

## **Austrian Cartographic Commission**

**in the Austrian Geographical Society**

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## **Cartography in AUSTRIA 2015 – 2018**

National Report for the General Assembly of ICA 2019 in Tokyo, Japan.

### **Austrian Cartographic Commission**

Austria is one of the founding members of ICA. At the first General Assembly in 1961, it became necessary to have an Austrian national member in ICA. It was then, when the Austrian Cartographic Commission (ÖKK) in the Austrian Geographic Society was established on 20 March 1961. Hans Bobek the president of the Austrian Geographic Society acted as chair of the ÖKK until 1966 when Erik Arnberger took over who had just been appointed the first full professor of cartography at the University of Vienna in 1965. Since then the chair of the ÖKK was held by Erik Arnberger (1966 – 1985), Ferdinand Mayer (1985 – 1995), Ingrid Kretschmer (1995 – 2007), and Wolfgang Kainz (2007 – present).

The Austrian Cartographic Commission has around 120 individual and institutional members and considers itself the cartographic face of Austria to the world. Members of ÖKK have been actively involved in various commissions of ICA (mountain cartography, atlases, map production and geo-business) and in the Executive Committee (Georg Gartner was vice-president from 2007 – 2011, president of ICA from 2011 -2015, and currently functions as past-president 2015 – 2019).

ÖKK holds member meetings twice a year and organizes scientific events. Highlights of such events are the cartographic conferences of the German-speaking countries Austria, Germany, and Switzerland that were held in Vienna, Austria in 1970, 1989 (including the German Democratic Republic just before major political changes in Europe), and 2006 (jointly with IGU and ISPRS). The next such conference will take place in Vienna in September 2020 as EuroCarto 2020.

Prof. Dr. Wolfgang Kainz

Chair, Austrian Cartographic Commission

### **Contributions to ICA**

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

G. Gartner (Past-President of ICA)

M. Jobst (Vice-chair, Commission on Management and Economics of Map Production)

P. Jordan (Chair, Commission on Toponymy)

### **Scientific Events in Austria**

2015, Nov 10<sup>th</sup> – 12<sup>th</sup>: 1<sup>st</sup> ICA European Symposium on Cartography, Vienna University of Technology

2015, Nov 26<sup>th</sup> 2015: “Armenia in Old Maps” (Austrian National Library, organized by the Embassy of Armenia)

2016, April 26<sup>th</sup> – 30<sup>th</sup>: 10<sup>th</sup> ICA Mountain Cartography Workshop at Carl-von-Stahl-Haus, Golling

2016, Sep 15<sup>th</sup> – 17<sup>th</sup>: 18<sup>th</sup> Colloquium on the History of Cartography at the University of Vienna

2016, Nov 14<sup>th</sup> – 16<sup>th</sup>: 13<sup>th</sup> International Conference on Location Based Services at the Vienna University of Technology

2016, Mar 4<sup>th</sup> – 5<sup>th</sup>: 139<sup>th</sup> Meeting of StAGN (Ständiger Ausschuss für geographische Namen) initiated by the AKO (Working Group for Cartographic Toponyms) in Graz. Symposium: “Minority toponyms in Slovenia, adjacent areas and German-speaking countries”

2017, Mar 23<sup>rd</sup> – Sep 17<sup>th</sup>: Exhibiton “Wien von oben” (Vienna from Above). Die Stadt auf einen Blick (Vienna Museum)

2018, May 31<sup>st</sup> – Jun 3<sup>rd</sup>: Annual Meeting of ARGE Comparative High Mountain Research at Altenberg a. d. Rax

2018, Jun 11<sup>th</sup> – 12<sup>th</sup>: Workshop on Earth Observation with Chinese Satellite Systems and 44<sup>th</sup> Meeting of the Austrian Cartographic Commission (University of Vienna). More information: <https://china-sat-workshop.univie.ac.at>

2018, Nov 22<sup>nd</sup> – 23<sup>rd</sup>: International Symposium “Minority Names in Public Space – Problems, Challenges, Solutions” at the Austrian Academy of Sciences.

2018, Apr 19<sup>th</sup>: The Research Group Cartography at the Vienna University of Technology co-hosted the Workshop “CODE/GEO/GRAPHIC” in Berlin, Germany.

## Education, Research and Development

### University of Vienna

Department of Geography and Regional Research – Working Group Cartography and Geoinformation Science

In the period of 2015 to 2018 the University of Vienna awarded 45 master’s degrees, as well as 3 doctor’s degrees in the scientific field of Cartography and Geoinformation Science.

