Czech Office for Surveying, Mapping and Cadastre

Annual Report 2009

Content

Introduction

State administrative bodies of the Cadastre of Real Estates managed by the Czech Office for Surveying, Mapping and Cadastre provide state administration in the area of registration of land parcels represented by the Cadastre of Real Estates. Apart from this they ensure performance of surveying activities in the public interest including particularly administration of basic geodetic control including the network of GNSS permanent stations, running the Fundamental Base of Geographical Data, publishing the set of the Basic Maps of the Czech Republic, surveying of the state border and managing of the Central Archives of Surveying, Mapping and Cadastre.

Real Estates transactions were influenced by the financial crisis in 2009. In contrast to previous years, when the number of submissions for the registration of property right and other material rights have been yearly increasing of 10 % and more, in 2009 the decrease of 11 % occurred, thus approximately to the level of 2007. Cadastral offices have received 674 090 proposals for registration of rights and completed 689 920 of them, so that the average time for completing the registration further decreased in 2009. In Prague, where long terms for registration in the past complicated real estate businesses, were error-free submissions completed in shorter time than within one month and it is possible to say that the submitters were mostly satisfied with provided service. Registration based on record and notation reached 1 311 thousands in 2009, which represents yearly increase of 10 %. Only the number of records and annulments of notations for seizure reached 757 000.

Yearly increase in the number of requests for outputs from the cadastre was solely realized by e-services of the Remote access, which satisfied even 68 % of total 4 million requested information from the cadastre of real estates. On the other hand the number of requests at desks in cadastral offices decreased on 14 %, whilst the number of provided outputs via verifiers (CzechPoint, notaries) increased on 28 %. It is the result of long-term conceptual steps decreasing the costs, which enables managing of present governmental economic provisions without negative influence on activities of cadastral offices. Accepted provisions speeding up the digitalization of cadastral maps took effect in 2009. The number of cadastral districts with digitized cadastral maps increased of 6 % and the conditions were created in such a way that they lead to further speeding up the digitalization in 2010.

In 2009, fulfilment of the long-term program of constructing a national geoinformation infrastructure, provided by the Czech Office for Surveying, Mapping and Cadastre continued. Czech network of GNSS permanent stations, which allows fast and precise positioning in the whole territory of the state with cm accuracy thanks to permanent reception of signals of global navigation system, has been interconnected with similar networks of Austria, Germany, Poland and Slovakia in the frame of the European project EUPOS. Map products are provided via Geoportal of the Czech Office for Surveying, Mapping and Cadastre in the form of web services, so that users can download them direct from the Geoportal in the necessary amount - they are not forced to copy the updated data. In 2009 the project of acquisition of new terrain model of the Czech Republic has been launched in cooperation with the Ministry of Agriculture and Ministry of Defence. With help of airborne laser scanning data of the earth surface are collected based on which the high precision terrain model will be produced so as the model of land cover depicting buildings and permanent plants. Resulting products will serve under others to the needs of state defence and for the flood-protection projects.

The annual report of the Czech Office for Surveying, Mapping and Cadastre provides more detailed overview of important activities and their results, provided by cadastral offices, Land Survey Office, survey and cadastral inspectorates and the Czech Office for Surveying, Mapping and Cadastre.

Karel Večeře
President of the COSMC

1. Surveying, Mapping and Cadastre Sector in the Czech Republic

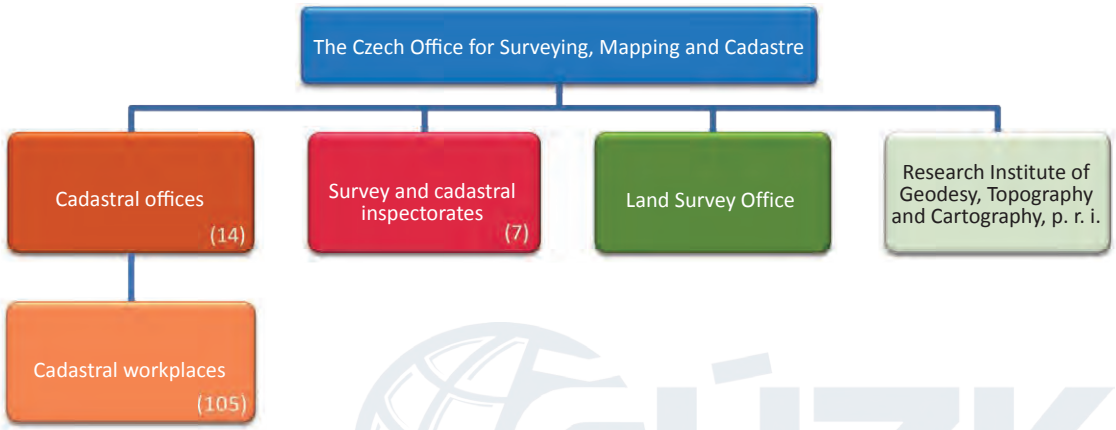
Cadastre of Real Estates

The Cadastre of Real Estates of the Czech Republic is a set of data about real estates in the Czech Republic, including their inventory and description and their geometric specification and position. Parts of it are records of property and other material rights and other legally stipulated rights to these real estates. The Cadastre of Real Estates continues to a long tradition and inventories of ownership and land registrations in the territory of the Czech Republic, with roots going back to the 14th century. The current Cadastre of Real Estates is integrated in the Information System of the Cadastre of Real Estates (ISKN) and represents one of the fundamental registers of state administration.

Land Surveying Activities

The main goal of land surveying activities in the public interest provided by the surveying, mapping and cadastre sector is to provide both professional users and wide public with requested geographical products, data and services from the geodetic control, Fundamental base of geographical data, state map series, orthophotographic representation of the Czech Republic and the Central Archives of Land Surveying and Cadastre.

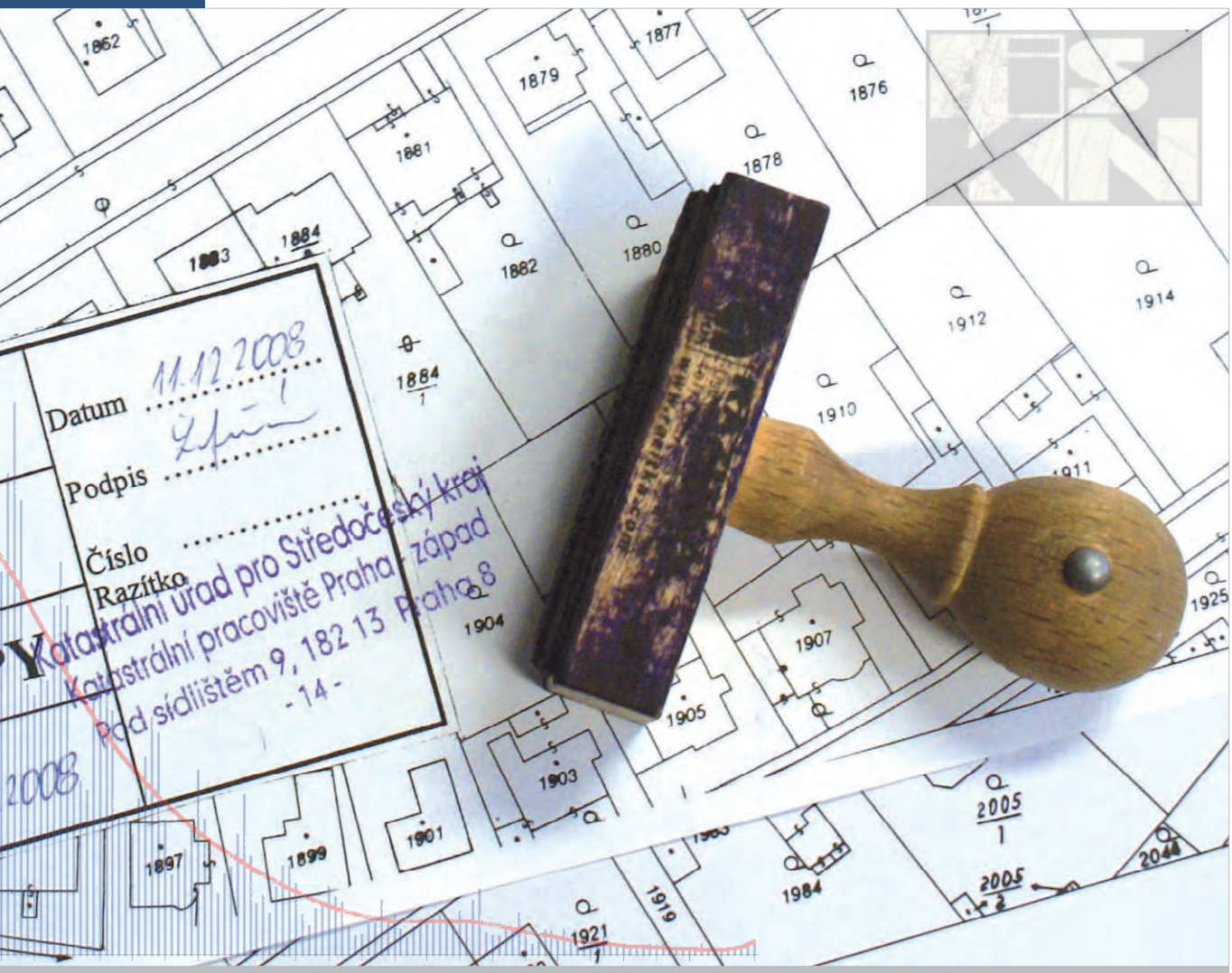
Organizational Structure of the Branch of Land Surveying and Cadastre



Organizational Structure of the Sector

The Czech Office for Surveying, Mapping and Cadastre (COSMC) governs 14 regional cadastral offices, which have 105 workplaces in larger towns and execute state administration of the Cadastre of Real Estates, it further manages the 7 survey and cadastral inspectorates that control cadastral offices and supervise some commercial activities, whose results are applied to the Cadastre of Real Estates and state documentation funds and the Land Survey Office (LSO), which focuses on other land survey activities that are provided in the public interest. COSMC is also the founder of the Research Institute of Geodesy, Topography and Cartography, p.r.i.

Administration authorities for the cadastre of real estates and land surveying were set up by Act No. 359/1992 Coll. on land surveying and cadastral bodies, which also specifies their material and territorial competence. In 2009 2 small cadastral workplaces were cancelled in Horažďovice and Moravský Krumlov. Instead of cadastral workplaces only contact points are located there ensuring acceptance of submissions and provision of information from the cadastre of real estates.



