisstopo, Wabern  
[www.berufsbildung-geomatik.ch](http://www.berufsbildung-geomatik.ch); [www.kartografieausbildung.ch](http://www.kartografieausbildung.ch)

### Vocational education and training

Several working groups have been reforming Swiss vocational education and training in the Geodata branch since 2006. Therefore, a complete new vocational education and training course, which takes four years, started in August 2010.

The two professions Cartographer and Geomatician are merged into the profession Geomatician which now consists of three specialisations: Cadastral Surveying, Cartography and Geoinformatics. Swiss knows a well-established dual vocational education and training system. Trainees can practice theoretical knowledge, which they learn at a vocational school, in firms where they are employed. In vocational school, Geomatician trainees get a general basic course of two years, before they specialise in Cadastral Surveying, Cartography or Geoinformatics.

The Geodata market in Switzerland is going to receive well specialised professionals with a broad knowledge of the market.

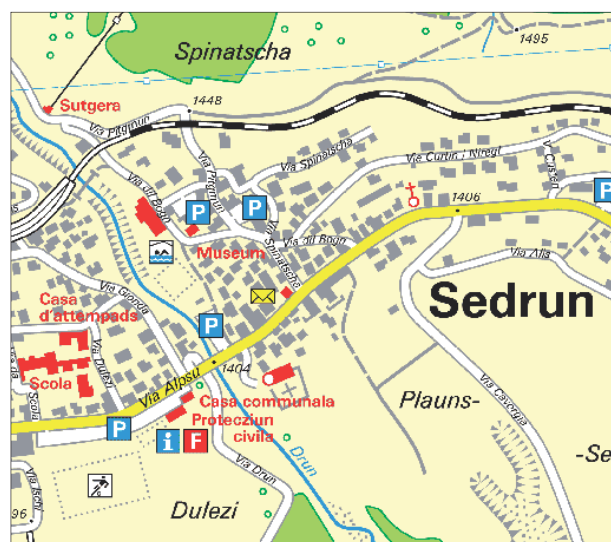
More information at [www.berufsbildung-geomatik.ch](http://www.berufsbildung-geomatik.ch) (in German, French, and Italian)



Manuela Dubach, swisstopo trainee in geomatics.

### Vocational education and training in Geomatics at the Swiss Federal Office of Topography swisstopo

Since the new vocational education and training course for Geomaticians (see previous column), swisstopo reorganised its training program from scratch. Three managers and 15–20 Geomatician trainees built a stand-alone organisational unit of the cartographical division. They are supported by 15 trainers, which teach the trainees in specific topics of the particular divisions of swisstopo. Consequently, trainees are to work in every division of swisstopo during their vocational education and training course, which is, of course, very interesting for both trainees and swisstopo.



Section of a site map made by Martin Lutz (swisstopo), 2nd year of cartography training.



## Continuing Education

[www.cartography.ch/ausbildung/ausbildung.html](http://www.cartography.ch/ausbildung/ausbildung.html)

### Continuing Education in Cartography, Geomatics or Geography

#### ETH

ETH Zürich (Swiss Federal Institute of Technology Zurich): Curriculum Geomatics Engineering and Planning at [www.geomatik.ethz.ch](http://www.geomatik.ethz.ch)

Courses in Cartography at [www.karto.ethz.ch/education/teaching\\_courses](http://www.karto.ethz.ch/education/teaching_courses)



*ETH Zurich – Campus Höggerberg*

#### UZH

Universität Zürich UZH (University of Zurich): Department of Geography: [www.geo.uzh.ch/en](http://www.geo.uzh.ch/en)



*University of Zurich – Campus Irchel*

#### EPFL

Ecole Polytechnique Federal de Lausanne EPFL: [www.epfl.ch](http://www.epfl.ch)



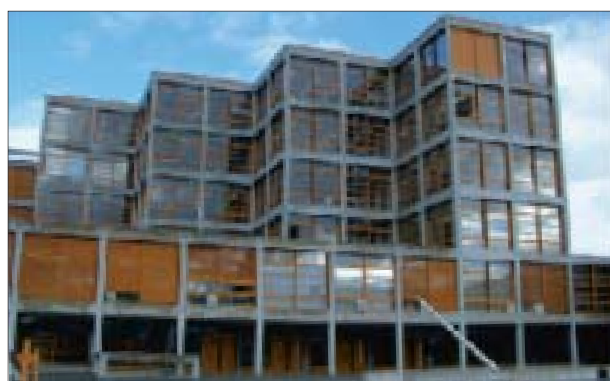
*EPFL campus in Lausanne*

#### FHNW

Fachhochschule Nordwestschweiz FHNW (University of Applied Sciences Northwestern Switzerland): [www.fhnw.ch/habg/ivgi](http://www.fhnw.ch/habg/ivgi)

