



CARTOGRAPHIC SOCIETY
of the Czech Republic

<http://www.czechmaps.cz>

National Report
on Cartographic Activities
in the Period 2003 - 2007

Prague, June 2007

REPORT

on Cartographic Activities in the Czech Republic in the Period 2003 – 2007

compiled by
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1. Kartografická společnost České republiky (Cartographic Society of the Czech Republic)

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The Cartographic Society of the Czech Republic was established in 1993 after dividing of Czechoslovakia and its Cartographic Society of the Czechoslovak Republic. The Society represents the Czech Republic in the International Cartographic Association (ICA) from 1995, when the Czech Republic was readopted as a regular ICA member country by the ICA General Assembly in Barcelona (Spain).

1.1 Activities of the Society in the period 2003-2007

The 6th General Assembly of the Society, which was held in September 2003 in Prague, elected for the period 2003-2005 a new Executive Committee of the Society as follows:

President :

MIKŠOVSKÝ Miroslav, Assoc.Prof., MSc., Ph.D., Faculty of Civil Engineering, Czech Technical University in Prague

Vice-President :

TALHOFER Václav, Assoc.Prof..Col., MSc., Ph.D., University of Defence in Brno

Secretary General :

ZIMOVÁ Růžena, MSc., Ph.D., Faculty of Civil Engineering, Czech Technical University in Prague

Treasurer :

KUČERA Jiří, MSc., Land Survey Office in Prague

Members :

ČADA Václav, Assoc.Prof., MSc., Ph.D., Faculty of Applied Sciences, West-Bohemian University in Plzeň

FRIEDMANNOVÁ Lucie, MSc., Ph.D., Faculty of Natural Sciences, Masaryk University in Brno

KONEČNÝ Milan, Assoc.Prof., DSc., Ph.D., Faculty of Natural Sciences, Masaryk University in Brno (ICA President for the period 2003-2007)

ŠUMBERA Jiří, MSc., Publishing house SHOCart, Ltd., Zádveřice/Vizovice

VOŽENÍLEK Vít, Assoc.Prof., DSc., Ph.D., Faculty of Natural Sciences, Palacký University in Olomouc

The main tasks of the Executive Committee of the Society were focused on preparation of - national competitions „The Best Map of the Year 2003“ and „The Best Map of the Year 2004“

- the national competition „Children Cartographic Drawings“ in the period 2003-2005
- the presentation of the Czech cartography on the 22nd ICA International Cartographic Conference in La Coruña (Spain) in 2005
- the 16th National Cartographic Conference (in collaboration with the Cartographic Society of the Slovak Republic) in Brno in 2005
- the seminar „Digital Cartography IV.“
- the seminar on preparing of a Standing Czech Old Maps Exhibition

The results of the national competition of Czech publishing houses „The Best Map of the Year 2003“ were presented at the Prague Book Fair 2004 in May 2004; from 58 maps and atlases, which were registered for the competition, won the first price the set of Standardized Topographic Maps 1: 25 000 and 1:50 000 of the Czech Republic issued by the Military Geographic and Hydrometeorological Survey in Dobruška. Further were awarded:

- the map „National Park Thayatal“, issued by the publishing house ROSY in Mělník,
- the Internet application „<http://mapy.centrum.cz>“, prepared by T-mapy Prague,
- the „Road Map of the Czech Republic 1:50 000“, issued by the Land Survey Office in Prague and
- the Internet presentation of old maps of the 1st and 2nd Military Mapping, prepared by Laboratory of Geoinformatics of the Jan Purkyně University in Ústí nad Labem.

The seminar „Digital Cartography IV.“ was held in September 2004 in the City Museum in Sedlčany. A part of the programme was the excursion to the Land Survey Office in Sedlčany, where. new digital printing machine DICOpres was presented .

The results of the next national competition of the Czech publishing houses „The Best Map of the Year 2004“ were presented at the Prague Book Fair 2005 in May 2005. The first price won the Historical Atlas of Czech Towns Vol.15 - Trutnov, issued by the Historical Institute of the Czech Academy of Sciences. Further were awarded:

- the „Relief Map of Beskydy Mountains“, issued in coedition of publishing houses Kartografie HP and SHOCart, Ltd. and
- the map set of school wall maps, issued by the publishing house Kartografie Praha, Inc.