2. Administration of the Cadastre of Real Estates

First records concerning the land inventory were collected for tax purposes. The effort for unified tax policy was tangible even in 1022, when the Czech prince Oldřich from the family of Přemyslovci set up the hide tax. Despite the area of the estate taking for the tax basis was not accurate, we can consider it as the first step towards to the development of the cadastre of real estates (real estates records) as a fiscal tool.

The nobility started to secure private rights to property by recording in Land records at the start of the 14th century. That was the start of the recording of rights to real estate here. Later other records of real estate and cadastres were set up, serving predominantly for more effective and fair tax collection.

The foundations of today's modern Cadastre of Real Estates were laid by issuing a supreme patent of the Austrian Emperor Franz I on 23. 12. 1817, about land tax and land surveying. Its basis was a precise inventory and geodetic measurement of all land, a so-called Stable Cadastre. Most cadastral maps of the territory of the Czech Republic are today still derived from the survey documentation of the Stable Cadastre. Such a cadastral maps (usually at a scale of 1:2 880) are available for about 62 % of the territory of today's state.

Current Czech Cadastre of Real estates was established in 1993 and integrates the function of Land Registry Book (registration of rights) and former Cadastre of Lands (records of real estates) into one tool.

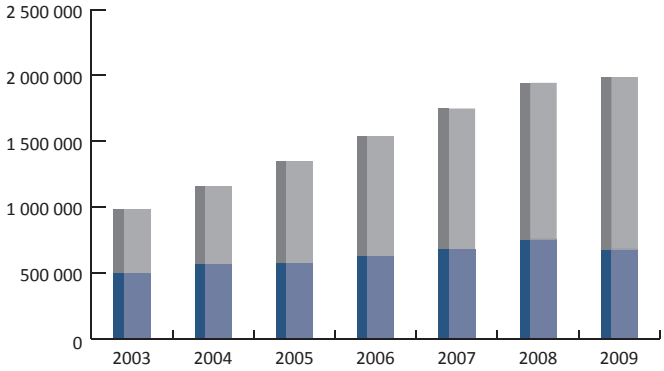
Cadastre of Real Estates in the Czech Republic is administered with help of the information system. The Information System of the Cadastre of Real Estates (ISKN) is an integrated information support system for state administration of the Cadastre of Real Estates and for providing user services of the cadastre. It was implemented in 2001. The new system increases the data quality, their accessibility and reliability and offers the option of connecting to other basic registers of state administration. Data are administered in local databases and replicated in roughly 2-hour intervals in the central database by means of the WAN department network. Thanks to this functionality it is possible to search up-to-date data of the cadastre throughout the whole Czech Republic by means of the Internet service „Remote Access to the Cadastre of Real Estates".

Since September 2001 all historical data of descriptive and spatial data were stored, so it is possible to assemble data into required outputs on historical data (time development). Since June 2006 are the electronic outputs signed by the electronic mark and have the same significance as the public documents issued by cadastral workplaces.

Main Tasks of Cadastral Offices

The main task of cadastral offices is recording of material rights to real estates and other data by means of entry or registration and record of notations. Total number of completed records increased yearly almost about 44 000.

Development of the Total Number of Completed Proceedings on Entry and Record

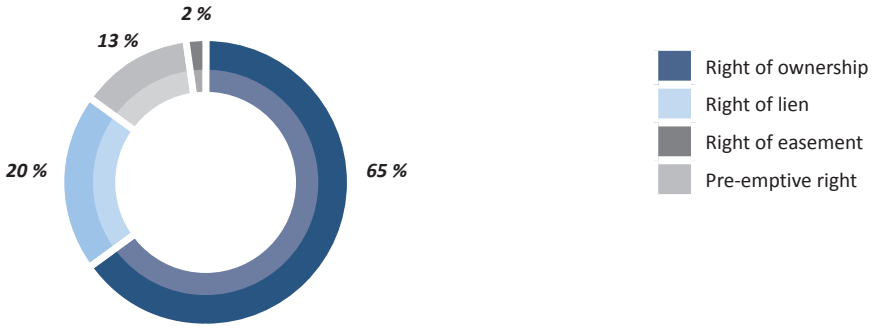


Year	2003	2004	2005	2006	2007	2008	2009
Proceedings on entry	498 229	572 296	581 025	626 948	695 564	766 305	689 920
Proceedings on record	485 161	587 824	768 252	910 038	1 064 336	1 190 566	1 310 883

Entries of Proprietary Rights into the Cadastre of Real Estates

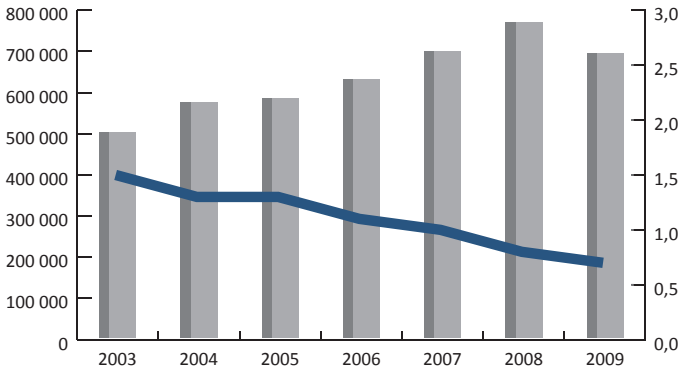
Entry in the Cadastre of Real Estates records of property rights to real estate (right of ownership, right of lien, right of easement, pre-emptive right with material effect) and other rights stipulated by the cadastral act. In administrative proceedings the cadastral office assesses deeds and other documents, decides on permitting entry and, based on these decisions, records the rights in the Cadastre of Real Estates. Property rights to real estates are created by registering in the Cadastre of Real Estates with legal effect on the date of application for entry.

Share of Single Types of Registration of Rights in the CRE



In 2009 brought a decrease in accepted proposals for entries of rights of 11 % compared to 2008 – a total of 674 000. Proposals for entry of proprietary rights were represented by 65,0 % of the total number, rights of lien concerned 20,5 % of proposals, 13,0 % of proposals concerned easements and 2 % pre-emptive rights with material effects. During years the proportion of entry of rights of easement has increased most (3 %). The decrease in proportion of registration of right of lien (2 %) shows the decrease of mortgages as a consequence of development of financial crisis, whereas the decrease in the number of mortgage registration is significantly lower than the decrease in the number of provided mortgages. The reason is that a lot of mortgage registration in 2009 was connected with the refinancing of pre-provided mortgages.

Development of the Total Number of Completed Proceedings on Entry



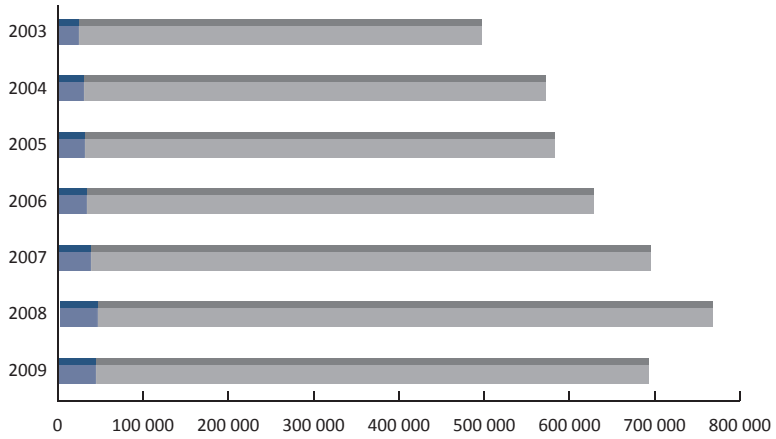
Year	2003	2004	2005	2006	2007	2008	2009
Number of completed proceedings	498 229	572 296	581 025	626 948	695 564	766 305	689 920
Average time for settlement (in months)	1,5	1,3	1,3	1,1	1,0	0,8	0,7

Reduction in number of proposals for registration of rights positively influenced the submitters´ waiting time for their requests processing. Average time for decision on the request was reduced to 14 days in the Czech Republic, total time from submission of application to registration the right into the cadastre decreased to 20 days cf. previous chart.

From the total number of yearly requests for entry, 94 % entries of rights are approved, the rest of administrative proceedings are refused or interrupted. In 2009 the total number of refused entries mildly decreased, as you can see in chart bellow, however the percentage of incorrect requests at the total number of received requests for entries is growing, which implies slight degradation in quality of delivered requests for entry of rights. This development is boosted by the low fee for submission of the proposal for registration of right in comparison to high prices of legal services. Submitters, who are not in a hurry with the real estate transaction, prefer drawing up a deed by themselves expecting the cadastral office to indicate them possible defects during administrative proceeding. In case the defects are irremovable they take the proposal back or wait for its refusal and afterwards submit new one without marked defects. Cost of such a proceeding is only administrative fee of 500 CZK in contrast to significantly higher costs for appropriate legal services. The share of incorrect requests for entry which has to be corrected during the proceeding and which means prolongation for the proceeding is high in the long term.

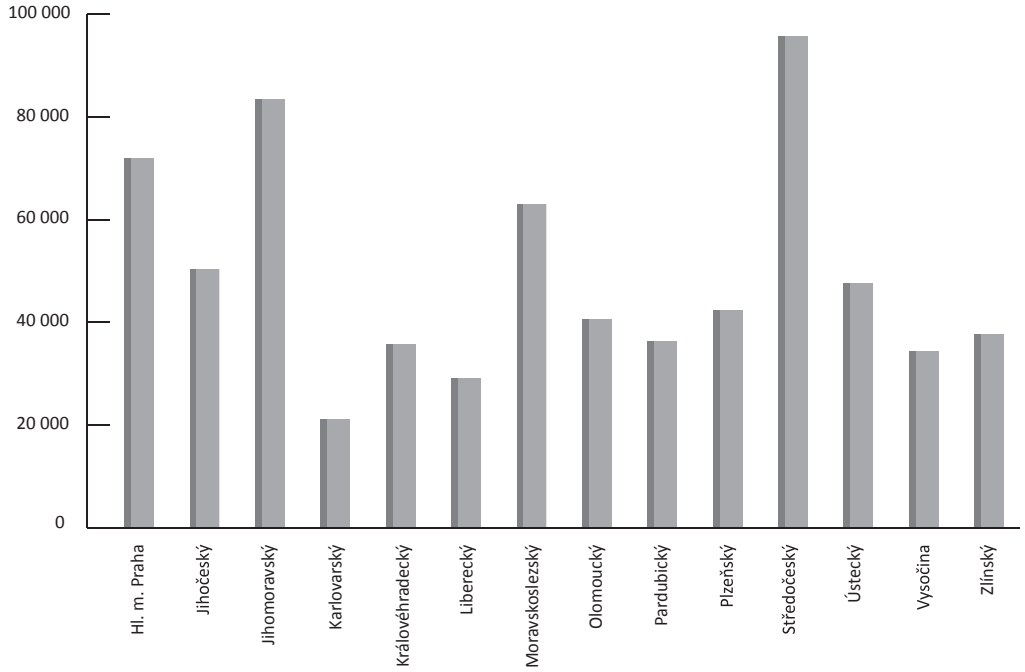
Development of time for processing of requests for entry in the Cadastral Office for Prague-City was very positive in 2009. In total figures for 2009 the average time for proceeding of all requests reached 1 month, which represents reduction on third of the time in comparison to 2008. In other regions the time limit for proceeding varied from 11 to 26 days, as it is evident in the chart on the following page.