#### HEIG-VD

HEIG-VD Haute Ecole d'Ingénierie et de Gestion du Canton de Vaud (School of Business and Engineering Vaud): [www.heig-vd.ch](http://www.heig-vd.ch)



*HEIG-VD in Yverdon-les-Bains*

## Cartographica Helvetica Journal on the History of Cartography

*Hans-Uli Feldmann, chief-editor Cartographica Helvetica*  
[www.kartengeschichte.ch](http://www.kartengeschichte.ch)

Since 1990 the working group "History of Cartography" of the Swiss Society of Cartography publishes a journal on the history of cartography as a means of communication between map collectors, researchers and dealers.

It aims to provide information on every aspect of early maps, their history as well as production methods. These collected journals amount to a valuable reference library.

### Format of Cartographica Helvetica

60 pages, with superb illustrations, mostly in colour. Size: 21 x 29.7 cm (A4).

### Publishing dates

The journal is published bi-annually (January and July). The first issue appeared in January 1990.

### Contents of each issue

- feature articles in German, written by leading experts on various subjects of the history of cartography
- summaries in English and French
- information on present and future map facsimile projects
- reviews on books, exhibits and conferences
- Information on forthcoming auctions and events
- reader's forum
- map quiz
- dealer's catalogues, market prices at auctions
- classified advertising section for map dealers and collectors on map sales and exchanges

### Subscription rates

Switzerland: CHF 45.00, Europe: CHF 50.00, Overseas CHF 55.00 (per year); postage included.

### Editor and publisher

Verlag Cartographica Helvetica  
Untere Längmatt 9, CH-3280 Murten  
Fax: +41-26-670 10 50  
E-mail: [hans-uli.feldmann@bluewin.ch](mailto:hans-uli.feldmann@bluewin.ch)  
[www.kartengeschichte.ch](http://www.kartengeschichte.ch)

### Retrodigitisation

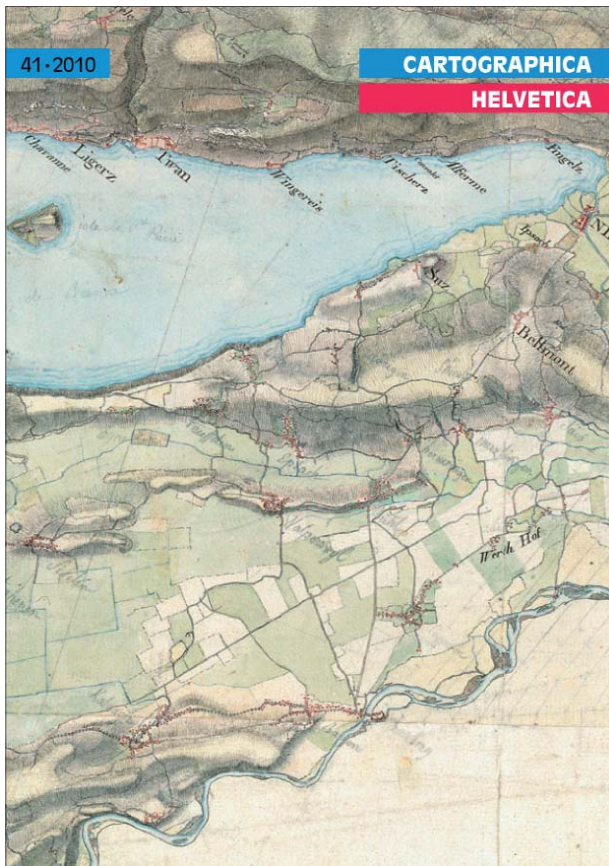
In order to make the journal more widely available and to support research, Cartographica Helvetica has been scanned and converted into searchable full text during summer 2009. The digitised journal has been published by the 'Swiss Electronic Academic Library Service'. However, the two latest issues will only be available with a delay of twelve months. The following main features are worth mentioning:

- a simple Google-like full-text search
- users can refine their search by using different filters
- it is also possible to browse the contents of the issues
- every page can be zoomed by up to 600%
- every page and every article can be downloaded as PDF file
- the entire user interface is available in English, German and French

The service is available for non-commercial teaching and research, as well as for private use free of charge. To enter the service please go to either the table of contents, the author list, the subject index, the index of names or browse directly in <http://retro.seals.ch>.