2015: 13 Master degrees, 1 Doctoral Degree

2016: 6 Master degrees

2017: 16 Master Degrees, 2 Doctoral Degrees

2018: 10 Master Degrees

### Projects

Aiding SuSustainable Independent Senior TrAvellers to Navigate in Towns (ASSISTANT), a project for helping elderly citizens navigate through public transport was finalized in July 2015.

Digitising Patterns of Power (DPP) (2015 – 2018) is a multidisciplinary project, conducted by the Austrian Academy of Sciences, Institute for Medieval Research (IMAFO) in cooperation with the University of Vienna, Department of Geography and Regional Research. It is part of an initiative to promote digital humanities research in Austria. DPP brings together expertise from historical and archaeological research as well as Digital Humanities in the field of spatial representation and geo-communication to explore medieval geographies. A prototype of the DPP application has been online since the beginning of 2017. (<http://dpp.oeaw.ac.at/>)

LAWIS (2002 – ongoing): The goal of this cooperation project between the Avalanche Warning Centre Tyrol (Innsbruck, Austria) and the University of Vienna, Department of Geography and Regional Research is to develop and maintain a complex and very powerful database driven online system embedded within a geo-spatial visualization environment for access of current relevant avalanche information in Europe. Besides the direct link to all European Avalanche Warning Centres with their daily information bulletins further lexical as well as current facts concerning weather, avalanches, snow profiles and mountain casualties are integrated and made accessible. (<https://www.lawis.at>)

ÖROK-Atlas online (2004 - ongoing) is a cooperative scientific project with the goal of developing an online system that enables the user to explore national (Austrian) as well as international (European) statistical information. Users can compare and analyze data and visualize the selected information in a high-quality cartographic environment. ÖROK-Atlas online is a synthesis of Cartography, Geographic Information Technology, Multimedia and Statistical Analysis. (<http://www.oerok-atlas.at>)

ALBINA (2017 - 2019) is project that has the goal to produce a joint, multilingual avalanche bulletin, which informs the public daily about the avalanche situation in the entire European region of Tyrol, South Tyrol and Trentino and is implemented as part of an Interreg V-A Italy-Austria project. The developed communication structures will promote and facilitate the exchange of information between the experts of the different regions. They are supported by a software system that visualizes weather station data, observations, snow profiles and avalanche events of the entire region and offers the possibility to enter the avalanche bulletin. (<https://avalanche.report>)

CTBTO's Global GeoStories (2018): Within this project six GeoStories on the topic of "Ending Nuclear Explosions" were developed for the Hyperglobe (spherical display) in cooperation with CTBTO (Comprehensive Nuclear-Test-Ban Treaty Organization). The goal was to illustrate this issue on the Hyperglobe to better demonstrate its global impact on humankind. Processes of realization include the creation of storyboards, automated raster manipulation methods, morphing and animation techniques, audio editing, interface development as well as authoring and composing the Global GeoStories.

Riedenkarten AT (2018 – 2021) is a research and development project with the aim of conceiving a functional as well as user-centred geographic information portal of all Austrian vineyards to record, represent and communicate relevant factors dealing with wine and their spatial-temporal characteristics. Österreich Wein Marketing GmbH (ÖWM) commissioned the project in close cooperation with the University of Vienna, the Institute of Geography and Regional Research and the Technical Office for Landscape Planning plan+land, Artner & Tomasits OG.

## Vienna University of Technology

Department of Geodesy and Geoinformation – Research Group Cartography

The Research Group Cartography is an integrated part of the Department of Geodesy and Geoinformation of the Faculty of Mathematics and Geoinformation of the Vienna University of Technology.

Since 2018 Prof. Georg Gartner and the Vienna University of Technology are members of the Academic Networks of the United Nations Committee on Experts of Global Geospatial Information Management (UN-GGIM).

In the period of 2015 – 2018 the Research Group Cartography organized 22 CartoTalks. (more information: <http://cartography.tuwien.ac.at/cartotalks>)

The Vienna University of Technology awarded 17 master's degrees that were established in the context of cartography.

2015: 4 Master's degrees  
2016: 3 Master's degrees  
2017: 6 Master's degrees  
2018: 4 Master's degrees

### *Projects*

genderATlas is an online atlas for visualizing data, indicators and information of the geospatial reality of women and men in Austria. It is a cooperative project between the Vienna University of Technology and the Department of Geography and Regional Research, University of Vienna, as well as the ÖIR Projekthaus GmbH. From 2013 to 2015 the project was funded by the aid program FEMtech of the Austrian Federal Ministry for Transportation, Innovation and Technology.

