

REPORT

on Cartographic Activities in the Czech Republic in the Period 1999 – 2003

compiled by

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et al.

1. Kartografická společnost ČR (Cartographic Society of the Czech Republic)

Address: Pod sídlištěm 9/1800, CZ 180 00 Prague 8 – Kobylisy, Czech Republic

web site : <http://www.czechmaps.info>

The Cartographic Society of the Czech Republic was established in 1993 after dividing of the former Cartographic Society of the Czechoslovak Republic. This society represents the Czech Republic in the International Cartographic Association (ICA) from 1995 (ICA General Assembly in Barcelona, Spain).

1.1 Activities of the Society in the period 2000 – 2001

The 4th General Assembly of the Society took place in Prague in March 2000 and elected the Executive Committee of the society for the period 2000-2001 as follows :

President :

MIKŠOVSKÝ Miroslav, Assoc. Prof., MSc., PhD., Czech Technical University, Prague

Vice-President :

TALHOFER Václav, Col., Assoc.Prof., MSc., PhD., Military Academy, Brno

Secretary General :

VOŽENÍLEK Vit , Assoc.Prof., DSc., PhD., Palacký University, Olomouc

Treasurer :

KUČERA Jiří , MSc., Land Survey Office, Prague

Members :

ČADA Václav , MSc., PhD., West-Bohemian University, Plzeň

KAFKA Oldřich , MSc., Cadastral Office, Pardubice

KONEČNÝ Milan, Assoc.Prof., DSc., Ph.D., Masaryk University, Brno

NĚMEČEK Bedřich, MSc., Land Survey Office, Sedlčany

ŠMÍDOVÁ Hedvika, MSc., Cadastral Office, Brno

The efforts of the Executive Committee were concentrated on preparations of

- the seminar „Digital cartography 2“ in Prague (2000)
- the seminar „Copyright of databases and digital cartographic products“ in Prague (2001),
- the national competition „The best map of the year 1999“ , Prague, April 2000
- the national competition „The best map of the year 2000“ , Prague, April 2001
- the national competition „Children cartographic drawings“, Prague, March 2001
- the 14th Czech and Slovak cartographic conference in Plzeň (2001)
- the presentation of the Czech cartography on the 20th ICA International Cartographic Conference, Beijing (China), August 2001.

The seminar „Digital cartography 2“ was held on the Faculty of Civil Engineering of the Czech Technical University in Prague in September 2000. It was prepared in cooperation with the Institute of Mapping and Cartography of this Faculty. On the seminar were presented more than 10 papers prepared by Czech universities and Czech cartographic publishing houses. More than 50 specialists and students took part in it.

The seminar „Copyright of databases and digital cartographic products“ was held in Prague in May 2001. It was prepared in cooperation with the Czech Association for Geoinformatics. On the seminar were presented 6 papers prepared by law-specialists and leading staffs of Czech publishing houses.

The national competition „The best map of the year 1999“ was organized by the Society in the beginning of 2000. The main prize in the category of printed maps and atlases won the „School Atlas of the Czech Republic“ issued by Geodezie CS, Inc., Liberec. A special evaluation was given to digital products of the firm PJsoft Prague introduced on Internet.

The national competition „The best map of the year 2000“ was organized by the Society in the beginning of 2001. The evaluation was organized first time as a part of the International Book Fairs Prague 2001. The main prize in the category of printed maps and atlases won the tourist map „Třeboňsko-Horní Lužnice“, published by SHOCart, Ltd., Zlín. In the category of digital map products was the price given to „Geobase Professional 2.8“ on CD-ROM, issued by Geodezie CS, Inc., Liberec. A special evaluation was given to the Military Geographic Institute in Prague for the publication „Orthophotomaps of Tábor and Olomouc“.

The competition of „Children cartographic drawings“ was organized by the Society in March 2001. It was divided into three age categories and organized by the General Secretary Assoc.Prof. Vít Voženílek. In the competition were evaluated more than 50 children drawings and five best of them were sent to the ICA General Secretary and displayed on the ICA International Exhibition of Children Drawings (the Barbara Petchenik price) in Beijing in August 2001.

The 14th Czech and Slovak cartographic conference was held on the Faculty of Applied Sciences in Plzeň (Western Bohemia) in August 2001. During three-days sessions were given more than 40 papers. The conference was completed by an exhibition of new Czech maps, published by Czech publishing houses and by a technical exhibition of Czech and international firms.