Development of the Total Number of Approved and Refused Entries



Year	2003	2004	2005	2006	2007	2008	2009
Number of approved entries	471 428	541 162	550 447	593 672	655 818	722 123	648 167
Number of refused entries	22 528	28 619	29 626	31 829	36 799	44 020	42 584

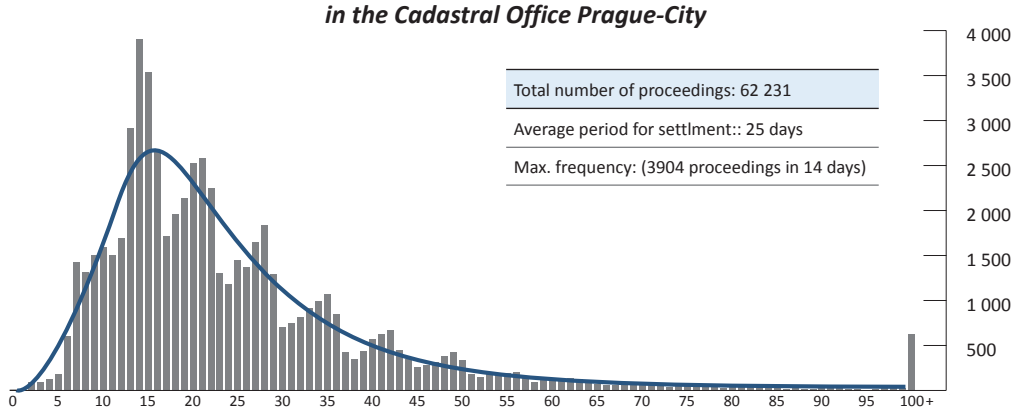
Number of Entries and Supposed Duration of Proceedings in Single Regions of the Czech Republic



Region	Hl. m. Praha	Jihočeský	Jihomoravský	Karlovarský	Královéhradecký	Liberecký	Moravskoslezský
Number of procee-dings in the year	71 993	50 406	83 579	21 198	35 676	29 097	63 088
Average period for settlement (in days)	31	25	17	19	23	23	13
Region	Olomoucký	Pardubický	Plzeňský	Středočeský	Ústecký	Vysočina	Zlínský
Number of procee-dings in the year	40 707	36 301	42 365	95 784	47 715	34 361	37 650
Average period for settlement (in days)	21	16	19	21	11	26	18

Following chart of dispersion of period for entries in the Cadastral Office for Prague-City depicts the proposals delivered and completed in 2009 and proves, that the highest number of applicants was satisfied within 14 days from the delivery of the proposal for entry. Legal stated time 30 days for decision on proposal and 30 days for realization of the change into the cadastral documentation, have not been exceeded by any cadastral office yet. Dispersion visible in figure bellow is caused both by registration time being cut down during 2009 and by the significant number of uncompleted sub-

Dispersion of Periods for Entry Proceedings between 1. 1. 2008 and 31. 12. 2008 in the Cadastral Office Prague-City



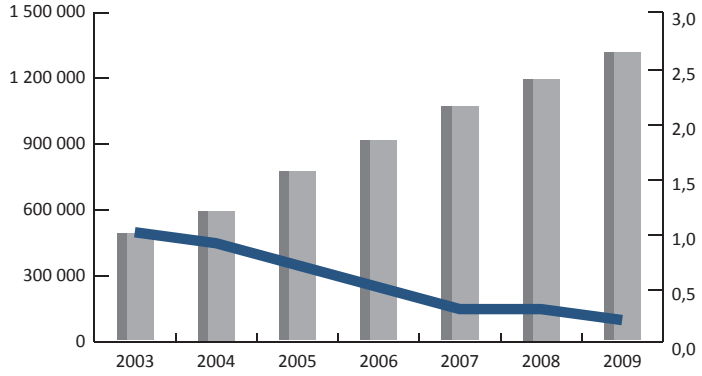
missions, where the cadastral office has to call upon the submitter to complete the proposal. Therefore it can be simply said, that the submitters of error-free proposals can expect completing of their submission practically for 2, maximum 3 weeks, even in Prague.

Registering of Rights by Record, Notation and Registering of Other Data

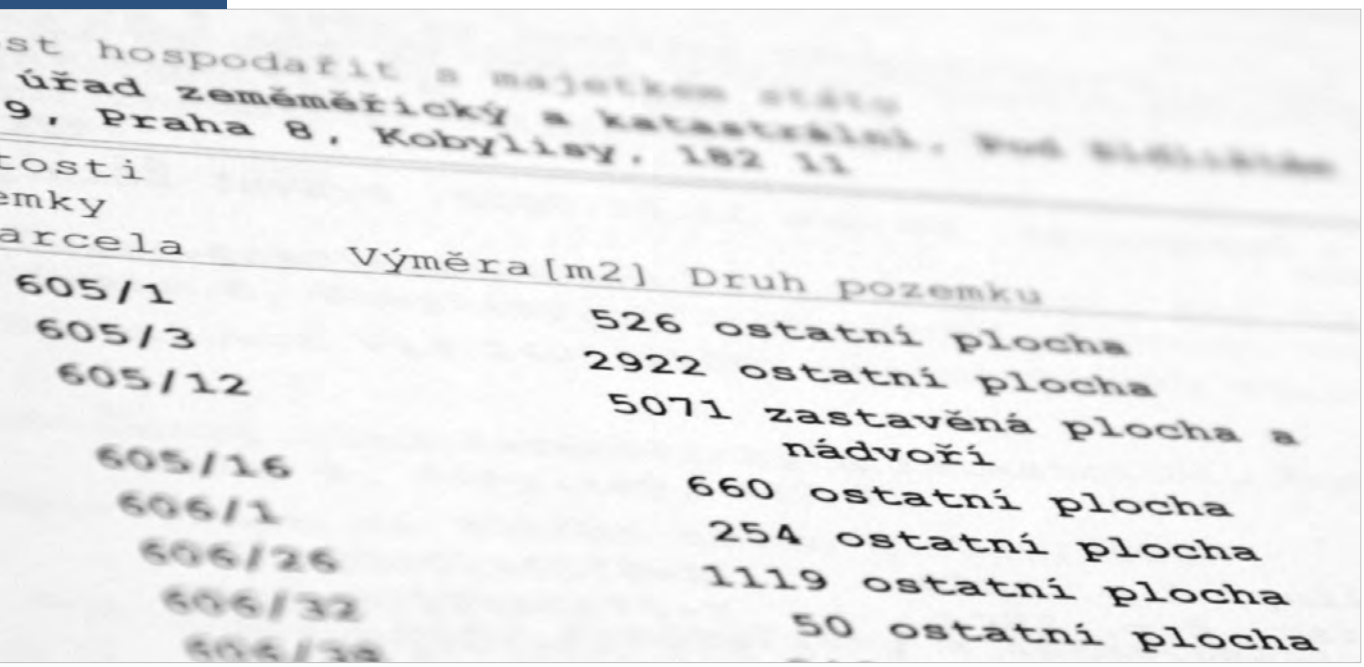
Cadastral offices perform also other registrations into the Cadastre of Real Estates, namely registering by record. This is the way how to register the rights to real estates established by decision of other organizations of state administration, by decision of courts or given by the law, by knocking down of the auctioneer in the public auction or how to annul extinguished rights of lien and easements. Further types of registrations are the registrations by notation. Notations serve to denotation of facts or relations relating to the real estate or a person, which are solely informative. Following data are recorded into the Cadastre of Real Estates regarding e.g. change of land type, real estate protection etc.

In 2009 the enormous growth in the number of submissions for registration by notation in particular went on. Whilst 1 166 000 submissions for registration by record and by notation were delivered to cadastral offices in 2008, in 2009 the number of these submissions exceeded 1 291 000, which represents an annual growth of more than 11 %. The cardinal influence on the growth of these requests had the records and annulments of property by seizure of assets, which represented more than 60 % out of total number of registrations by records and notations, which cadastral offices carry out without delay. In total 1 310 000 submissions for registration by record were handled and the average period for completing has shortened from 8 days in 2008 to 5 days in 2009. In the end of 2009 the change of execution order being in force from 1. 11. 2009 positively influenced the number of registration by notation on writ of execution, which has started to decrease significantly.

Number of Completed Submissions for Registering of Rights by Record and Notations



Year	2003	2004	2005	2006	2007	2008	2009
Number of completed proceedings	485 161	587 824	768 252	910 038	1 064 336	1 190 566	1 310 883
Period for settlement in months	1	0,9	0,7	0,5	0,3	0,3	0,2

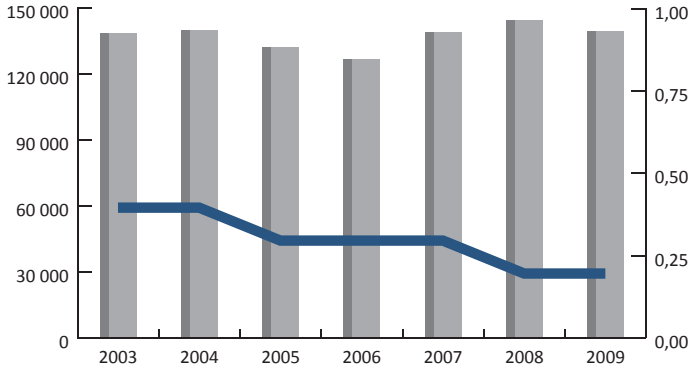


Certification of Survey Sketches

Survey sketches represent land parcel division, position of a building or change of its external outline in the cadastre of real estates and some other changes shown in cadastral maps. They are made solely by private geodetic firms. They are important documentation for maintaining of cadastral maps, thus every survey sketch must be legalised by an authorised surveyor who is authorised to certify the results of surveying activities by the COSMC under Section 14 of Act No. 200/1994 Coll. on surveying and mapping.

The number of surveying sketches has been very high in the Czech Republic for a long time, since there are transformation processes constantly occurring, whose result or partial step is land division (agricultural restitution, registering property of municipalities, sale of state farming land etc.). In 2009 the decrease occurred in the number of requests for certification of survey sketches by the cadastral offices on 4 % in accordance to 2008. The average time for checking and certification of survey sketches by the cadastral offices shortened to 6 days.