The project „Wissenschaftlich-kartographische Optimierung der ÖBB-INFRA-Karten“ (Scientific-cartographic optimization of ÖBB-INFRA-maps) was kicked off in September 2016.

In the project "Indoor Navi" user-centred navigation solutions for train stations in Austria are being developed.

"EURECA" is a project in which the possibilities of extracting semantic information from archives in such a way that they can be supplied to a location-based service, are analysed.

The collaboratively developed current research agenda on location-based services was successfully completed and published as an open access paper in the Journal of Location Based Services: <https://www.tandfonline.com/doi/full/10.1080/17489725.2018.1508763>.

## University of Salzburg

### *Projects*

YouthMap5020 is a project for the development of a dynamic and interactive web map for children and adolescents in Salzburg City. (<http://youthmap5020.at>)

senTOUR (2014 -2016) is a senior-friendly online portal for touristic geospatial information. The prototype is based on the region of the Austrian National Park Gesäuse. The main component is an interactive map of the national park, which depicts hiking trails, info centres, resting areas, drinking fountains, sights, public rest rooms as well as many other points of interest. The prepared geographic information of senTOUR can be accessed via mobile App.

## Austrian Academy of Sciences

### *Projects*

Woldan Goes Digital, a project by the *Collection Woldan* of the Austrian Academy of Sciences, has been completed in 2017. The objective of the project was to digitize more than 1700 cartographic objects of the Viennese private collector Erich Woldan (1901 – 1989) and make the data accessible through a Geospatial Content Management System.

Politics and poetics of toponyms, identity and location in multilingual areas. A comparative study of Carinthia (Austria) and the Teschen region (Czech Republic) (FWF project I 2366 G23): The project has been selected by the Austrian Fund for the Promotion of Scientific Research (FWF) from a large number of submissions for funding. It was carried out in the years 2016-2018 by two research groups in the Czech Republic (headed by P. Mácha, Ostrava) and Austria (headed by P. Jordan). The Austrian research group consists of three persons and is based at the Austrian Academy of Sciences in Vienna. The focus lies on the question of how important it is for members of linguistic minorities to see their

place names on road signs and in other ways in public spaces. It compares minority situations in southern Carinthia and in an area with a Polish minority in the Czech Republic.

Project “Unfolding the Woldan Collection” (2018 – 2020): A data model and prototype for Dissemination and visualization of cultural heritage in a spatial-temporal way”, Collection Woldan, Austrian Academy of Sciences

Projekt “HistoGIS” (2018 – 2020), Austrian Centre for Digital Humanities (ACDH)

## Austrian Alpine Club and University of Innsbruck, Tyrol

### *Projects*

Austrian Alpine Map 0/16 “Mount Kenia National Park”

In cooperation between the Austrian Alpine Club and the University of Innsbruck, the Alpine Club Map 0/16 “Mount Kenya National Park” was published in October 2018 as part of the FFG project AV.MAP. A central feature of this map is the use of satellite data to enable a map creation process without regard to national borders or regions. Terrain models and orthophotos were calculated from high-resolution Pleiades Tri-Stereo satellite data. The temporal consistency of the data sets provides a good cartographic basis from which contour lines, hill shading and evaluations of hydrology were generated. Automated boulder and rock depiction complete the map image. In conjunction with other data sources and extensive field work a trekking map for Mount Kenya was created.

More information: [www.gis.tirol/AV.MAP/](http://www.gis.tirol/AV.MAP/)

## Authoritative Cartography

### Federal Office of Metrology and Surveying (Bundesamt für Eich- und Vermessungswesen, BEV)

Department for Cartography

#### *Cartographic models and map series*

Nationwide Updating Process (FAKT): In the period of 2015 – 2018, 198 maps of the Cartographic Model 1:50.000 Raster (KM50-R) were updated in the UTM system. 133 sheets of the Austrian Map 1:50.000 (ÖK50) and 213 sheets of the Austrian Map 1:25.000 (ÖK25V) were released for print.

The cooperation between the Institute of Military Geography (IMG) and the BEV in 2011 to publish common civilian-military issues of existing national map series was successful. Since 2017 all maps of the ÖK50 series are available in the new edition.

The Cartographic Models 1:250.000 - Vektor (KM250-V) and 1:500.000 – Vektor (KM500-V) were updated via a continuing process (LAKT) and are now available through the BEV website ([www.bev.gv.at](http://www.bev.gv.at)). The Cartographic Model 1:200.000 – Raster (KM200-R) was discontinued in 2015.