In the category of digital cartographic products was awarded the Information Map to the Street Atlas of the Czech and Slovak Republics – Complete Edition, issued by the company PJ Soft.

In the category of student cartographic works was awarded the dissertation „Atlas of a Very Small Territory – The Middle Part of the Valley of Radůňka River, prepared by Zdeněk Fröhlich (University Ostrava).

Special were awarded

- the Orthographic Presentation of the Czech Republic at the scale 1:100 000, presented by GEODIS Brno and
- the cartographic elaboration of a comprehensive tourist atlas of the Czech Republic at the scale 1:50 000., prepared by the publishing house SHOCart, Ltd., Zádveřice/Vizovice.

The seminar on preparing of a Standing Map Exhibition was held in May 2005 at the Faculty of Civil Engineering of the Czech Technical University in Prague; a special committee for preparation of this project was founded.

The national competition „Children Cartographic Drawings“ during the period 2003 - 2005 was realized in April 2005; five of the awarded children works were sent to the ICA

General Secretary for the ICA International Barbara Petchenik competition in La Coruña (Spain) in July 2005.

In collaboration with the Institute of Mapping and Cartography was organized in April 2005 a seminar, where the habilitation thesis of Mr. Čada, MSc., Ph.D. and Mr. Šíma, MSc., Ph.D. (both from the Faculty of Applied Sciences, West Bohemian University in Plzeň) were presented to the cartographic community.

The 22nd ICA International Cartographic Conference attended 14 Czech delegates (incl. accompanying persons). In the ICA conference programme were included 5 Czech invited papers and 1 poster. The Cartographic Society sent to the conference organizers 21 selected Czech maps and atlases, mostly the awarded works from the national competitions from the year 2004; the parcels with these Czech cartographic products were unfortunately not delivered as the mail lost them, but all these maps and atlases were mentioned in the ICA exhibition catalogue.

The 16th National Cartographic Conference, commonly organized by the Cartographic Societies of the Czech and the Slovak Republics, was held from the 7th to the 9th of September 2005 at the University of Defence in Brno. The conference attended 153 participants; on its programme were given 34 scientific papers and 22 posters. In the time of the conference was realized the 7th General Assembly of the Czech Society, which elected for the period 2005-2009 a new Executive Committee of the Society as follows:

President :

MIKŠOVSKÝ Miroslav, Assoc.Prof., MSc., Ph.D., Faculty of Civil Engineering, Czech Technical University in Prague

Vice-President :

TALHOFER Václav, Assoc.Prof..Col., MSc., Ph.D., University of Defence in Brno

Secretary General :

HÁJ Bohumil, MSc., Publishing House SHOCart, Ltd., Zádveřice/Vizovice

Treasurer :

ZIMOVÁ Růžena, MSc., Ph.D., Faculty of Civil Engineering, Czech Technical University in Prague

Members :

ČADA Václav, Assoc.Prof., MSc., Ph.D., Faculty of Applied Sciences, West-Bohemian University in Plzeň

KONEČNÝ Milan, Assoc.Prof., DSc., Ph.D., Faculty of Natural Sciences, Masaryk University in Brno (ICA President for the period 2003-2007)

NĚMEČEK Bedřich, MSc., Land Survey Office Sedlčany

ŠUMBERA Jiří, MSc., Publishing House SHOCart, Ltd., Zádveřice/Vizovice

VOŽENÍLEK Vít, Prof., DSc., Ph.D., Faculty of Natural Sciences, Palacký University in Olomouc

The main tasks of the Executive Committee of the Society during the period 2005 – 2007 were focused on preparation of

- national competitions „The Best Map of the Year 2005“ and „The Best Map of the Year 2006“,
- the national competition „Children Cartographic Drawings“ in the period 2005-2007
- the presentation of the Czech cartography on the 23rd ICA International Cartographic Conference in Moscow in 2007