1.2 Activities of the Society in the period 2001 - 2003

A part of the 14th Czech and Slovak cartographic conference was the 5th General Assembly of the Czech Society, which elected the new Executive Committee of the Society for the period 2001-2003 as follows :

President :

MIKŠOVSKÝ Miroslav, Assoc.Prof., MSc., PhD., Czech Technical University, Prague

Vice-President :

TALHOFFER Václav, Col., Assoc.Prof., MSc., PhD., Military Academy, Brno

Secretary General :

VOŽENÍLEK Vít, Assoc.Prof., DSc., PhD., Palacký University, Olomouc

Treasurer :

KUČERA Jiří, MSc., Land Survey Office, Prague

Members:

ČADA Václav , MSc., PhD., West-Bohemian University, Plzeň

KAFKA Oldřich , MSc., Cadastral Office, Pardubice

KONEČNÝ Milan, Assoc.Prof., DSc., PhD., Masaryk University, Brno

NĚMEČEK Bedřich, MSc., Land Survey Office, Sedlčany

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

The main tasks of the Executive Committee of the Society were focused on preparation of

- the seminar „Digital cartography 3“ in Prague (2003)
- the national competition „The best map of the year 2001“ , Prague, April 2002
- the national competition „The best map of the year 2002“ , Prague, May 2003
- the national competition „Children cartographic drawings“, Prague, March 2003
- the 15th Czech and Slovak cartographic conference in Zvolen/Slovakia (2003)
- the presentation of the Czech cartography on the 21st ICA International Cartographic Conference and the 12th ICA General Assembly, Durban (South Africa), August 2003.

The seminar „Digital cartography 3“ took place on the Faculty of Civil Engineering of the Czech Technical University in Prague in June 2003. The program of the seminar was focused on new cartographic softwares and on teaching digital cartography at the university.

The national competition „The best map of the year 2001“ was organized by the Society in the beginning of 2002. The main price in the category of printed maps won the „Basic Map 1:10 000“, derived from the new vector database ZABAGED, issued by the Land Survey Office in Prague. The main price in the category of maps on Internet won the product <http://mapy.tiscali.cz>, prepared by PLANstudio, Ltd., Prague. A special evaluation was given to the diploma work of MSc. Barbora Skácelová „Agricultural Atlas“.

The national competition „The best map of the year 2002“ was organized by the Society in the beginning of 2003. The main price in the category of printed atlases, map sets and editions won the „Touristic road atlas of the Czech Republic 1:100 000“, issued by the publishing house SHOCart, Ltd., Zádveřice. The main price in the category of printed maps won the „Atlas of Prague – integrated city transport 1:20 000“, issued by the Transport Enterprise of Prague and Geodézie CS, Inc., Liberec. The main price in the category of map applications on Internet won „Town District Prague 14“ (<http://www.praha14.cz/planstudio/praha14/praha14.html>), prepared by PLANstudio, Ltd., Prague. A special evaluation was given to the publishing house Geodézie CS, Inc. for publishing of a set of regional atlases of the Czech Republic.

The national competition of children drawings to the thema „Making the world a better place for children“ was closed in May 2003. The best sketches will be displayed on the Exhibition in Durban in August 2003.

The 15th Czech and Slovak cartographic conference in Zvolen (Slovakia) will be held on beginning of September 2003, i.e. after the ICA Conference in Durban. About 40 papers for this conference and a large map exhibition have been prepared .

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 from the year 1995 for two periods as the Vice-President of the Association. He was nominated by the Society for the next period 2003 – 2007 to the ICA Presidency.

The Society is represented in most of the ICA Commissions:

- Commission on Education and Training by Assoc.Prof. Vít Voženílek, DSc., PhD.
- Commission on Map Production by Assoc.Prof. Miroslav Mikšovský, MSc., PhD.
- Commission on History of Cartography by Assoc. Prof. Milan Drápela, DSc., PhD.
- Commission on Spatial Data Standards by Prof. Bohuslav Veverka, MSc., DrSc.
- Commission on Theoretical Cartography by Assoc.Prof. Jaromír Kaňok, DSc., PhD.
- Commission on Visualisation and Virtul Environments by Prof. Aleš Čepěk, MSc., PhD.
- Commission on Maps and the Internet by Josef Hnojil, MSc., PhD.
- Commission on Generalisation by Karel Staněk, MSc., PhD.
- Commission on Mapping from Satellite Imagery by Eduard Muřický, DSc.
- Commission on National and Regional Atlases by Tomáš Beránek, DSc., PhD.
- Commission on Planetary Cartography by Petr Buchar, MSc., PhD.
- Commission on Gender and Cartography by Jarmila Váňová, MSc.
- Commission on Cartography and Children by Eva Klímová, DSc.