Development in the Number of Requests for Certification of Survey Sketch

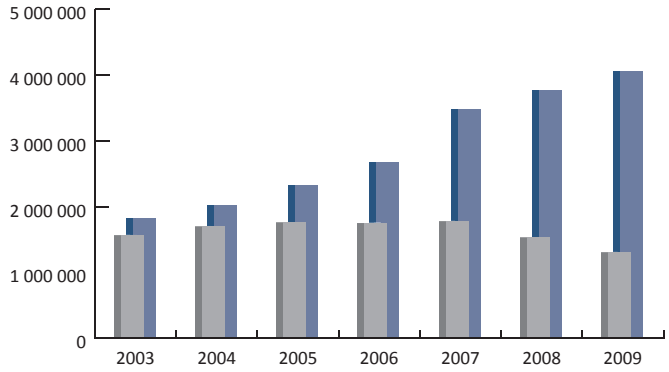


Year	2003	2004	2005	2006	2007	2008	2009
Number of requests for certification	138 537	139 994	132 309	126 746	139 198	144 744	139 576
Average period for settlement in months	0,4	0,4	0,3	0,3	0,3	0,2	0,2

Provision of Information from the Cadastre of Real Estates

Individual workplaces of cadastral offices provide clients with information from the cadastre over the counter during office hours. Outputs from the cadastre contain both technical data on real estates and data on legal relations. In addition, copies of cadastral maps, copies of documents stored in document funds, copies from historical registries (Land Registry Book, Cadastre of Lands) and some other outputs are provided. Since 2001 Internet services have been available allowing outputs from the cadastre by remote access, without visit to the cadastral office. These services satisfy today more than a half of continually growing demand for information from the Cadastre of Real Estates. Requests for provision of information at the counters of cadastral offices in 2009 decreased yearly on 14 %, while the total increase of satisfied requests for information from the cadastre of real estates including remote access was 8 %. Therefore in 2009 68 % of applicants for information from the cadastre of real estates were satisfied by electronic services. This progress was fundamentally influenced by the development of services on contact points of public administration Czech POINTs, which issued 371 000 outputs from the cadastre of real estates in 2009.Further influence of significant importance is growing orientation of users towards acquiring information by means of remote access via internet services, which have started to use not only banks and real estate agencies, but also municipalities and regional authorities. On 1. 7. 2006 notation of statements from the Cadastre of Real Estates with an electronic mark began. Such statements are considered as public documents. More in the chapter Electronic services of COSMC – Remote access.

Development in Number of Provided Information:
Over the Counter (Number of Requests), Electronically (Number of External Outputs-Reports)



Year	2003	2004	2005	2006	2007	2008	2009
Information provided in cadastral offices	1 569 246	1 698 690	1 757 902	1 756 365	1 780 972	1 530 412	1 308 748
Included information provided electronically	1 824 000	2 020 000	2 328 600	2 669 419	3 486 033	3 760 788	4 055 402

Digitalization of the Cadastre of Real Estates

Digitalization of the real estates registry is a vital step for effective operation and administration of the Cadastre of Real Estates. Cadastral maps in digital form are fundamental databases for administration and decision-making about the area. They are strategically important as a reference basis for creation of further maps, information systems and applications relating to the territory as f.i. digital technical maps, spatial plans, price maps, monitoring and development of technical and traffic infrastructure, environment and others. Digitalization of the file of descriptive information of the cadastre of real estates was realized in years 1993 – 1998, in the frame of which the cadastral database was completed with missing data on land parcels consolidated into large agricultural and forest areas, information on titles, some information on owners and data on agricultural land quality. In the course of this process almost 40 million entries were added to the database and its volume thus doubled. Digitalization of the file of descriptive information of the cadastre created basic conditions for the transition to a higher version of the information system equipped with remote access to data in the central database of the cadastre.

Digitalization of cadastral maps started in connection with the completion of digitalization of descriptive information of the cadastre. The capacities that cadastral offices could give to map digitalization were very limited in view of the growth of volume of other activities. Therefore only 2 to 3 % of the total cadastral territories in the Czech Republic were transformed into digital form yearly. Decrease in number of completed cadastral districts in 2004 - 2007 is influenced in particular by the reduction in number of employees (2 % yearly in 2004 - 2006). In 2009 accepted provisions for speeding up the digitalization resulted in increase of number of further digitized cadastral districts by 6 %. Attention was focused even henceforward on cadastral maps of cities and larger municipalities, where higher quality documentation is usually available and where are more transactions on the property market and development objectives realized. Digitalization of cadastral maps in such localities is nevertheless more time consuming than in rural areas.

Development of Digitalization of the File of Geodetic Information of the Cadastre (FGI): 2000-2009

Year	Units	Till 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Digitalization completed	c.d.	1 049	440	453	543	383	314	279	263	313	763
Total in digital form	c.d.	1 988	2 428	2 881	3 424	3 807	4 121	4 400	4 663	4 976	5 739
Yearly growth from the total of 13 027 c.d.		8,1 %	3,4 %	3,5 %	4,2 %	2,9 %	2,4 %	2,1 %	2,0 %	2,4 %	5,9 %
% from the total number		15,3 %	18,6 %	22,1 %	26,3 %	29,2 %	31,6 %	33,8 %	35,8 %	38,2 %	44,1 %

Results of Digitalization in 2009

At 31. 12. 2009 the cadastral map was available in digital form in 5 739 cadastral districts, which represents 44 % of the total number of 13 027 cadastral districts of the Czech Republic. Revision of cadastral documentation was completed based on the results of land consolidation projects, by new mapping and by adaptation of the set of geodetic information, which means digitalization of existing cadastral maps included transformation into the S-JTSK (System of Unified Czech /Slovak Trigonometrical Cadastral Net) coordinate system to DCM in 763 cadastral districts.

In comparison to the year 2008 the digitalization speeded up nearly 2,5 times. Cadastral offices were reinforced by 300 employees in 2009 in comparison to 2008, which were trained in 2009 and afterwards participated in digitalization of cadastral maps. Their productivity could not fully occur in 2009 according to their step-by-step employee orientation, which resulted together with significant shortfall in completing land consolidation into lower number of digitized cadastral districts than planned 955 in 2009.

The private sector has been invited to take part in the digitalization of cadastral maps in the form of public tenders for selected activities. Public tenders were launched as open proceeding for so called framework agreement followed by implementing agreements for single localities. To define range and contract prices the catalogue pages for four basic renewal types are used. Cadastral offices made 75 implementing agreements for digitalization of cadastral maps with 40 land survey companies and by 31. 12. 2009 they took over the results in the amount of 77,4 million CZK.

Plan of Digitalization of Cadastral Maps in Further Years

Approved budget for 2010 creates sufficient conditions for carrying on intensive digitalization of cadastral maps. Economy measures in the budgetary chapter No. 346 Czech Office for Surveying, Mapping and Cadastre were realized in such a way that they do not negatively influence the process of digitalization. In 2010 the number of cadastral districts covered with digitized cadastral map is planned to be 8,5 % of the total number of all cadastral districts in the Czech Republic. Maximal increment of digitalization at the level of 10 % from the total number of all cadastral districts should be reached in years 2011 to 2013.

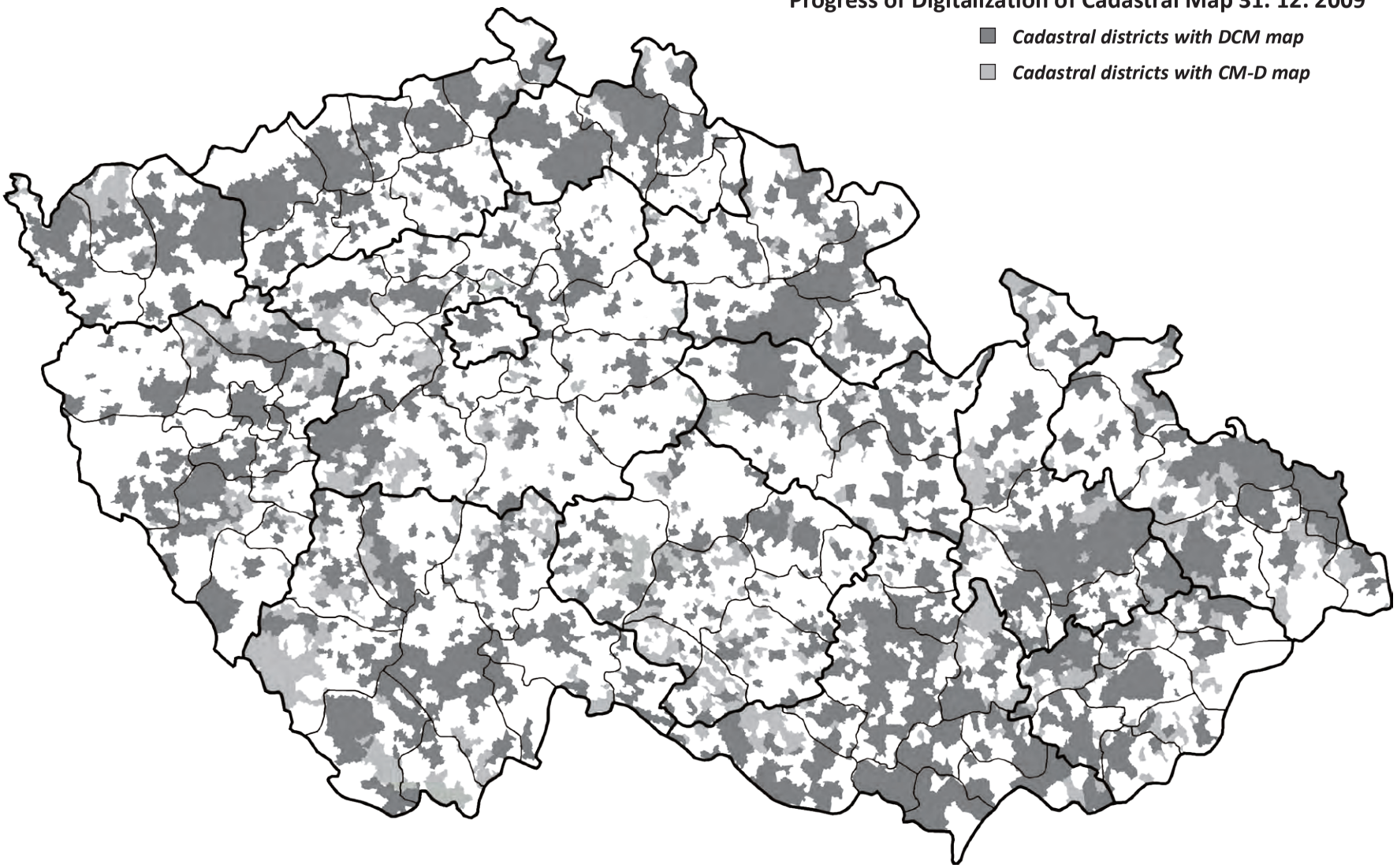
Schedule of Digitalization of FGI: 2009 – 2015