## Cover Gallery (vol. 36-41), 2007–2010



Volume 41, 2010



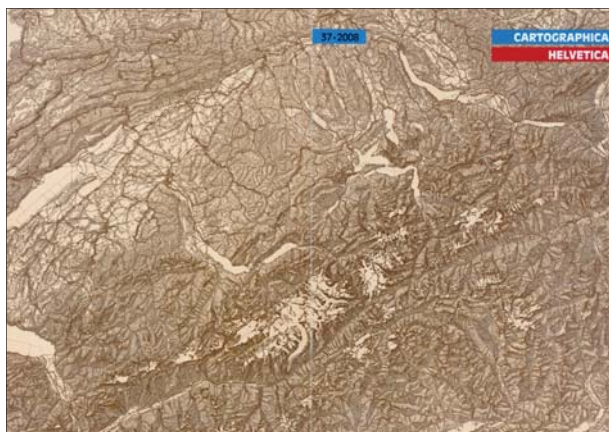
Volume 40, 2009



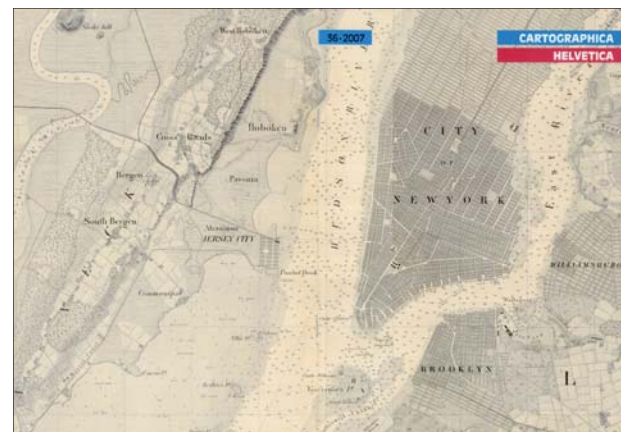
Volume 39, 2009



Volume 38, 2008



Volume 37, 2008



Volume 36, 2007



# Geomatik Schweiz – Géomatique Suisse – Geomatica Svizzera, Kartographische Nachrichten

[www.geomatik.ch](http://www.geomatik.ch) (Geomatik Schweiz – Géomatique Suisse – Geomatica Svizzera)

[www.kirschbaum.de/texte/zkn.php](http://www.kirschbaum.de/texte/zkn.php) (Kartographische Nachrichten)

## Geomatik Schweiz – Géomatique Suisse – Geomatica Svizzera

It is a periodical for geoinformation, land management, geodesy, surveying, cartography, photogrammetry, remote sensing, space planning, structural improvement, agricultural economics, culture, technology, soil, water, environment, and municipal engineering.

Articles are published either in German, French or Italian. The journal is published monthly.

### Subscription rates

Switzerland: CHF 96.00, Other countries:  
CHF 120.00 (per year); Single Issue CHF 10.00,  
Special Issue CHF 15.00 postage excluded, students  
half price.

### Editor and publisher

Chief editor: Thomas Glatthard,  
Museggstr. 31, CH-6004 Luzern,  
[redaktion@geomatik.ch](mailto:redaktion@geomatik.ch)

Publisher: SIGImedia AG  
Pfaffacherweg 189, Postfach 19, CH-5246 Scherz  
[verlag@geomatik.ch](mailto:verlag@geomatik.ch)

**Geomatik** ■ **Schweiz**  
**Géomatique** ■ **Suisse**  
**Geomatica** ■ **Svizzera**

Geoinformation und Landmanagement  
Géoinformation et gestion du territoire  
Geoinformazione e gestione del territorio

*Header of the periodical*

## Kartographische Nachrichten

The “Kartographische Nachrichten” is a cartographic periodical in German. There are six issues per year which the members of the Swiss Society of Cartography receive free of charge. In articles, reports, reviews, job advertisements and many other information, this periodical reflects the cartographic activity in Germany, Austria and Switzerland.