- the 17th National Cartographic Conference (in collaboration with the Cartographic Society of the Slovak Republik) in Bratislava (Slovakia) in 2007
- the preparing and realization of a special web-site of Czech Old and Up-to-date Maps

The results of the national competition of Czech publishing houses „The Best Map of the Year 2005“ were presented at the Prague Book Fair 2006 in May 2006; the first price in the category „Atlases and Map Series“ won the historical atlas „Kladsko – Changes of the Middle-European Region“ prepared by the Historical Institute of the Academy of Sciences of the Czech Republic and the University in Hradec Králové. The first price in the category of autonomous cartographic works won the map „Region of Pardubice – National Cultural Heritage, issued by the publishing house SHOCart, Ltd., Zádveřice. In the category of school maps and atlases won the first price the „School Atlas of the Czech Republic and Europe“, issued as well by SHOCart, Ltd., Zádveřice. In the category of student cartographic works won the first price the „Workbook to the School World Atlas“ prepared by Mgr. Jana Návratová from the Palacký University in Olomouc. In the category of the cartographic applications on the Internet won the first price the Map Server of the Centre for the Regional Development of the Czech Republic developed by the company T-MAPY, Ltd. A special award won the company TRANIS, Ltd. for the long-lasting development of the cartographic product „Kilometrovník (engl.: the kilometre stone) of Europe“.

The results of the next national competition of the Czech publishing houses „The Best Map of the Year 2006“ were presented at the Prague Book Fair 2007 in May 2007. 107 cartographic products were registered for this competition. The first price in the category „Atlases and Map Series“ won the „Atlas of Bird Nests Allocation in the Czech Republic in the Period 2001 – 2003“, prepared by the Faculty of Forestry of the Czech Agricultural University in Prague. The first price in the category of autonomous cartographic works won the map „Český Ráj from the View of Archeology“, issued by the publishing house Geodézie On Line. The first price in the category of school maps and atlases won the „Atlas of the Czech Republic“ for the primary and secondary schools issued by Kartografie Praha, Inc. In the category of student cartographic works won the first price the „Atlas of the Czech Part of Slezské Beskydy Mountains“ prepared by Ms. Nikola Jurková from the Ostrava University. In the category of cartographic applications on the Internet won the first price the server „Interactive Plan of the South-Moravian Integrated Transport System“ developed by the company SmartGIS. In the category of digital products won the first price „Kilometrovník (engl.: the kilometre stone) of the Czech and Slovak Republics“ prepared by the company TRANIS, Ltd. Special awards won the company Geodézie On Line, Ltd. for creation of the border area maps and the publishing house SHOCart Zádveřice, Ltd. for the stable high-quality of maps with cyclo-touristic themes.

The national competition „Children Cartographic Drawings“ during the period 2005 - 2007 was realized in April 2007; in the competition took part 129 children works. Chosen winning drawings we sent to the organizers of the ICA International Children Cartographic Drawings Exhibion“ on the price of Barbara Petchenik, which will také place in Moscow during the ICA International Cartographic Conference in August 2007.



Fig.1 – One of the winning children works –
Iveta Čížová (10 years) – Sun and Moon shining on our Earth

For the 23rd ICA International Cartographic Conference in Moscow were prepared all invited papers and posters. The chosen Czech cartographic products were sent to the Conference Exhibition Committee and the winning children works were sent to the organizers of the Barbara Petchenik competition.

The 17th National Cartographic Conference was prepared by Cartographic Societies of the Slovak and the Czech Republics and will be held after the ICA Conference in Bratislava on the 6th and the 7th of September 2007. Chosen invited papers will be published in reviews *Geodetický a kartografický obzor* and *Kartografické listy*. A part of the conference will be a large exhibition of the up-to-date Czech and Slovak cartographic production.