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 Assoc.Prof. Miroslav Mikšovský, MSc.,PhD.

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 Czech Geographic Society and co-organizes yearly sessions of representatives of all Czech universities teaching geography and cartography. The Society cooperates also closely with the Cartographic Society of the Slovak Republic and organizes with this Society every two years common cartographic conferences.

The Cartographic Society of the Czech Republic issues a newsletter (Digest of the Society) with information on activities of the Society and the ICA. Some special numbers of the Digest serve for publication of chosen cartographic seminar proceedings. The actually reports are published on the web sites of the Society <http://www.czechmaps.info>

2. Český úřad zeměměřický a katastrální (Czech Office for Surveying, Mapping and Cadastre)

Address: Pod sídlištěm 9/1800, CZ 182 11 Prague 8 – Kobylisy

web site : <http://www.cuzk.cz>

e-mail : cuzk@cuzk.cz

The state administration authority is represented by the Czech Office for Surveying, Mapping and Cadastre in Prague. The state administration has about 5200 employees, which are working mainly at cadastral offices . A great deal of cartographers is concentrated in the Land Survey Office in Prague and its branch in Sedlčany (Middle Bohemia). Top specialists in cartography are working in the Research Institute of Geodesy, Topography and Cartography in Zdíby (near Prague).

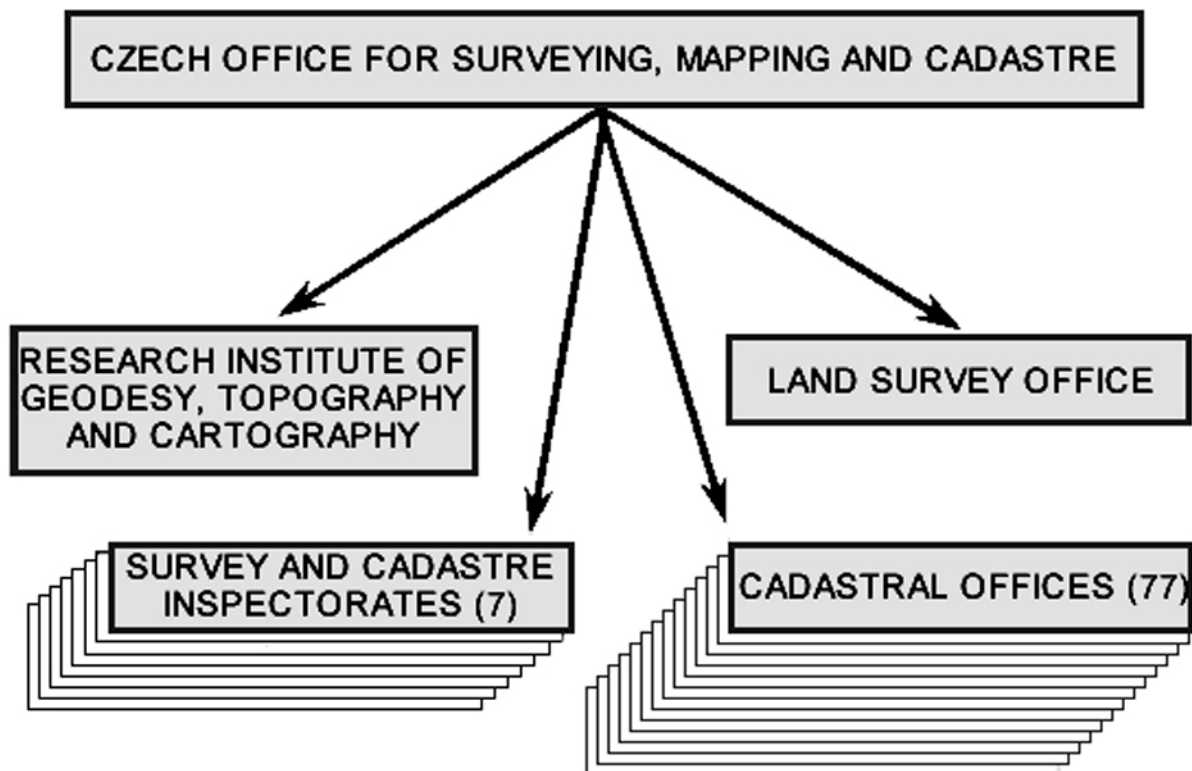


Fig.1 – Structure of the Czech Office for Surveying, Mapping and Cadastre

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

- complete administration of the Cadastre (including legal relations to real estate property),
- maintenance and modernisation of horizontal, vertical and gravity control in the Czech Republic,
- large-scale mapping (cadastral maps, derived 1:5.000 State map),
- medium-scale mapping (Basic map of the Czech Republic 1:10.000, 1:25.000, 1:50.000, 1:100.000, 1:200.000),
- small-scale mapping of the Czech Republic (1:500.000, 1:1.000.000),
- creation of the Fundamental Base of Geographic Data (ZABAGED),
- geodetic surveys and documentation of state boundaries,
- development and maintenance of the Information System of Surveying, Mapping and Cadastre in the Czech Republic,

- standardization of geographical names,
- coordination of research and international cooperation in geodesy, cartography and cadastre.

2.1 Zeměměřický úřad (Land Survey Office)

Address : Pod sídlištěm 9/1800, CZ 182 11 Prague 8 – Kobylisy

The cartographic section of this office is located partly in Prague, partly in Sedlčany (about 60 km southly from Prague). The office is authorized by creation and maintenance of the vector database with attributes ZABAGED.

This database serves for creation of medium-scale maps. The Basic maps 1:10 000 are plotted from the year 1998 from this database automatically using Microsoft program packages. From 2001 are from this database plotted new Basic Maps at scale 1:50 000. Its plotting is running out in the program milieu MGE/MicroStation. The planimetry and altimetry are extracted using half-automatic generalization from ZABAGED, the geographic names are completed from the database GEONAMES. By the end of 2003 will be covered by this new Basic Map 1:50 000 about 20% of the state territory (43 map sheets).