### Publisher

Kirschbaum Verlag GmbH Bonn  
Fachverlag für Verkehr und Technik  
Siegfriedstraße 28  
D-53179 Bonn  
[www.kirschbaum.de](http://www.kirschbaum.de)



*Cover of the issue 2/2011*



## 22nd International Conference on the History of Cartography ICHC2007, Berne, Switzerland, 8 –13 July 2007

*Hans-Uli Feldmann, President IHC2007*  
[www.ichc2007.ch](http://www.ichc2007.ch)

### Organisation

The editorial team of *Cartographica Helvetica* and some other members of the Working Group on the History of Cartography did organise the 22nd International Conference on the History of Cartography in Berne from 8 to 13 July 2007. The Swiss Federal Office of Topography, the Institute of Geography of the University of Berne and the Institute of Cartography of ETH Zurich provided significant support. Some 266 conferees and 34 accompanying persons from 38 countries (a record figure!) shared 62 papers, 39 posters and 4 exhibitions. By the end of the week the conference was an obvious success, one in which the Swiss organiser with its conference director Hans-Uli Feldmann could take great pride (for more details, see *Imago Mundi* Vol. 60, Part 1: p. 97–103).

### Special issue 19

Oehrli, Markus (ed.): Paper and poster abstracts of the 22nd International Conference on the History of Cartography, Berne 2007 = Zusammenfassungen der Vorträge und Poster der 22. Internationalen Konferenz zur Geschichte der Kartographie, Bern 2007 = Résumés des communications et affiches du 22e Congrès International de l'Histoire de la Cartographie, Berne 2007. Murten: Cartographica Helvetica, 2007. (Special issue 19, 224pp. 11 ill., CHF 30.–).



*Cover of the special issue 19*

### Photographs of the IHC2007



*Berne, 8 July 2007, opening ceremony*



*Members of the organising team*



*Martin Rickenbacher talks about Ferdinand R. Hassler*





*Conference hall at the University of Berne*



*Presentations*



*ICHC President opens the sessions with a cow bell*



*Visit to the Ferdinand Rudolf Hassler exhibition*



*Visit to the Swiss Alpine Museum in Berne*



*ICHC2007 volunteers*



*Farewell dinner at the top of the Niesen (2,362 m)*



## 6th ICA Mountain Cartography Workshop at Lenk im Simmental (Switzerland), 11–15 February 2008

*Christian Häberling, Lorenz Hurni; ETH Zurich, Institute of Cartography, Zurich  
[www.mountaincartography.org/activities/workshops/lenk\\_switzerland](http://www.mountaincartography.org/activities/workshops/lenk_switzerland)*

From February 11 to 15, 2008, the 6th edition of the traditional ICA Mountain Cartography Workshop took place for the first time in Switzerland. The workshops focused on mountain-related topographic and thematic aspects and their depiction on maps and map related representations. Every second year since 1998, cartographers and representatives of other fields related to cartography and GIS (like geology, natural hazards, tourism, biology, etc.) are meeting in an inspiring mountain region to discuss their current scientific projects and work.

Under the lead of Prof. Lorenz Hurni, the Institute of Cartography at ETH Zurich was in charge of the organisation of the event, which took place at Lenk im Simmental. Lenk is a small village in the Bernese Alps, and is situated in a wide valley north of the Wildstrubel massif. It is surrounded by mountains with altitudes between 2000 and 3500 metres. The skiing areas of Lenk are connected to those of the famous ski resorts of Gstaad (west) and Adelboden (east) by aerial passenger tramways and chair lifts.

The sports and recreational complex KUSPO (“Kurs- und Sportzentrum”) was selected as workshop location (<http://www.kuspo.ch>), providing a convenient infrastructure and an advantageous accommodation (Figure 2). These conditions made it the ideal place for a successful meeting of both professionals and friends.

During the whole week, the weather was perfect with blue skies and very mild day temperatures. For all participants, these conditions enormously inspired the discussions and activities.

Almost 60 participants and single-day guests from 15 countries participated at the workshop (Figure 1). Besides long-term members of the commission, also many new experts attended the workshop. We are therefore very pleased and hope for an increasing interest in the Commission on Mountain Cartography also in the future. The workshop and its participants were honoured by welcome addresses of William Cart-

wright, the President of the International Cartographic Association (ICA), and Stefan Arn, the President of the Swiss Society of Cartography (SGK).

The workshop was comprised of three different kinds of presentations: classic presentations by the participants talking about their latest scientific results and developments, short presentations according to the Pecha-Kucha system (see [http://en.wikipedia.org/wiki/Pecha\\_Kucha](http://en.wikipedia.org/wiki/Pecha_Kucha)) covering production processes and new products, and last, a small map and relief exhibition allowing to show and compare the newest map products (Figure 3).

The 34 presentations were structured in the following five main thematic blocks: “Physical Geography”, “DEM and Terrain Modelling”, “Relief Depiction”, “History” and “Multimedia and Mobile”.

