

# *Austrian Cartographic Commission*

*In the Austrian Geographical Society*

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## **Cartography in AUSTRIA 2007 – 2010**

### **National Report to the General Assembly of ICA 2011 in Paris, France**

#### **Contributions to ICA**

The following individuals served on the Executive Committee and Commissions of ICA:

G. Gartner (Vice President of ICA)

P. Jordan (Chair, Commission on National and Regional Atlases)

I. Kretschmer (†) (Commission on the History of Cartography)

K. Kriz (Chair, Commission of Mountain Cartography)

#### **Further Development of the Austrian Cartographic Commission (ÖKK)**

By the admission of several new members, especially graduates of the Department of Geography and Regional Sciences of the University Graz, the number of ÖKK members increased until the end of 2010 to 144 persons. Apart from the continuous publication of four information bulletins per annum, a certain number of technical meetings as well as two collective meetings of the ÖKK were arranged each year. In 2010, the 15<sup>th</sup> volume of the ÖKK information bulletin was published.

#### **Technical Meetings in Austria (major events)**

##### **2007**

April 26 – 28, 2007: 13<sup>th</sup> International Seminar on the Naming of Seas and East Sea, Vienna

June 11 – 15, 2007: Workshop “Relief Building”

January 31 – February 2, 2008: Symposium “Cartography and Art – Art and Cartography”, Vienna

##### **2008**

April 13 – 18, 2008: General Assembly of the European Geosciences Union, Vienna

September 10 – 12, 2008: 3<sup>rd</sup> International Conference of the European Society for the History of Sciences, Vienna

October 1 – 2, 2008: Symposium at the Austrian Academy of Sciences: Presentation of the results of the project “Alpkultur”, Vienna

November 26 – 28, 2008: 5<sup>th</sup> Symposium on Location Based Services and Tele-Cartography, Salzburg

## **2009**

February 8 – 14, 2009: 15<sup>th</sup> International Geodetic Week, Obergurgl (Tyrol)

February 11 – 15, 2009: Workshop “Mapping Different Geographies”, Puchberg am Schneeberg (Lower Austria), see: <http://www.univie.ac.at/cartography/mdg>

February 16 – 17, 2009: ICA Symposium on Cartography for Central and Eastern Europe, Vienna

March 10 – 11, 2009: International Symposium on Geographical Names (with Focus on Diversity and Standards), Vienna

May 5 – 7, 2009: 15<sup>th</sup> German-speaking ESRI User Conference, Bregenz (Vorarlberg)

September 19 – 26, 2009: Deutscher Geographentag 2009 (Congress of the German-speaking Geographers), Vienna, see: <http://www.geographentag-wien.at/>

October 6 - 8, 2009: 10. Österreichischer Geodätentag (10<sup>th</sup> Congress of the Austrian Surveyors and Geodesists), Schladming (Styria)

## **2010**

February 22 – 24, 2010: 5<sup>th</sup> International Workshop on Digital Approaches in Cartographic Heritage, Vienna

July 1 – 3, 2010: Congress of the three German-speaking ISPRS (International Society for Photogrammetry and Remote Sensing) member organizations DGPF – OVG – SGPBF as well as the centennial celebration of the ISPRS at the Vienna University of Technology, further information: <http://www.isprs100vienna.org/>

July 5 – 7, 2010: Technical Commission VII Symposium “100 Years ISPRS”, with focus on „Advancing Remote Sensing Science“ at the Vienna University of Technology, further information: <http://www.isprs100vienna.org/>

July 6 – 9, 2010: GI\_Forum - Symposium and Exhibit on Applied Geoinformatics, at the University of Salzburg, further information: <http://www.gi-forum.org>

Annually in July (1<sup>st</sup> or 2<sup>nd</sup> week): AGIT-Symposium and Trade Fair for Applied Geoinformatics in Salzburg, further information: <http://www.agit.at>