Year	1997 - 2009	2010	2011	2012	2013	2014	2015
Proposal of the number of cadastral districts for map digitalization	-	1 386	1 322	1 300	1 300	1 200	1 100
Total number of cadastral districts with cadastral map in digital form	5 739	6 835	8 127	9 427	10 727	11 927	13 027
Yearly growth in % out of total number	3,7 %	8,4 %	9,9 %	10,0 %	10,0 %	9,2 %	8,4 %
(% out of total number)	44,1 %	52,5 %	62,4 %	72,4 %	82,3 %	91,6 %	100 %

The actual course of adaptation of cadastral maps into digital form is negatively affected on the one hand by the necessity of completing cadastral maps of parcels consolidated in the course of collectivisation into large land blocks, today registered in a simplified manner using the historical map fund of former registrations, and on the other hand by the very urgent problem of resolving the consequences of unfinished allotment and consolidation proceedings arisen after the second world war. Whilst the removal of parcels registered in a simplified manner is a technical problem, resolution of the consequences of unfinished allotment and consolidation proceedings is a problem with serious legal aspects. Land consolidation, which is the most effective tool for the solution of relations in the area as a whole, because it provides digital cadastral map together with resolution of ownership relations i.a., proceeds however very slowly due to insufficient financial support.

To fulfil the above stated plan it is necessary to finance the task in accordance with the government decree No. 871 on provisions speeding up the digitalization of cadastral maps from 25th July 2007. At the same time it is necessary to carry on the land consolidation to clarify the reconstruction of allotments and completing of redistribution step-by-step to 2015 in the cadastral districts with uncompleted allotment and redistribution proceedings.

Until the digital cadastral map is for disposal in all cadastral districts, users´ needs are covered by the raster data obtained by precise scanning of cadastral maps and maps of former land registries. Raster data of cadastral maps with current content are being collected continuously upon the stated requests. Currently these maps are for disposal via application Remote Access into the Cadastre of Real Estates on the whole territory of the Czech Republic.


Progress of Digitalization of Cadastral Map 31. 12. 2009
Cadastral districts with DCM map
Cadastral districts with CM-D map

3. Land Surveying Activities in the Public Interest

It is typical at present for land surveying activities in the public interest to utilize new technologies for data collecting, systematic data processing including their storage into the database systems and making them fast available to users via internet applications. In 2009 main focus was given to creation of the conditions for trouble-free implementation of the Directive of the European Parliament and Council 2007/2/ES, on establishing the Infrastructure for spatial information in the European community (INSPIRE).

In the area of geodetic control the effort was focused on interconnection of the Czech network of permanent stations GNSS (CZEPOS) with border stations of neighbouring states and on cooperation with private land surveying subjects regarding error detection on points and services provision in the frame of CZEPOS network, in particular. Since further development of geodetic control is impossible without connection to European terrestrial reference system ETRS89, preparation for implementation of new realization of its frame in the CR was in progress last year.

Huge effort has been given to stabilization of production system of the Fundamental base of geographical data of the CR (ZABAGED®) and to completion of integration of the database of geographical names (Geonames) into it, because ZABAGED® has become the basic source of information for

geoinformatic systems and for map production with still growing demands on its quality and regular updating. Cooperation with external administrators on ZABAGED® updating was further deepened.

Further important activity was processing of the inter-branch project of COSMC, Ministry of Agriculture and Ministry of Defence of the CR, regarding the laser scanning and processing of elevation data from the territory of the CR, which should result in some types of elevation territorial model of the CR and the model of land cover. Realization phase of the project will be launched in March 2010.

In 2009 development and new technology solution for cartographic production have been going on under the conception of integrated information cartographic system, public map services have been launched and geographical data provision via Geoportal has been extended.

Geodetic Control

The Land Survey Office performs administration of geodetic control of the Czech Republic and decides on the localisation, transfer or removal of survey marks of basic geodetic control. At present the importance is given to the modern part of geodetic control represented by the Czech network of permanent stations GNSS for positioning (CZEPOS) apart from classic geodetic control represented by minor control.

In 2009 the geodetic control development was directed at activities leading to new realization of European terrestrial reference frame ETRF89 and system of the Unified Czech /Slovak Trigonometrical Cadastral Net S-JTSK/05 on the territory of the Czech Republic. Dynamic maintenance of geodetic minor control was launched last year based on the communication with users - mostly private surveyors, who send the reports on damages or changes on points of minor control via internet.

Maintenance and Documentation of the State Border

The Land Survey Office carries out surveying activities for maintenance and verification of state borders after agreement with the state border documentation administrator, which is the Ministry of Interior of the Czech Republic. The actual performance of surveying activities, their scope and specific material content is different for state borders with individual neighbouring states. They are completely subject to tasks arising from international agreements on state borders and their documentation, which is administered in agreement between both partners. The international border commission coordinates processing of documentation for maintenance, signalling and verifying state borders and updating border documentation. From the point of view of surveying activities the current period can be described as a period of transformation and updating of state border documentation from a graphical to a digital form and specification of positioning coordinates of all break points of the state border.

Fundamental Base of Geographic Data (ZABAGED®)

ZABAGED® is a database set of selected geographic, topographic and geodetic data from the whole territory of the Czech Republic. ZABAGED® creates the continuous digital geographic model of the territory matched by its accuracy and detailed representation of geographic reality to the Base Map of the Czech Republic 1:10 000 (ZM 10). The content of ZABAGED® represents 116 types of features represented by vector graphic and descriptive part with more than 350 types of descriptive and qualitative attributes. Selected types of features (hydrography, communications) content in its descriptive part the identifiers (integration keys) for the connection to the databases of their administrators. The vertical component represented by spatial 3D sets of contours is administered in the separate file system. In the area of updating the main goal was in 2009 to stabilize the ZABAGED®´s production system, reach the areal data updating of 1/3 of the Czech Republic yearly and deepen the cooperation with partner organizations to ensure future continuous ZABAGED® updating. The content of ZABAGED® has been enlarged on definition points of address places and definition points of administrative units obtained from the Czech Statistical Office (ČSÚ). The work on provision of high-quality street names´ implementation and improvement of the road network structure went on. Technology of the ZABAGED® production system was completed with the possibility to administrate and update the Base dataset of administration and cadastral boundaries. The integration of ZABAGED® and Geonames has started on the application and data level.

Altimetry

Altimetry data of the Czech Republic territory, administered and provided in the ZABAGED® frame in the form of altimetry contour line model, has been updated in 2009 in the range of 1400 map sheets of BM10. To facilitate the application of the altimetry model in geographical information systems this model is being alternatively transformed into the point grid sized 10x10 m and as such provided to users. Land Survey Office has taken up the preparations for the project of new altimetry mapping of the territory of the Czech Republic with use of the technology of airborne laser scanning in 2009. In December 2008 the Agreement on cooperation on creation of CR altimetry digital databases was signed between the Czech Office for Surveying, Mapping and Cadastre, the Ministry of Agriculture and the Ministry of Defence. Based on this agreement the airborne laser scanner was acquired, settled into the photogrammetric army airplane and necessary data for test operation of the technology for new altimetry model processing were taken. Processing line has been built at the workplace of Land Survey Office in Pardubice and in the Military geographic and hydrometeorological office in Dobruška.

State Map Series

State map series represent sets of basic and thematic map series produced by the Land Survey Office and the Czech Office for Surveying, Mapping and Cadastre. The basic state map series is a cartographic work with a basic generally usable content, coherently showing the territory according to unified principles, created and issued in the public interest. The sources of topographic content of the basic state map series are cadastral maps, ZABAGED® and Geonames, in particular.

The basic state map series at a scale of 1:5 000 is provided both in digital and printed form and is available in three versions. The former state maps 1:5 000 – derived (SMO-5) are provided only in the form of copies and prints for sale. Another version is the state map 1:5 000 (SM 5) provided in digital, raster and printed form for approximately 25 % of the territory of the Czech Republic. The last version is state map 1:5 000 – raster one (SM 5 R) based on the SMO-5 printing bases and being provided both in raster and printed forms. SM 5 is not regularly updated at present, because there are ongoing preparations in operation in LSO for launching of new full-automated technology for creation of this map series. Base maps at medium scales represent the most important part of the basic state map series.

Base Maps of the Czech Republic are produced in a scale series of 1:10 000, 1:25 000, 1:50 000, 1:100 000 and 1:200 000. An important part of the state map series are maps of territorial units forming the Map of Districts of the Czech Republic 1:100 000, Map of Regions of the CR 1:200 000, Map of the Czech Republic 1:500 000, CR – Physical-geographical map 1:500 000 and Czech Republic 1:1 000 000. The collection of the basic state map series is still being supplemented with a group of maps of the administrative division of the Czech Republic at scales of 1:200 000, 1:500 000, 1:1 000 000 and 1:2 000 000. In 2009 creation of new map series went on – map of municipalities with enlarged administrative competencies 1:50 000, where the administrative district of every municipality with enlarged administrative competencies is depicted on one separate map sheet. In 2009 the new form of Base maps 1:25 000 was completed for the whole territory of the state.

The thematic state map series is a cartographic work representing certain thematic phenomena as a rule, on the basis of the basic state map series, which is published in the public interest. The collection of the thematic state map series issued by the Czech Office for Surveying, Mapping and Cadastre includes the Base Hydrographic Map of the Czech Republic 1:50 000, Road Map of the Czech Republic 1:50 000, Regional Road Map of the Czech Republic 1:200 000, and some other maps with thematic land surveying content.

Geonames Database

The Geonames database provides a complete set of information on standardized geographical names (in total 68 types of designated objects) and names of settlement units for the Base Map of the Czech Republic 1:10 000. The Geonames database facilitates the access to terminological data, allows their analysis for the needs of onomastic and historical research. Alongside with the ZABAGED® data it provides users with an integrated view of the territory of the Czech Republic. It is a source for publishing state map series of various scales.

Updating of the Geonames database is going on in cooperation with municipalities harmonized with updating of ZABAGED® together with digitalization of cadastral maps. In 2009 the methodology for integration of data in both mentioned applications has started with the particular goal of making the Geonames administration more efficient, elimination of duplicities and discrepancies in both data sets, and ensuring seamless outputs from the Geonames database.