In the “Physical geography” block, a number of scientific mapping and cartography projects as well as case studies from all over the world were described in detail (Michaela Kinberger, Uni Vienna; Manfred Buchroithner, TU Dresden; Giorgio Vassena, Uni Brescia; Richard Ladstätter, TU Graz; Sabine Stäuble, Uni Lausanne). Other presentations covered concepts for terrain evaluation or monitoring techniques (Igor Drecki, Uni Auckland; Melanie Kunz, ETH Zurich; David Theler, Uni Lausanne). Finally, developments of new interactive map and 3D-visualisation applications were discussed (Alexander Thimm, Swiss National Park; Karel Kriz, Uni Vienna; Christophe Lienert, ETH Zurich).

In the session “DEM and Terrain Modelling”, projects making use of latest laser technologies or high resolution satellite image data (Julien Vallet, Helimap.ch; Kirsten Wolff, ETH Zurich) as well as new approaches for the visualisation of hidden geological structures (Peter Jordan, Böhlinger AG) or for the derivation of contour lines for small scale maps (Anna Leonowicz, ETH Zurich) were presented. A presentation by Maria Pla and Blanca Baella (ICC, Barcelona) focused

on requirements for database-driven relief representations for topographic maps.

The sessions on “Relief Depiction” covered the broadest variety of presentations. First, the needs of mountain map users, especially members of Alpine Clubs, concerning the accuracy and symbolisation of topographic maps were evaluated (Martin Gurtner, swisstopo). Two authors were dealing with the evolution of classic relief maps or perspective views for different cartographic purposes (Alex Tait, International Mapping; Martin Gamache, National Geographic). Similar, but more technically oriented projects covered the development of new tourist maps with an integrated shaded relief (Roger Smith, Geographx NZ; William McNulty, National Geographic; Tom Patterson, US National Park Service). David Schobesberger (Uni Vienna) presented an evaluation of the use and effectiveness of 2-D or 3-D representations in National Park maps. Loïc Gondol (IGN Paris) talked about tests for new cliff drawings and scree representation in topographic maps. The latter method could be compared with scree representations generated by a software developed by Bernhard Jenny (ETH Zurich). Tibor Tóth (Tóth Graphix) demonstrated his relief shading methods using Photoshop and a tablet device. Stefan Räber (ETH Zurich) presented various physical relief depiction techniques, including the production of physical relief models with modern computer-driven drilling machines for an Earth Science exhibition at ETH Zurich.

The session on the history of mountain mapping started with a biographical presentation of the Swiss topographer and cartographer Jacot-Guillarmod (1868–1925) and his influential cartographic cliff representations (Hans-Uli Feldmann, swisstopo), followed by a presentation about the cartographic tradition and the latest technological developments at the Institute of Cartography of ETH Zurich (Lorenz Hurni). Alistair Pearson (Uni Portsmouth) reported about laser measurements and geometric analysis of the accuracy of a historic relief model.

A session on multimedia application and mobile devices for mountain mapping comprised presentations about Web applications for data acquisition (Dusan Petrovič, Uni Ljubljana), spatial communication using Google tools, (Karel Kriz) and acces-

sibility visualisation (Adrian Weber, ETH Zurich). Furthermore, an implementation of GPS technology for mountain mapping and tour planning was demonstrated by Juan Galera (Uni Leon).

The topics of the eight short presentations, which were grouped in two sessions, were obviously more diversified. The authors covered topics like representation principles of rock representations (Jürg Gilgen, swisstopo), tourist mapping activities in Romania (Gabriela and Marin Ilies, Uni Cluj-Napoca), the historic development of panoramic maps (Arne Rohweder, Gecko Maps), mobile trekking guide devices for the Rwenzori National Park, Uganda (Constante Bonacina, Uni Brescia), smart interactive maps (Nathaniel Kelso, The Washington Post), Multidate habitat mapping approaches in Quebec (Guillaume Fortin, Uni Moncton), a topographic map of the Tatra Mountains (Rafal Jońca, RJ Carto) and traditional hill-shading for digital maps (Gizella Bassa, Gizimap).

A new kind of discussion forum was tried out for the first time in the workshop series and immediately attracted the special interest of the audience due to its topic: The new graphic design of the National Swiss topographic maps. Led by Lorenz Hurni (ETH Zurich), Hans-Uli Feldmann and Martin Gurtner (both swisstopo), the participants discussed vividly the new structure of the map content with new object classes and the displayed design specimens with different symbolisation and labelling options.