The Austrian Map 1:200.000 Federal State (Bundesland) (ÖK200 – BLK) was discontinued in 2016 and is now available as a historical map.

#### *Digital products*

The Austrian Map Mobile App is available for iOS and Android. Cartographic data provided by the BEV can be visualized in the high quality of the authoritative Austrian maps via mobile app or Austrian Map online ([www.austrianmap.at](http://www.austrianmap.at)). Data for the maps in 1:50.000, 1:250.000 and 1:500.000 as well as the

geographic nomenclature is updated quarterly. Since 2016 the area around Lake Constance (Bodensee in German) is depicted through original data from Switzerland and Germany.

### *International*

The Austrian content for the EuroGeographics product EuroBoundaryMap (EBM, 1:100.000) and EuroRegionalMap (ERM, 1:250.000) is provided by the BEV annually.

### *Apprenticeship geoinformation technician*

In 2018 ten apprentices were in the 1<sup>st</sup> - 3<sup>rd</sup> year of apprenticeship in geoinformation technician training. One apprentice successfully passed the final exam.

## Geological Survey of Austria (Geologische Bundesanstalt, GBA)

The GEOFAST project has the goal to compile digital and nationwide geological maps onto topographic base maps in the scale of 1:50.000. Sheets are not published in offset print, but for print on demand. 31 map sheets were published in the map series of ÖK50 BMN in the period of 2015 – 2019.

In 2018 the book “Österreichs Mineral- und Heilwasser” (Austria’s Mineral- and Healing Water) was published. It includes geological maps and focuses on the topics of deposits and hydro-geology as well as ultra-traces and hydro-chemistry. (see: Elster D., Fischer L., Hann S., Goldbrunner J., Schubert G., Berka R., Hobiger G., Legerer P. & Philippitsch R. (2018): Österreichs Mineral- und Heilwässer. Wien: Geologische Bundesanstalt, 2018.)

IRIS online is an interactive web map for a raw material information system.

<https://www.geologie.ac.at/services/webapplikationen/iris-interaktives-rohstoffinformationssystem/>

## Cartographic Publishers

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

In the period of 2015 – 2019 Freytag-Berndt & Artaria KG updated and newly published a wide variety of cartographic products. These include Automobile and Recreational Maps in different scales ranging from 1:3.000.000 (i.e. Australia) to 1:30.000 (i.e. Malta), city maps in scales around 1:10.000 and topographic tracking maps scaling from 1:50.000 (i.e. National Park Donauauen) to 1:25.000 (i.e. Garmisch Partenkirchen).

The versatile range of products includes a selection of roadmaps, leisure maps, city maps, hiking maps and atlases.

The waterproof City Pocket series was expanded by maps of Copenhagen, Passau, Tel Aviv, Krakow, Liverpool and Belgrade in scales ranging from 1:10.000 to 1:4.000. These compact and waterproof city maps are translated in a number of different languages and offer a quick overview of points of interest for themes such as shopping, local delicacies, culture, night-life and sights.

More information: <http://www.freytagberndt.com/en/>

### Ed. Hölzel (Vienna)

Various issues of the Hölzel school atlases have been updated again for the period of 2015 - 2019.

In 2017 the 200th birthday of the founder Eduard Hölzel was commemorated. In Olomouc, Czech Republic, the site of the founding of the publishing house in 1844, a commemorative exhibition with the participation of the publisher took place in the State Scientific Library.

In 2018 a novel school atlas, the “Hölzel Aktivatlas” (Hölzel Active Atlas), was published. The atlas section contains a comprehensive topographical block with a name register and a thematic section organized according to Austrian school curricula with simple and challenging tasks for cartographic exercises. The Atlas contains work sheets to enhance the map handling competence in different difficulty levels (from map reading to map analysis).

More Information: [www.hoelzel.at](http://www.hoelzel.at)

## Further Publications

A comprehensive list of textual publications, map series and atlases as well as digital products being published from 2015 to 2018 can be found in “Kartographische Nachrichten, Journal of Cartography and Geographic Information”, Kirschbaum Verlag GmbH, Bonn (Germany), where in issue 2, on an annual basis, the developments of ÖKK are reported in the section “ÖKK-Nachrichten” (Bulletin of the Austrian Cartographic Commission).

Edited by Benedikt Hajek and Wolfgang Kainz, University of Vienna, Department of Geography and Regional Research – Cartography and Geoinformation Science