This office offers other digital databases (mostly in raster form) from the whole state territory at scales 1:5000, 1:10 000, 1:25 000, 1:50 000, 1:200 000, 1:500 000 and 1:1 Mio.

2.2 Výzkumný ústav geodetický, topografický a kartografický (Research Institute of Geodesy, Topography and Cartography)

Address : CZ 250 66 Zdíby 98

The main tasks of the institute are basic and applied research in geodesy, surveying and cartography, development and testing of new techniques and software in following items:

- geodesy and geodynamics,
- engineering survey,
- state cadastre of real estate,
- map compilation and editing,
- research and development of Information System of Surveying, Mapping and Cadastre as a source information register for the State Information System of the Czech Republic,
- production of specialized measuring devices for geodesy and cartography,
- activities in state standardization and metrology in the sphere of geodesy and cartography.
- State Metrology Center.
- Branch Information Center and Branch Library.

3. Geografická služba Armády ČR (Geographic Survey of Army of the Czech Republic)

The main tasks of the Geographic Survey of the Army of the Czech Republic is the geographic securing of the weaponed forces of the Czech Republic and the participation on the support of NATO-states according to the NATO Geographic Policy.

The Geographic Survey concentrates its efforts on finishing of creation of the basic vector databases of terrain information with data resolution 10 and 100 meters. The database was completed in 2002 and now is used as well for creation and maintenance of topographic and thematic maps as for implementation to commanding and weapon systems. The survey has for disposal two vector databases : DMÚ25 (Digital Model of the Territory at scale 1:25 000) and DMÚ 200 (Digital Model of the Territory at scale 1:200 000), which are classified and coded according to DIGEST-standards and FACC-catalogues, of an altimetry data DMR 2 (Digital Model of the Relief) with a possibility of its transport into DTED-standards and raster equivalents of topographic and special maps in formats ADRG, event. CADRG. All products are at present systematically updated. For the updating serve first of all aerial event. space photos. The Geographic Survey took part in the years 2000 – 2002 on the project Vector Smart Map (VMap), Level 1. Its part was as well in data collection as in their ellaboration in given standard and creation of CD-records. For using data of this project two technologies of their quick updating and their presentation in a form of paper maps called Operational Planning Graphic (OPG) were developed.

From the view of cartographic production was the Geographic Survey concentrated first of all on finishing of the technology of topographic map creation and updating. These maps are compiled in georeference system WGS84 and UTM-projection. Further it continued in updating and issuing of thematic maps and maps, of which creation the Survey was obliged in the frame of NATO – especially JOG-maps (Joint Operational Graphic) at scale 1:250 000.