Orthophotographic Representation of the Czech Republic

Orthophotos created by the orthogonalization of aerial photographs (transformation of photographs to the orthogonal projection in digital form) find more and more uses in various fields of activities. A colour orthophoto is available for the whole territory of the Czech Republic and is being updated in cooperation with the Ministry of Agriculture and Ministry of Defence of the Czech Republic. Aerial orthophotos are taken regularly in three-year cycles so as every year the updated orthophotos from one third of the territory of the Czech Republic are for disposal. The Land Survey Office distributes this product to users in map sheets of the State Map 5 (ca 5 sq km). Data are in TIF raster format, JPEG or MrSID with resolution of 0,5 m and are georeferenced in coordinate system S-JTSK with help of text set TFW (SDW). Sets for georeferencing into the world coordinate system WGS84 are also provided.

In 2009 orthophotos processing with higher accuracy given by the smaller pixel size of 0,25 m has been launched and the switch-over to digital scanning has been prepared, which enables simplification of data processing and improvement of their photo interpreting quality.

4. E-Government Services

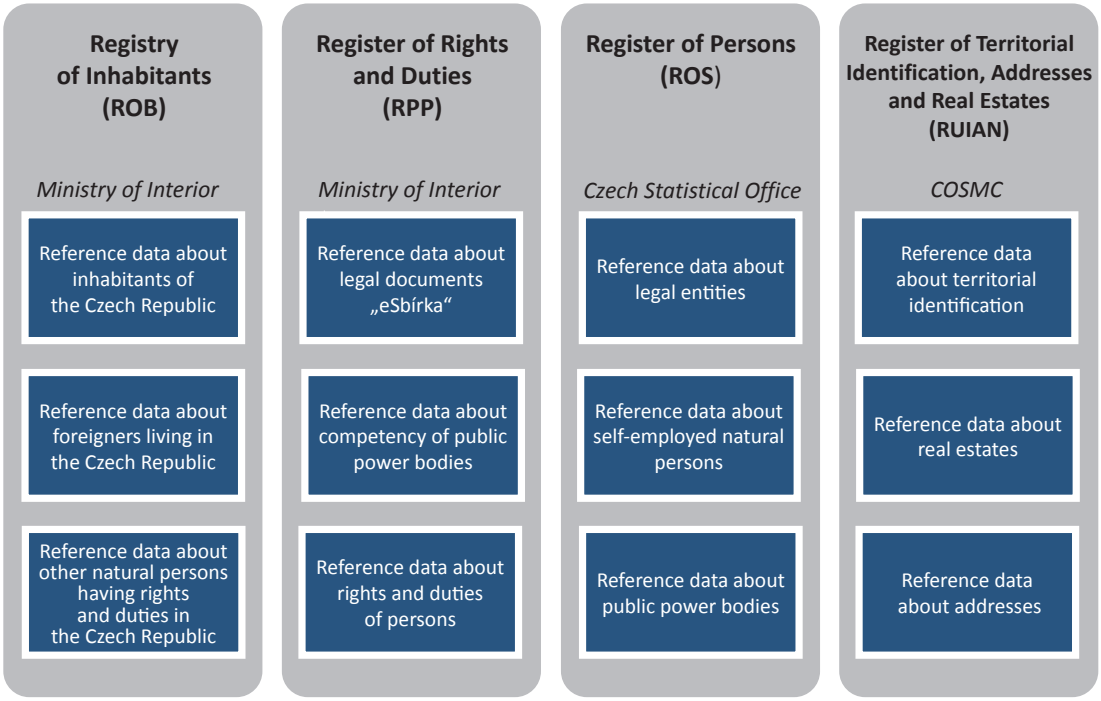
Headstones of the national e-Government conception (electronic public administration) are the basic registers. Basic registers contain data on people, companies, real estate and on rights and obligations.

Four registries depicted in the following picture should create the database of electronic public administration.

Interconnection of basic registries of public administration and their connection to other information systems should remove current problems with heterogeneous data, in particular in the area of people, companies, addresses and territorial identification. After launching of basic registries these data will be centralized in one place to save financial resources and time not only to public authorities but also to other subjects outside the public administration. These resources could be then allocated to be used for creation of other information services.

The branch COSMC is in particular involved in the Registry of territorial identification, addresses and real estates (RÚIAN). The registry will serve as the source of reference and other data on territorial items and territorial-registered units included parcels, buildings, addresses and their localization. In 2009 two public tenders were accepted focusing on realization of the registry. First public tender dealt with the technical infrastructure of RÚIAN, the second one with implementation of the solution of RÚIAN. Both agreements have already been signed and the provision both of technological infrastructure and implementation of the solution are being in run.

Basic Registries and Their Content



Informatization of the public administration and society in general brings the need of creation of infrastructure on the national level, included the geoinformatics both on national and European levels. Introduction of e–Government encompasses several component technical problems, such as digitalization of the data series and information funds, use of protected electronic communications (ciphered communication, electronic signature, electronic mark), making accessible agendas and remote services (presentation of products and services on web portals, implementation of web services for remote access to data), interconnection of information systems of public administration and similar. In the area of land surveying and cadastre users have several services that can be considered applications of electronic public administration available. These services allow clients to acquire information from the cadastre, use the on-line map services or determine the actual position or carry out a precise measurement using the network of GNSS permanent stations.

Remote Access to the Cadastre of Real Estates

http://katastr.cuzk.cz/

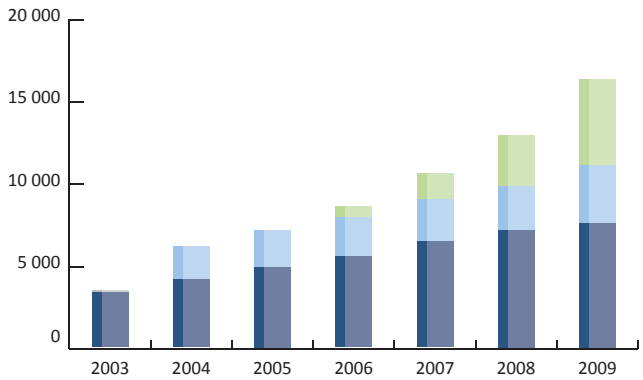
Remote access (DP) allows the provision of data from the cadastre for the whole territory of the Czech Republic via the internet. Outputs from the cadastre obtained in this way – for example, statements from the cadastre and other configurations, are formally and materially completely identical to documents issued at the same time by the cadastral office.

In 2006 the possibility of visual search in the application was improved. Aside from digital cadastral maps, orthophoto maps (aerial photographs) and topographical maps for the whole territory of the CR were made available, as a navigation tool for orientation in space and improved searching of parcels. Since 2007 scanned raster maps of the cadastre are also available through the application Remote access to the Cadastre of Real Estates for the whole CR and those cadastral districts where digital maps are not available yet. In 2008 raster pictures of cadastral maps of the former Cadastre of Land were completed, which are being utilized for depiction of agriculture and forest land amalgamated during land consolidation into larger land complexes till digitalization is not completed.

Using of digital and raster basis made available the digital data from the cadastre for the whole territory of the Czech Republic.

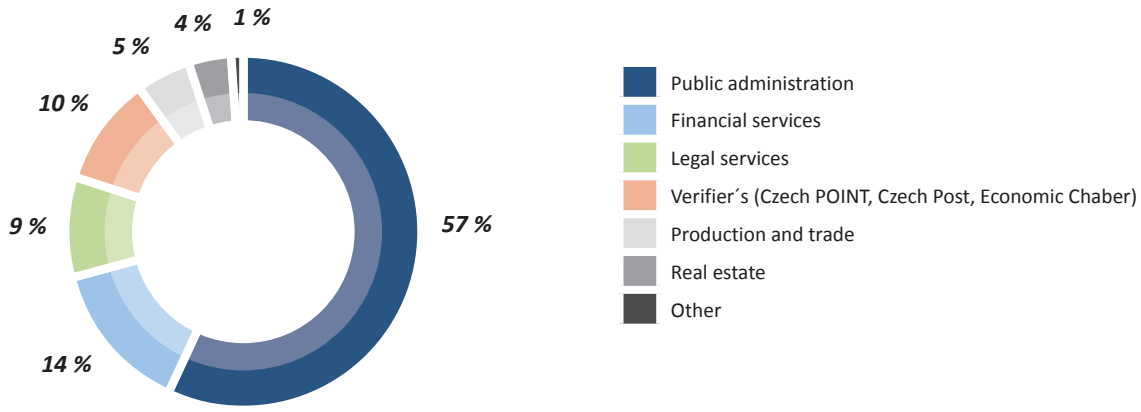
Outputs from Remote access are paid, but substantial group of users from state administration and self-government have been provided with data from the cadastre in this manner free-of-charge. Remote access has been operated since 2001 and since its launch the number of clients actively using it has grown annually. The number of RA users increased by about 27 %; at 31. 12. 2009 the number of users´ accounts was at a total of 16 265, 3 514 of which were free accounts and 5 201 were accounts for certifiers (see later) in connection to the development of the project Czech POINT.

Development of the Number of Users – According to the Type of Acounts



Year	2003	2004	2005	2006	2007	2008	2009
Paying customer's accounts	3 387	4 169	4 933	5 572	6 474	7 132	7 552
Free accounts	66	1 979	2 190	2 364	2 558	2 667	3 514
Verifier's accounts	-	-	-	614	1 540	3 051	5 201

Depiction of the Biggest Users of Remote Access – According to the Data Value



As well as the number of users, the income for provision of data via Remote Access is growing. In 2009 the income from paid accounts overreached 110 million CZK in total. These services are most used by the banking sector for obtaining of the documents necessary for mortgage provisions. Other significant group were in 2009 the providers of legal services – notaries, solicitors and court executors. Remote Access is provided free of charge to municipalities, regions and since 2009 to the state institutions, notaries and executors, as well.

Issuing of Verified Outputs from the Information Systems of Public Administration

Based on the amendment of Act No. 365/2000 Coll., on public administration information systems (ISVS), marking of outputs from the RA with an electronic mark based on a qualified system certificate started at the beginning of July 2006. That electronic mark guarantees authenticity (issued by the Czech Office for Surveying, Mapping and Cadastre) and constancy of the output. An electronically marked statement from the cadastre has all the appurtenances of a public document. Furthermore, the number of places where it is possible to acquire a certified statement from the Information System of the Cadastre of Real Estates was increased. The amendment to the Act on ISVS mentioned above allowed issuing of statements to following subjects from 1. 7. 2006: notaries, regional, matrimonial, municipal and city district authorities, selected representative offices, the list of which is stated by the implementing legal regulation, and further the Post Office and the Czech Chamber of Economy. These subjects (verifiers) then put outputs into the paper form and issued them consequently as the public output from the information system of the public administration.