Three further seminars on preparing of a Standing Map Exhibition were held during the period 2005 - 2006. In the frame of an Euro-project will be realized a reconstruction of a part of the castle in Velké Opatovice (Moravia), where a standing old Moravian maps exhibition will be established. Therefore the committee on the Standing Old Czech Maps Exhibition, established in 2005 decided to change its efforts and to prepare a web-site presentation of the Old and Up-to-date Maps of the country. In 2006 was prepared a pilot project of the presentation, which will be realized during the period 2007 – 2008 by a redaction committee, chaired by the member of the Society Mr. Prof. Bohuslav Veverka, MSc., D.Sc. from the Faculty of Civil Engineering of the Czech Technical University in Prague

1.2 International activities of the Society

The Czech Republic is an ICA regular member from 1995 and follows in the former membership of Czechoslovakia from 1968. The Czech Republic is in the ICA represented by its Cartographic Society.

Mr Assoc.Prof Milan Konečný, RNDr., Ph.D. serves to ICA in the period 2003 – 2007 as the ICA President.

The Society is represented in most of the ICA Commissions in the post of Commission members or corresponding members.

The Czech Republic is a founding member of the European Cartographic Union, which was established in 1999 in Maastricht (The Netherlands). The Society is represented in the Executive Committee of the Union by its President.

1.3 Other activities

The Cartographic Society of the Czech Republic is a collective member of the Czech Association for Geoinformatics. The Society cooperates closely with the Cartographic Society of the Slovak Republic and organizes with it every two years common cartographic conferences. The Society cooperates closely with the Society for Photogrammetry and Remote Sensing of the Czech Republic, with the Czech Union of Surveyors and Cartographers and with the Czech Geographic Society as well.

The Society issues a newsletter (Digest of the Cartographic Society of the Czech Republic) with information of activities of the Society and of the ICA. The actually reports are published on the web sites of the Society <http://www.czechmaps.cz>.

2. The state administration authority in the Czech Republic

The state administration authority is represented by the Czech Office for Surveying, Mapping and Cadastre (mail address: Pod sídlištěm 9/1800, CZ 182 11 Prague 8 – Kobylisy, Czech Republic, e-mail: cuzk@cuzk.cz, web site : <http://www.cuzk.cz>).

The subordinary organizations of the Czech Office are the Land Survey Office in Prague, the Research Institute of Geodesy, Topography and Cartography in Zdiby, the Survey and Cadastre Inspectorates (7) and Cadastre Offices (77).

The main tasks of the Czech Office for Surveying, Mapping and Cadastre are :

- the maintenance and modernization of horizontal, vertical and gravity control in the Czech Republic,
- the large-scale mapping (cadastral maps, the State Map 1:5000)
- the medium-scale mapping (the Basic Maps 1:10 000, 1 :25 000, 1:50 000, 1:100 000, 1:200 000),
- the small-scale mapping of the Czech Republic at scales 1:500 000, 1:1 Mio, 1:2 Mio)
- the creation and updating of ZABAGED (Fundamental Base of Geographic Data) based on the Basic Maps 1:10 000 (in raster and vector form with attributes as well),
- the complete administration of the cadastre including legal relations to real estate property)
- the geodetic surveys and documentation of the state boundaries
- the development and maintenance of the Information System of Surveying, Mapping and Cadastre in the Czech Republic,
- standardization of geographical names and
- coordination of research works and of international cooperation in geodesy, cartography and cadastre.

3. The Geographic Service of the Czech Armed Force

In the latest years was finished the fundamental reorganization of the Czech Armed Forces Geographic Service (GS). Two previous institutions (the Military Geographic Institute and the Military Topographic Institute) were joined into one – the Military Geographic and Hydrometeorologic Institute (MGHMI) and completed by the Department of Hydrometeorologic Support. The new organization took over all the production from both former institutes.

To guarantee full interoperability in the geographic support with other NATO armies the Czech Armed Forces have changed the previous geodetic reference system S-1942/83 with Gauss projection into the geodetic system WGS84 with UTM projection including MGRS since 1st January 2006. All digital databases were transformed into the new system; new topographic maps at the scales 1:50 000 and 1:100 000 were created. In terms of this process which started five years ago, the geodetic reference system was changed, the basic database of DMU (Digital Feature Model) was completely up-dated and all features were improved according to their position. Nowadays the typical geometric accuracy is about 3 meters; main features have resolution of 1 meter. Aerial photographs were used like basic information sources. They were orthogonalized and during this process the present digital elevation model was improved.