By help of NIMA USA were in 2002 constructed and put into operation new printing-works in the Vojenský topografický ústav (Military Topographic Institute) in Dobruška, which were equipped by a modern offset printing-press Rapida. The printing works serve as well for printing of new topographic maps, which are produced fully by digital technologies and use the above mentioned vector databases.

In 2002 began a considerable transformation and reorganization of the whole Army of the Czech Republic, which has to be finished in 2006 and at the end of it will be established a fully professional army. In the frame of this transformation are reduced the weaponed forces of the Czech Republic into a half of the up-to-date stand. This transformation affects the structures of the Geographic Survey. This survey will be combined with the Hydrometeorological Survey into one organization with one commanding centre. In July 2003 merged the historical Geographical Military Institute with the Topographical Military Institute in Dobruška and originated a Geographical and Hydrometeorological Office in Dobruška as a basic working place for main tasks of the whole geographical securing of the army. This office will fulfil the main tasks of the geographical securing especially in the sphere of the whole geoinformatics (compilation and updating of all topographic and thematic maps, updating of geoinformation databases etc.) and on the field of geodetic works, photogrammetry and remote sensing. The office will be ready to fulfil tasks in the field of geographical securing and solution of critical situations as well of military as non-military threats.

The geographical securing of critical situations solution was practically attested by large inundations in the Republic in summer 2002. The survey took part from the beginning of this

natural catastrophe by elaboration of analogue and digital maps used by organization and management of rescue operations by the Emergency Staff of the Czech Republic and its army. After lowering of water took the survey part in preparation of maps for projecting and building of new supplementary bridges.

4. Education of cartographers

The preparation of cartographers on the universities in the Czech Republic for civil purposes is provided at several schools, i.e.:

- for the Master of Science degree on the Faculty of Natural Sciences of Charles University in Prague or on the Faculty of Natural Sciences of Masaryk University in Brno,
- for the Master of Science in Engineering degree on the Faculty of Civil Engineering of the Czech Technical University in Prague or at the Military Academy in Brno,
- for the Bachelor of Science degree on the Faculty of Applied Sciences of the West-Bohemian University in Plzeň, on the Faculty of Natural Sciences of Palacký University in Olomouc and on the Faculty of Natural Sciences of the University in Ostrava.

The Master of Science studying programs are planned out into 10 or 11 terms and are closed by taking of state finals and by viva voce of the dissertation. The study programs of the Master of Science at the universities and Master of Science in Engineering at the technical universities differ principally in the higher orientation of the Master of Science study in the sphere of geography and geoinformatics and the Master of Science in Engineering study in the sphere of geodesy and map production technologies.

The Bachelor studying program is planned out into 6 terms and is closed by state finals and by viva voce of the Bachelor dissertation. After finishing of the Bachelor studying program the graduates have the possibility to continue in the Master of Science or the Master of Science in Engineering studying programs after possible differential exams.

The post-graduate study of cartography (Ph.D.) is provided for the graduates of the Master of Science or Master of Science in Engineering working in the civil sector by the Faculties of Natural Sciences of Charles University in Prague and of Masaryk University in Brno and by the Faculty of Civil Engineering of the Czech Technical University in Prague, for the graduates working in the military sector by the Military Academy in Brno. The doctoral study is either internal or external, its duration is 3 years. The 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.

The graduates of all forms of the university courses can find their job both in state and local authorities /i.e. in organizations of the Czech Office for Mapping and Cadastre, in several ministries, regional or local authorities/ and in the private sector, which nowadays represents about 30 cartographic publishing houses of nation-wide or local importance, in the representation of hardware or software companies etc. The graduates of doctoral studies apart from above mentioned possibilities devote in the further professional career mostly to research or pedagogical activities.

The graduates for the military purposes are prepared at the Institute of Military Land Information of the Military Academy in Brno. This university prepared yearly about 7 – 8 graduates. In the frame of the above mentioned reform of the army will come as well to a

reorganization of the system of military education incl. the Military Academy in Brno. The specializations in the education will be reduced and the future University of the Defence will not prepare specialists in the branch of geodesy and cartography. At present was stopped the admission of new students for this specialization. The military education in geodesy and cartography will be stopped in 2006, when the last students will finish the Academy. New high school graduated members for the geographical survey of the Czech Army will be in the future prepared only on civil universities.