In the frame of the project CzechPOINT (POINT stands for - Czech posting authorization information national terminal), that has been launched in pilot version in April 2007 and since 1. 1. 2008 is in full operation, it is possible to acquire the verified extract from the cadastre of real estates, from the trade and commercial registries and from criminal record. The outputs from the CRE create in the long term 25 % of all CzechPOINT´s outputs. At present the CzechPOINTs enable issuing of the extract from the cadastre of real estates and the possibility of issuing copies of digital cadastral maps is under preparation.

Consultation of the Cadastre of Real Estates

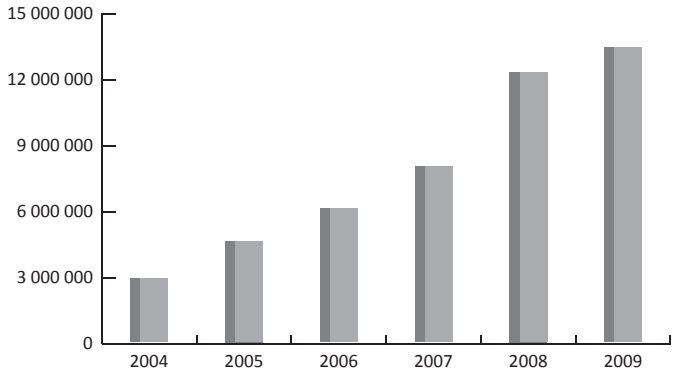
http://nahlizenidokn.cuzk.cz/

Probably the best-known e–Government service, operated in this department, is free consultation of the cadastre. This Internet service was launched on 1. 1. 2004 and allows provision of selected data concerning ownership of parcels, buildings and building units (flats or non-residential space). By means of consultation it is possible to find information on the state of proceedings from the moment of submission to the cadastral office for the purposes of registering property and other rights to real estate or other data recorded in the Cadastre of Real Estates of the Czech Republic. The consultation application is very intensively used by a wide range of users and has contributed in a significant way to increase the transparency of the course of individual administrative proceedings.

Consultation of the cadastre is one of the most visited websites of Czech state administration. In the six years of its existence the application has registered a constant growth in the number of users; in 2009 it had more than 13,4 million visits. Yearly growth in the number of visits is 9 %. The biggest growth in number of users was in 2008 and was caused by launch of the new version of application, which enabled the access to depicted cadastral maps from the whole territory of the Czech Republic. In localities not covered by the digital cadastral map, the raster pictures of cadastral maps are for disposal, which are regularly updated with depiction of changes based on survey sketches solving for better orientation. That way the users have access to currently updated complex information from the cadastre of real estates direct from their worktable.

There were launched new possibilities of the Consultation of the CRE in 2009, among them the version for mobile phones http://m.nahlizenidokn.cuzk.cz and further continuous technical innovations.

Development of the Number of Visits to Consultation of the Cadastre of Real Estates



Year	2004	2005	2006	2007	2008	2009
Number of accesses (in thousands)	2 900	4 600	6 100	8 000	12 315	13 419

Web Map Services for Cadastral Maps

Web map services (WMS) for cadastral maps enable further possibility of work with cadastral maps; the user can combine the cadastral maps layer in his computer with other datasets. That way he gets access to brand updated data via internet and has to take care neither about the storage of map copies in his data storage nor about their updating.

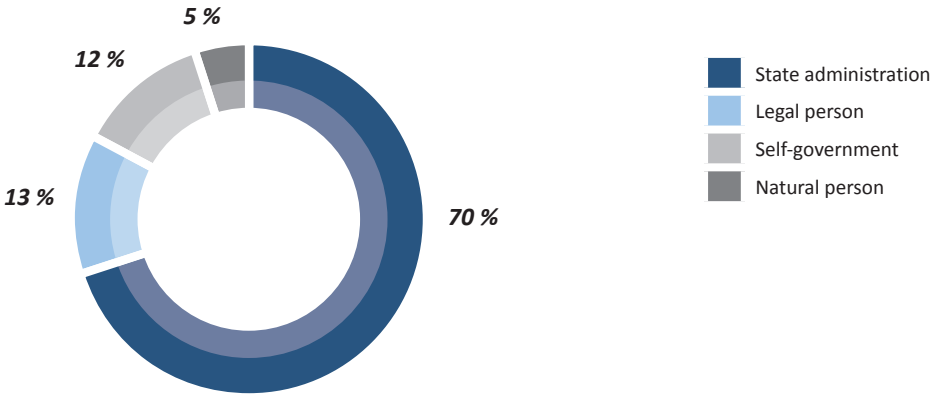
Geoportal of the COSMC

http://geoportal.cuzk.cz/

The Geoportal of the COSMC is a comprehensive internet solution for provision of geographical data including both map services publishing and internet shop, serving to data files ordering, to access to map services and to printed maps. In 2009 the modernisation and enhancement of former Geoportal of LSO was launched. Its transformation to the Geoportal of COSMC will step by step enable access to data from the whole land survey and cadastre branch to the users. COSMC Geoportal homepage fulfils the role of the link to further applications and services of the branch (Consultation of the CRE, viewing of archival maps, CZEPOS, Geodetic control points etc.) as well.

In accordance with requirements of the Implementation rules of the INSPIRE Directive the meta-information file on provided data and services was completed in 2009 in line with the branch metadata profile. Apart from the metadata on datasets there are even more detailed data on single map sheets for most products at the disposal. Searching in metadata is enabled by the searching service.

Structure of Geoportal Users



Datasets Provision

By means of the internet shop it is possible to order data not only in existing vector and raster formats, but also, for example, in GML format (ZABAGED® data). The client is enabled to select required data according to the sheet line system, i.e. units for which files are available direct via the internet.

The most demanded data sets remained ZABAGED®, orthophoto and raster form of the Base map of the Czech Republic 1:10 000. The biggest data amount is provided to users from the public administration. Students can get the data via commercial module free of charge in the reasonable amount for the purposes of their Master or Bachelor Thesis or semestral elaboration based on the agreement signed with the University.

Map Services

Standard map services of the COSMC Geoportal enable on-line internet access to datasets administered by the branch of land surveying and cadastre. Clients who connect their system to such a service need not administer their own database of fundamental geodata and accessible data are provided to them with the maximum possible relevance. Registered users are being provided with the publication of ZABAGED® data, dataset on administrative boundaries, orthophotos, raster forms of Base map 1:10 000, SM 5 raster data and Geonames.

Viewing map services is at disposal for wide public via application Geoviewer. The same datasets are offered for free viewing for public users as those provided to the registered ones. Graphical searching of geodetic points in the Database of Geodetic control (included depiction of point location sketch) or in the network for permanent stations CZEPOS as well as the map service for cadastral map is available via Geoviewer.

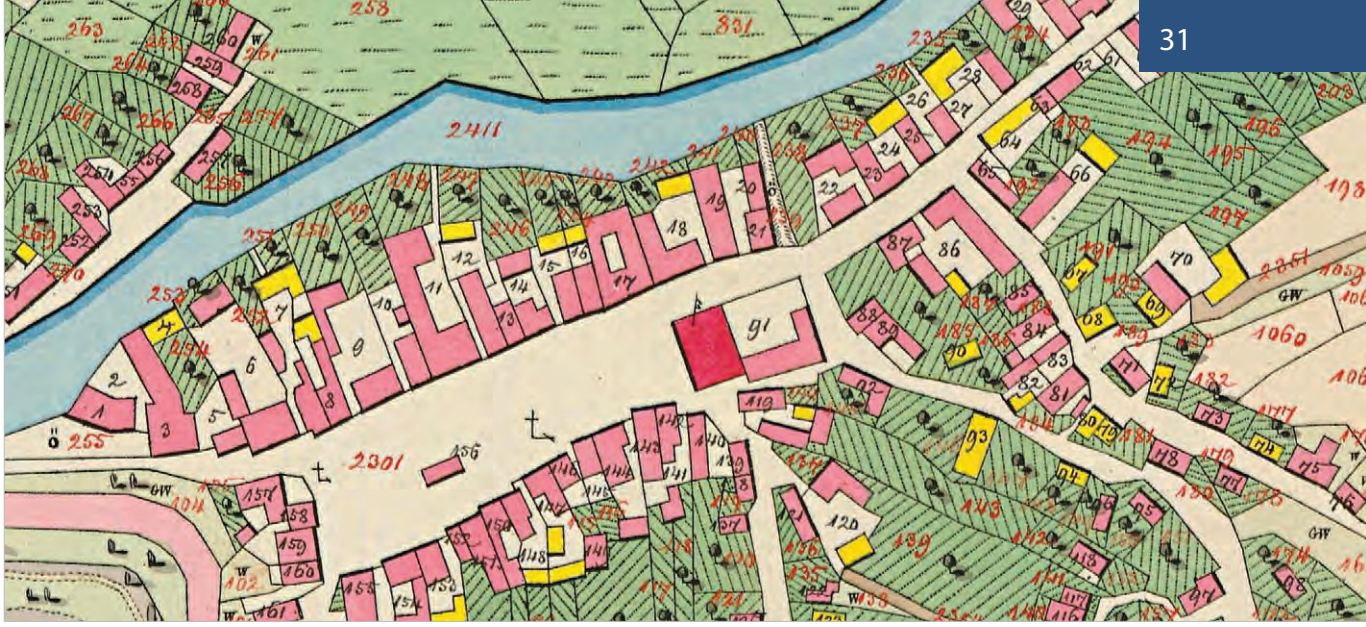
Cooperation with other sectors plays very important role in provision of map services. In frame of the provision of web map services to the Portal of public administration following products from the production of the COSMC branch are used: orthophoto and raster forms of the base maps 1:10 000 and 1:50 000. In the end of 2009 new web map service has been created for the Czech Statistical Office enabling it preparation of population, houses and flats census based on provided data.

Archive maps

http://archivnimapy.cuzk.cz

In 2006 the application Archive Maps was launched within the Geoportal. The archival documents available via this application are continuously extended. The most used archival documents are among others imperial mandatory prints of the Stable cadastre from 1 824 to 1 843 in scale of 1:2 880, now completed with the comparison records of areas between 1 845 and 1 948, prints of topographical sections of the third military mapping between 1 872 and 1 853 in scale of 1:25 000, collection of maps and plans from the second half of the 16th century until 1 850. Recently also maps are available there, which were taken away from the burglars into archives and libraries and whose possible owners are searched for by the Police of the Czech Republic.

The service is provided free of charge. Via Geoportal it is possible to order copies of archival documents or digital sets in printing quality.