## **Universities**

### **University of Vienna**

#### **Department of Geography and Regional Research – Cartography and Geoinformation**

At the beginning of winter semester 2007/2008, a reorganization of the study programs has been conducted in order to establish new Bachelor- and Master-curricula. The following Master-studies were introduced:

- Geography
- Spatial Research and Regional Planning
- Cartography and Geoinformation

## Projects

### ÖROK-Atlas online:

Since early in 2007, an internet-based version of the ÖROK-Atlas (Atlas for Spatial Development in Austria, edited by the Austrian Conference for Regional Planning) is available at the following internet address: <http://www.oerok-atlas.at> The atlas has been developed on behalf of the ÖROK (Austrian Conference for Regional Planning) by the Department of Geography and Regional Research - Cartography and Geoinformation of the University of Vienna, the Austrian Institute for Regional Studies and Spatial Planning (ÖIR, Information Services) and the Department of Geoinformation and Cartography at the Vienna University of Technology. The "ÖROK-Atlas online" features a collection of selected geographical as well as regional statistical data about the spatial development of Austria in cartographic form.

### CHIS:

The "Cultural History Information System" (CHIS) is part of a national research network, dealing with the cultural history of the Western Himalaya from the 8<sup>th</sup> century. CHIS is an internet-based information system in order to archive, visualize and analyze spatial data of cultural history. The application allows for queries resulting in map visualizations and features precise object search or special views. The project has been funded by the FWF (Austrian Research Fund) See: <http://www.univie.ac.at/chwh>

### Klima-Austria:

In cooperation with the Central Institute for Meteorology (Zentralanstalt für Meteorologie und Geodynamik - ZAMG), the Department of Geography and Regional Research - Cartography and Geoinformation at the University of Vienna developed a map-based information system in order to display the climate models of the ZAMG to the general public.

### LWD-Map online:

This continuing project is an ongoing cooperation of the Tyrolean Avalanche Alerting Service and the Department of Geography and Regional Research, University of Vienna, in order to communicate the daily avalanche report in visual form. See: <http://www.lawine.at/tirol/>

### EZG-Oberösterreich:

A cooperation of the Department of Geography and Regional Research at the University of Vienna, the Environmental Agency Austria (Umweltbundesamt) and the government of the province of Upper Austria. The aim was to manage and visualize all hydrographic data in a unified, systematic way.

### OmniSuite Pro (formerly dGlobe):

The aim of this ongoing project was the design and creation of an interactive platform-independent authoring and presentation system in order to visualize global geographic topics on a novel tactile hyperglobe, reaching from evaluating and implementing 3D-engines and the development of an intuitive, framework-based GUI to an "on-the-fly" projection of (dynamic) global data in real-time. See: [http://globoccess.de/index.php?article\\_id=10&clang=0](http://globoccess.de/index.php?article_id=10&clang=0)

### Animated Plate Tectonics (APT):

The goal was to visualize the continental drift (prehistoric plate tectonics and extrapolation into the future) on a novel tactile hyperglobe. 3D-models of the planet earth of different geological eras, served as bases for these complex animations.

### MeteoGlobe:

The aim of this project in cooperation with the Institute of Meteorology and Geophysics at the University of Vienna was the creation of global weather forecast data sets, which can be visualized on a tactile hyperglobe for demonstration purposes.

### WISER:

This project (started in 2004) is a cooperation of the Department of Geography and Regional Research of the University of Vienna with the International Atomic Energy Agency (IAEA) of the United Nations (UN). The goal of WISER (Water Isotope System for Data Analysis, Visualization and Electronic Retrieval) is the development of a user-friendly, integrated cartographic information system, which allows for the visualization and distribution of chemical and isotope-hydrological data sets.

## **Department of History**

### **Projects**

Cartography and Spatial Research in Austria 1918 - 1945:

The FWF-funded project "Cartography and Spatial Research in Austria 1918 - 1945. Continuities and Changes between Three Political Systems" was successfully concluded by the end of the year 2009.

## **Vienna University of Technology**

### **Institute of Geoinformation and Cartography – Research Group Cartography**

A Master study program "Geoinformation and Cartography" was launched at the Vienna University of Technology in 2008.