5. Cartographic publishing houses

After 1989 originated in the Czech Republic a lot of new private publishing houses, some of them with large editorial programs, some of them specialized only on chosen kinds of map. The review of these publishing houses follows :

Cartographic publishing houses with large editorial programs :

- **Kartografie Praha, Inc.** - a specialized cartographic publishing house with full range of map products (Czech territory and abroad), school maps and atlases, road maps and atlases, city maps and atlases, tourist maps, multi-media atlases, map guides, geographic encyclopedias, etc.
- **SHOCart., Ltd. Zádveřice (former SHOCart, Ltd., Zlín)** - a specialized cartographic publishing house focused on maps for orienteering, city maps and atlases, maps for winter and water sports, fishing, cycle touristic, road atlases, school wall maps, etc.
- **Geodézie ČS, Inc., Liberec** – a geodetic enterprise with a cartographic publishing section focused on road atlases, city maps and tourist map, maps on CD-ROMs (GEOBÁZE), school atlas of the Czech Republic, school wall maps, etc.
- **Geodézie Brno, Inc.** – a geodetic enterprise with a cartographic publishing section focused on city maps, touristic maps (mostly from Moravia), in co-edition with Geodézie ČS road atlases, road maps and map guides of Europe, etc.
- **P.F.art, Ltd., Brno** – a specialized cartographic publishing house, specialized on maps of regions, road maps and atlases, maps for city transport, railway maps etc.

Cartographic publishing houses with specialized editorial programs :

- **B.A.T. Program, Ltd., Rožnov pod Radhoštěm** – pictorial relief and city maps, maps of cultural and natural heritages of Czech regions
- **BEMA, Praha** – city maps of Prague and other cities
- **CNC – Václav Horák, Praha** - maps for winter sports, mountain cycle touristic, map guides
- **FOLIT, Ltd.** – relief maps
- **Geodézie Krkonoše, Ltd., Harrachov** - geodetic enterprise with a cartographic section, city maps, tourist maps
- **Geodézie On Line, Ltd., Česká Lípa** - city maps, tourist maps
- **Jesenické nakladatelství (JENA), Šumperk** - city maps, tourist maps, map guides, cycle tourist maps
- **Klub českých turistů (Club of Czech Tourists), Praha** – tourist maps 1:50 000 covering the whole state territory
- **M'Plan, Mariánské Lázně** – panoramic maps of Czech towns
- **NEKO, Ltd., Praha** – information booklets and guides for motor sports and touristic completed by maps issued by other publishers

- **ROSY, Mělník** – tourist maps of Krkonoše (Giant) Mountains and some regions in Northern and Western Bohemia 1:25 000
- **STIEFEL, Vyškov** – wall maps of the world, Europe and Czech Republic, wall maps of great towns, historical maps
- **STIEFEL Eurocart, Havlíčkův Brod** – wall maps of the world, Europe and Czech Republic
- **Žaket, Praha** – city maps, infomaps, tourist maps, atlases, orienteering maps

Other firms producing maps and dealing with map sale :

- **Alpy, Lysá nad Labem** – mountain map guides, tourist maps, distribution of maps from Austria (Kompass)
- **Euroverlag, Ltd., Plzeň** – promotional maps of cities and regions
- **GARP, Hradec Králové** – promotional maps of Eastern Bohemia cities and regions
- **Geodis Brno, Ltd.** – orientation charts of cities, orthophotomaps of cities (in co-operation with Kartografie Praha, Inc.)
- **Hauerté, Praha** – advertisement agency, maps of Prague and Prague districts
- **Mach, Úpice** – promotional maps of Eastern Bohemian cities and regions
- **Nord Servis, Opava** – advertising agency, road map of the Czech Republic and city map of Prague
- **T-mapy, Ltd., Hradec Králové** – city maps, co-operation with Kartografie Praha, Inc. and SHOCart Zlín, Ltd.
- **Topograf, Ltd., Praha** – cartographic works for Klub českých turistů and for the Czech Army)

6. Periodicals

- **Geodetický a kartografický obzor (Geodetic and Cartographic Review)**
Address (redaction) : Pod sídlištěm 9, CZ 180 00 Prague 8-Kobylisy
Common journal of Czech and Slovak geodesists and cartographers issued by the Czech Office for Surveying, Mapping and Cadastre and by the Office for Geodesy, Cartography and Cadastre of the Slovak Republic. Founded 1954, 12 editions yearly.
- **Zeměměřič (Land Surveyor)**
Address (redaction) : Radlická 2, 150 23 Prague 5
web site : <http://www.zememeric.cz>
Journal of geodesy, cadastre, cartography and GIS issued by a private publishing house Klaudyán Praha, Ltd. Founded in 1993, 12 editions yearly.