Except standard production many maps produced by Geocell of the KFOR Headquarter in Pristina (Kosovo) were printed in MGHMI.

A new international program called Multinational Geospatial Co-production Program (MGCP) has started. The goal of MGCP is to cover selected parts of the world by very precise digital vector data with geometric resolution of 10-20 meters. 28 participating countries started with the data collection. The Geographic Service used previous experience with VMap program and committed to collect data from 12 tiles 100 per 100 km size.

To the basic topographic maps were added new versions of military thematic maps and charts, e.g. the Topographic Maps of the Czech Republic at scales 1:250 000 and 1:500 000, the Military Training Area Maps at scales 1:25 000 and 1:50 000, the Flying Charts – Tactical Flying Chart 1:250 000, Low Level Flying Chart 1:250 000, ICAO Chart 1:500 000 etc.

The new system called IZGARD for access to digital data was created. The system is focused on military end-users and is accessible on the military net. The Web Mapping Service technology based on ArcIMS ground was used.

The GS has modernized its field units with a new deployable set of geographic support. The set is called SOUMOP and consists of four modules - data collection (MOSIN), data analyses (MOGAN), data and maps supply (MOZIN) and reprography (MOREP). All modules are in ISO containers, which can be transported by truck, airplane or ship. Modules have their own generator due to independency on external sources of electricity. ArcGIS and ERDAS Imagine are main GI technologies used in the SOUMOP.

The Geographic Service has a lot of partners in the Czech Republic and abroad, with whom it co-operates mainly in the data exchange. The most important local partner is the Czech Office for Surveying, Mapping and Cadastre. Foreign partners are especially geographic services of NATO armies.

4. Education in Cartography

The preparation of cartographers in the Czech Republic for civil purposes is provided on several universities and is included into geodetic, geographic or geoinformatic studying programs. These programs are provided at the Faculty of Natural Sciences of the Charles University in Prague, at the Masaryk University in Brno, at the Palacký University in Olomouc and the University of Ostrava, at the Faculty of Civil Engineering of the Czech Technical University in Prague, at the Technical University in Brno and at the Faculty of Applied Sciences of the West-Bohemian University in Plzeň.

In the last 4 years period the university courses were divided into Bachelor programs (normally 6 terms, at the Czech Technical University 8 terms), Master of Science programs (normally 4 terms after receiving of Bc.degree). After receiving of MSc.degree can the graduates continue in the post-graduate study at some chosen universities (the Charles University in Prague, the Masaryk University in Brno, the Czech Technical University in Prague and the Technical University in Brno). For more information see the Universities web sites.

The Bachelor studying program is closed by state finals and by viva voce of the Bachelor dissertation. The Bc.graduates can continue in the Master of Science studying program, sometimes without any further exams.

The Master of Science studying program is closed by state finals and by viva voce of the Master of Science dissertation as well. Some of the MSc.graduates can continue in the post-graduate studies ; its duration is normally 3 – 5 years. This study is closed by a viva voce, the part of it is a presentation of a scientific work. After it presents the student his thesis; after their defence and their considering in the Scientific Council of the faculty receives the student the doctoral degree Ph.D.

In terms of reorganization of the military university education in the Army of the Czech Republic a new University of Defense (UoD) was founded in 2004. UoD consists of three faculties and three university institutes. Bachelor and Master of Science education in the geodesy and cartography was finished in 2006 and since this time a new branch of military geography and meteorology has started. A new Military Geography and Meteorology Department (MGMD) of the Military Technological Faculty was founded in September 2006. One half of the whole study program is focused on cartography, photogrammetry, remote sensing and geoinformatic. This program consists of two parts – Bachelor (6 terms) and Master of Science (4 terms). Study subjects correspond to Geographic Service and Hydrometeorologic Service requirements and students after graduation are ready to serve in both services on basic positions.

The MGMD is responsible for geodesy and cartography post-graduate course finished by obtaining a Ph.D. degree. The duration of this course is 3 years in a present form or 5 years in a distance form. The study is organized according to the individual studying plans; a part of it are the doctoral thesis focused mainly on geographic support of armed forces problems. For more details see the university web site www.unob.cz.