### **Projects**

Ubiquitous Cartography as Guidance for pedestrian navigation:

This FWF-funded project has been developed in cooperation with the Institute of Geodesy and Geophysics at the Vienna University of Technology and the Austrian Institute of Technology (AIT) - Arsenal Research.

FEMroute:

In this research project - a cooperation of the Vienna University of Technology and Salzburg Research - gender-specific route guidance systems were evaluated.

The project "SemWay" (Semantic Wayfinding) concluded on June 30, 2010. Research focus of the project was to investigate how route instructions for pedestrians could be enriched with semantic information in order to map out the communication process in a more natural way and to enhance the navigational experience.

On April 1, 2010, the project "Ways2navigate" has been launched. Until the end of the year, a first iteration of tests, dealing with the fitness for use of presentation media as part of pedestrian navigation - including a digital map, speech and Augmented Reality - has been concluded.

## **University of Innsbruck**

### **Institute of Geography**

### **Projects**

Tirol Atlas (Atlas of Tyrol):

The internet-based atlas for North-, South- and East-Tyrol has been further developed in many aspects within the last years. By the end of 2007, 88 map sets, including 577 single maps, were available online as part of the thematic map interface. These interactive maps are just the basis for a continuing collection of information and multilingual coverage of the whole region. The thematic work focused on the topics climate, water, traffic and forests, whereas the demographic development has also been included. A new feature is the chronicle of nature in Tyrol, with more than 25.000 entries since the year 172 A.D. More information about the project at: <http://tirolatlas.uibk.ac.at>

## University of Graz

### Department of Geography and Regional Sciences

In winter semester 2007/2008, a new Master-curriculum in "Geo-Spatial-Technologies" was introduced, being a joint study-program of the Department of Geography and Regional Sciences of the University of Graz, the Institute of Remote Sensing and Photogrammetry and the Institute of Geoinformation of the Graz University of Technology.

### Projects

Development of a Hiking Region:

Production of the hiking atlas „Südsteirisches Rebenland“ (depicting the region of "Southern Styrian Vineyards", maps on a scale of 1:25.000), including the implementation of a guidance system

School Atlas "Steiermark" (Styria, Atlas Information System):

A cooperation of the Department of Geography and Regional Sciences at the University of Graz, the Regional Center of Didactics for Geography, "Wirtschaftskunde Steiermark" (Economics of Styria) as well as several local pedagogical and governmental partner organizations. The atlas is a collection of maps, manuals, operating sheets, interactive maps and games in analogue form. A digital version can be accessed at: <http://www.schulatlas.at>

Maps for the Federation of Austrian Industries:

A cooperation of the Department of Geography and Regional Sciences of the University of Graz and the company "Geosys Wirtschafts- und Regionalentwicklung" resulted in several interactive maps about industrial topics.

## Governmental Cartography

### Federal Office of Metrology and Surveying (BEV)

#### Department for Cartography

By the end of 2007, all departments of the Federal Office for Metrology and Surveying, except for the print office, relocated from Krotenthallergasse 3 in A-1080 Vienna to the main office building in Schiffamtsgasse 1-3, A-1025 Vienna. The new address of the print office is now: Erlaaer Strasse 20, A-1230 Vienna.

BEV-Portal: The new portal of the BEV [www.bev.gv.at](http://www.bev.gv.at) went online early in 2008. The metadata of the cartographic models and of the national topographic map series were updated online "just in time".

Cartographic Model 1:50.000 (KM50): In the course of the Nationwide Updating Process (FAKT), 136 topographic maps were edited in the UTM system. As part of the Continuing Updating Process (LAKT), new segments of highways, freeways, federal roads and railways were added to 53 topographic maps. Raster retouching and frame editing has been carried out, if required.

Cartographic Model 1:200.000 (KM200): From 2007 to 2010, all maps of the KM200 have been updated regularly, according to the continuous data acquisition plan.