The workshop was accompanied by various social events and activities which fostered the personal contact among the participants (Figure 4). On Tuesday evening, the welcome drink at the “Cinema Lenk” was accompanied by the display of two recent Swiss films: “Heimatklänge” (“Homeland Sounds”) about contemporary yodelling and “Marmorera” about scary events in the aftermath of the flooding of a mountain village by a reservoir. Due to the excellent weather on Wednesday, the opportunities for various outdoor like skiing, snow walking or simply relaxing on a restaurant’s sun deck used by everyone. At the curling event on Wednesday evening, many newly formed international teams were establish to master this challenging sport. Finally, the “Raclette dinner” – a traditional Swiss cheese dish – was very much appreciated by everyone on Thursday evening (Figure 5).



## Photographs of the ICA Commission on Mountain Cartography Workshop



*Fig. 1: Participants at the 6<sup>th</sup> ICA Mountain Cartography Workshop at Lenk, Switzerland*



*Fig. 2: Conference room*



*Fig. 3: Exhibition of mountain maps*



*Fig. 4: Participants discussing during a walk*



*Fig. 5: Everyone enjoyed the racelette dinner*

## 50th Anniversary of ICA at swisstopo Berne, Switzerland, 9 – 10 June 2009

Anne Ruas, Vice President ICA  
<http://icaci.org/>

### Dear Colleagues

The International Cartographic Association (ICA) was officially born at 4.20pm on the 9th of June 1959 in Berne, Switzerland during a two-day cartographic conference organised by Professor Eduard Imhof.

At the previous cartographic conference in Mainz, Germany in November 1958, a committee chaired by Professor Imhof with the help of Professor Erwin Gigas and Dr Carl Mannerfelt was set up to investigate possible ways to facilitate international collaboration in cartography. The Berne conference was entirely devoted to this subject. Thirteen nations sent delegates to the meeting: Austria, Belgium, Finland, France, Germany, Italy, The Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom and United States. The two-day meeting was very productive and included:

- a report by Eduard Imhof on the possible ways to organise international collaboration
- a discussion of the report
- voting for the creation of the International Cartographic Association
- a discussion on the principles concerning the statutes
- election of the executive committee
- open questions

The major discussion point was the relationship with the International Geographical Union (IGU), i.e. whether the ICA should be a special committee of the IGU or an independent sister association. Eventually, the decision to create an independent association named Association Cartographique Internationale / International Cartographic Association / Internationale Kartographische Vereinigung was made and the Executive Committee elected:

- President: Eduard Imhof (Switzerland)
- Vice Presidents: Duncan M Fitchet (United States), Stéphane De Brommer (France), Lewis J Harris (United Kingdom), Carlo Traversi (Italy), Carl M Mannerfelt (Sweden)
- General Secretary: Erwin Gigas (Germany)

The Committee was mainly composed from members of the previous committee, called Le comité des Six (Committee of Six), formed during the 1956 Esselte Conference in Tollare near Stockholm, Sweden.

The first General Assembly of the International Cartographic Association, organised by the Comité Français de Techniques Cartographiques, took place in Paris, France in 1961. It was attended by 84 delegates from 29 nations. A special celebration of this event is planned for ICC2011 in Paris.

The aim of this anniversary meeting in Berne, 9-10 June 2009, was to celebrate the 50th anniversary of the ICA. The Federal Office of Topography (swisstopo) proposed to host the event and we wish to thank them again for their hospitality, especially Stefan Arn for his support. All past Presidents, Vice Presidents and General Secretaries were invited to Berne, together with representatives from the thirteen nations present at the 1959 meeting and representatives from the ICA national members.

The two-day programme consisted of two parts. The celebration of the past including testimonials covering the first 50 years was presented on the first day, followed by a reflection on today's challenges on the second day. Swiss cartography also featured prominently for the ever-present role it plays in the ICA and world cartography.

This letter is quoted from the special issue of the ICA News summarises the Berne meeting:  
[http://icaci.org/documents/newsletter/ica\\_news\\_special\\_2009\\_hq.pdf](http://icaci.org/documents/newsletter/ica_news_special_2009_hq.pdf)





*Participants of the 50th Anniversary of the International Cartographic Association meeting in Berne, Switzerland*



*ICA President William Cartwright honours SGK President Stefan Arn for the excellent organisation*



*Aperitif at swisstopo*



*Invited guests*



*Stefan Räber (right), organiser of the Imhof's Exhibition, and Swiss delegate Christian Häberling*