Cartographic Model 1:250.000 (KM250): From 2007 to 2010, the Cartographic Model 1:250.000-Vector has been completed by adding several topographic data from the Nationwide Updating Process (FAKT) as well as from the Continuing Updating Process (LAKT).

Cartographic Model 1:500.000-Vector (KM500): The Cartographic Model 1:500.000 has been completed by adding several topographic data from the Nationwide Updating Process (FAKT) as well as from the Continuing Updating Process (LAKT).

Digital Landscape Model (DLM)-Transport Network: All major construction projects, which were finished from 2007 to 2010, have been added to the database.

Austrian Map online: The cartographic data sets of the scales 1:25.000, 1:50.000, 1:200.000 and 1:500.000 as well as the index of geographic names have been quarterly updated for the Austrian Map Online. See: [www.austrianmap.at](http://www.austrianmap.at)

Austrian Map Fly 5.0: The cartographic data sets of the scales 1:25.000, 1:50.000, 1:200.000 and 1:500.000 have been updated and edited for the new edition of Austrian Map Fly 5.0, which is available since April 2010.

### **Institute of Military Geography (IMG)**

In the year 2007, the biggest challenge was the preparation of adequate maps and information material in the forefront of the planned EUFOR-mission in Chad. In direct cooperation with the map users of the Austrian army, maps had to be produced from scratch or compiled according to user needs. Furthermore, the Military-Geological General Map of Austria (1:2.000.000) has been designed, based on the Geological General Map of the Republic of Austria.

Regarding the situation of the Austrian Military Geoinformation System (MIGIS) in 2008, the number of personnel could be increased significantly in order to enhance the provision of geodata not only qualitatively, but also quantitatively. The main task was the equipment of military aircraft with the required navigational data.

As a first step leading to a unified civil and military topographic map of the scale 1:250.000 – among others for usage in the field of “crisis- and disaster-management” - the essential conceptual work, which was carried out in cooperation with the Federal Office of Metrology and Surveying (BEV), was completed in 2009 (map series consisting of 12 maps of the Austrian territory).

### **Working Group for Cartographic Toponyms (AKO)**

The AKO was founded in 1969 within the framework of the ÖKK and is also connected to the Austrian Academy of Sciences. The AKO's function is to coordinate all Austrian federal and provincial authorities dealing with geographical names as well as the respective scientific institutions and cartographic publishers. The main goal is to foster the standardization of geographical names in Austria, in compliance with the recommendations of the United Nations. Two technical meetings are held each year. Subject to the bylaws, the AKO represents Austria in international committees dealing with geographical names. One working group of the AKO is engaged in a new edition of the 1994 released “Guidelines for Printing Geographical Names in Austrian School Atlases and other Education Media”.

## **Cartographic Publishers**

### **Freytag-Berndt & Artaria KG (Vienna)**

In the years 2007, 2008 and 2010, Freytag-Berndt & Artaria KG published and updated several cartographic products in the field of roadmaps, leisure maps, city maps, hiking maps and atlases. For further information see: [http://www.freytagberndt.at/rtc-freytagberndt/en\\_EN](http://www.freytagberndt.at/rtc-freytagberndt/en_EN)

### **Ed. Hölzel (Vienna)**

In the years 2007, 2008 and 2010, Ed. Hölzel published and updated several cartographic products in the field of pocket maps, camping maps, school atlases and school maps. The

publishing house focused on schoolbooks within the last years. For further information (in German) see: <http://www.hoelzel.at/cms1/>

## **New Products**

A comprehensive list of textual publications, map series and atlases as well as digital products being published from 2007 to 2010 can be found in "Kartographische Nachrichten, Fachzeitschrift für Geoinformation und Geovisualisierung", Kirschbaum Verlag GmbH, Bonn (Germany), in chapter "ÖKK-Nachrichten" (Bulletin of the Austrian Cartographic Commission, in German). See:

Issue 2007/2, p. 113ff.

Issue 2008/2, p. 94ff.

Issue 2009/2, p. 102ff.

Issue 2010/2, p. 96ff.