Database of Geodetic Control Points

http://bodovapole.cuzk.cz/

Database of geodetic control points serves to administration of data on geodetic control points. It contains geodetic data on points of Fundamental horizontal, vertical and gravimetric control, data on densification and minor vertical control points. The Land Survey Office performs administration of the database; its continuous updating is shared with cadastral offices in the frame of their competency.

In 2009 the modernisation of internet applications ensuring the publication of DGCP in the frame of COSMC Geoportal went on. Graphic search has been enriched by the new points´ marks enabling graphical differentiation between trigonometric and densification points measured in 2008 by the method of RTK in the frame of the task "Points´ densification" based on ETRS coordinates. Geoviewer has been further enriched by the graphic layer of points of minor horizontal control enabling their graphic localisation followed by the depiction of geodetic datum.

Web announcement of defects and changes on geodetic control points has been enriched by the possibility to announce the defects on minor horizontal control points as well. Existing categories of published points have been enriched by the CZEPOS network points so as by cancelled points with coordinates measured in coordinate systems S-JTSK and ETRS.

By the end of 2009 the database of geodetic control points included 70 396 centres of trigonometric and densification points and 42 118 associated points, further 1 312 levelling lines of the Czech state levelling network in total 25 001 km long, 115 361 levelling points (82 368 out of them are Fundamental vertical control points) and 460 gravimetric points.

In the end of 2009 together 690 cooperating users of DGCP were registered, it means users who fill in the web announcements on defects on geodetic control points. In comparison to 2008 there is increase of 282 users in 2009.

Cooperation with DBP users helps to improve efficiency in maintenance of geodetic control points, because it is possible to adjust only those points which are requested by the land surveying public.

Czech Positioning Network GNSS - CZEPOS

http://czepos.cuzk.cz/

The CZEPOS is the network of GNSS permanent stations spread on the whole territory of the Czech Republic. CZEPOS stations are installed on roofs of cadastral offices´ buildings and record the data from GNSS signals in the interval of 1s for 24 hours a day. Users are provided with them in the form of corrections enabling to specify GNSS measurements. CZEPOS services are provided in continuous operation since 2005.

At the beginning of 2009 the innovation of technology of CZEPOS real time service provision was launched by LSO. Besides of existing services new ones in modern format RTCM3 have been put into operation as well, which is supported by new users´ GNSS devices. New format is more efficient with data transfer thus enabling faster transmission of corrections.

Within the previous year more precise geocentric coordinates were implemented into the system, being calculated in the RIGTC, p.r.i. by the method of processing of the time lines observed on CZEPOS network stations since 2004 to the present. The calculation has been performed in connection to points of European network of permanent stations EPN together with inclusion of more precise sea level height of stations in the Baltic vertical datum after adjustment. In the end of 2009 the connection of GNSS permanent stations of our neighbour states located near the border was completed based on the agreement with their administrators. CZEPOS network consists at present of 27 stations on the territory of the Czech Republic and uses data from 27 stations located on the territory of neighbour states. Quality and availability control is also part of the CZEPOS administration.

The statistical data on availability of so called network solution (process of generating areal corrections GNSS) and the stability results of CZEPOS stations are being continuously published on CZEPOS website. Five CZEPOS stations proving up to now the best results in stability monitoring have been involved in the international network EUREF (EPN).

CZEPOS gains its wide ground in geodesy, navigation or in the area of intelligent control systems. At 31. 12. 2009 there were 829 registered CZEPOS network users, in comparison to the end of 2008 it means grow by 169 users.

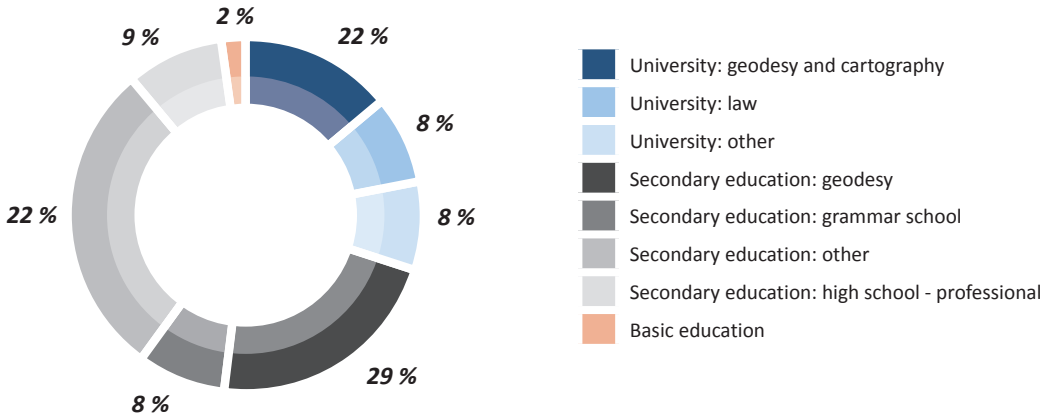
5. Economics and Human Resources

Employees and Education

The overview of the personnel structure in 2009 according to age and education confirms the positive trend of the last few years – a constantly increasing share of university graduates among employees. In the youngest age categories (to 40 years) there are no longer employees with basic education only. A reality is the constantly increasing representation of other fields than geodesy and cartography; above all these are employees with training in information technology, law and economics. The number of employees with secondary specialized education slightly decreased (on 24 ps.), on the contrary the highest grow was recorded in the category of University educated employees in the category geodesy and cartography (on 65 ps.) and in the category of secondary education - others (on 80 ps.). Training in the COSMC is governed above all by the Rules for education of employees in administrative bodies in accordance with government resolution and further by internal regulations, including the Training Plan in the Sector of the Czech Office for Surveying, Mapping and Cadastre.

The main goal in 2009 was improvement of the existing training system, which is the tool for getting, maintenance, renewal and deepening of the qualification of every particular employee in accordance with requested qualification of the employees of administrative bodies and with further demands connected with requirements on activities performance at particular job positions, with special focus on education of employees newly engaged in the digitalization of cadastral maps.

Overview of the Personnel Structure According to Education Type in 2009



Based on the approved Plan of education in the Czech Office for Surveying, Mapping and Cadastre in 2009 a lot of educational activities were realized. These activities were mainly focused on further professional and managerial education with the goal of systematic mediation, mastering and strengthening of knowledge, skills, values and attitudes of employees.

Group, regional and special expert training was important part of the Training plan in COSMC branch. Due to legislation changes unscheduled seminars were necessary to be realized except for scheduled ones. The seminars focused on legal, economic, personnel and cadastre subject matters.

Granting Official Authorization for Verification of Results of Land Surveying Activities

In the framework of granting official authorization for certification of the results of surveying activities professional competence exams for authorization were held in five terms in 2009 in accordance with Section 14 of the Act No. 200/1994 Coll. on surveying and mapping.

From the total number of 81 applications (23 of them from 2008) 45 new official authorizations were granted and authorizations of 17 applicants were expanded. In remaining cases the proceedings with 5 applicants were terminated (they did not fulfil the legal conditions for granting the official authorization or asked for termination of administration proceeding), 2 applicants did not pass the exam and will repeat it in 2010, 2 applicants did not succeed repeatedly and their application was refused, 2 applicants were excused. 8 applicants who applied for the exam in the end of 2009 will be invited to the exam at the beginning of 2010.

There were registered 2 482 official authorizations by 31. 12. 2009. 97 authorized land surveying engineers were deleted from the registry, because of death, withdrawal of the official authorization or termination of their activity. In 2009 8 authorized land surveying engineers were deleted from the registry (2 terminated their activity, 6 passed away). The list of official authorized land surveying engineers contents 2 385 valid records.

Economics

The approved state budget of the Czech Republic for 2009 specified revenue of CZK 252 700 thousands and expenditure of CZK 3 191 679 thousands for the COSMC. The expenditure was increased within 2009 by CZK 158 271 thousands for five projects co-financed by the EU budget - Project of homogenization of fundamental geographical data on the borderline between Free state of Saxony and the Czech Republic (1 138 thousands CZK), project Building-up RTIARE and modernisation of the ISCRE of the COSMC (1 145 883 thousands CZK), project Complex electronic documentary service in connection to the system of data boxes (10 058 thousands CZK), project Document Management System in connection to the electronic document conversion and data boxes – analysing (734 thousands CZK) and project Geoportal modification in connection to the Portal of public administration and agenda portals – analyses processing (458 thousands CZK).

In 2009 the chapter had two specific revenue indicators "Revenue collection" and "Non-revenue collection, capital incomes and accepted transfers in total". Revenue collection were prescribed in the amount of CZK 52 700 thousands, their fulfilment reached only CZK 30 016 thousands, it is 57 %. Against all odds drawings of the administration fees for the proposal of the registration of rights into the cadastre of real estates did not bring the expected amount. Adjusted budget of non-revenue collection of CZK 358 271 thousands was filled in by the amount of CZK 241 912 thousands, it is 67,5 %. After clearing of the resources from the EU budget and from the resources accepted from other bank accounts of other governmental bodies in the branch in the amount of CZK 336 thousands, the non-revenue collection were in total 241 576 thousands, it is 120,8 %. In comparison to 2008, when the cleared incomes reached CZK 214 158 thousands, the growth achieved in 2009 was CZK 27 418 thousands. The payments from the EU budget to the COSMC revenue account were not realized in 2009.

The greatest share of expenditure in 2009 was expenditure on employees´ salaries, other payments for work carried out and associated expenditure, 69 % of the total expenditure of the sector. The average monthly income achieved in 2009 reached CZK 23 770 per employee.

The expenditure on financing of programs administered in ISPROFIN, it means the expenditure allotted for procuring and modernisation of sector tangible and non-tangible property, created 21,4 % of the total expenditure. Nearly two thirds of it was non-investment expenditure used for securing the operation, maintenance and repair of state assets and for the lease of computer technology and administrative buildings. Further material expenditure were used in 27 % on digitalization of cadastral maps (CZK 77,4 million). The remaining part of other material expenditure covered the main expenditure on postal services, material, travel costs, training and educational expenditure and other services.

Summary of Obligatory Indexes of Chapter 346 of the State Budget							
Financial Indexes in CZK ´000s Index / Year	2003	2004	2005	2006	2007	2008	2009
Revenues of the chapter[1)]	181 437	158 315	143 125	157 572	175 459	214 158	271 592
including: tax revenue							30 016
Administrative fees	466 998	486 472	544 156	549 614	644 280	682 226	596 489
Data provided free	329 461	336 544	438 426	536 376	630 959	664 009	761 934
Total expenditure of chapter[2)]	2 133 961	2 327 168	2 421 660	2 513 377	2 815 730	2 806 480	3 170 650
including: projects co-financed from EU budget							26 778
Current expenses	1 680 182	1 802 266	1 830 893	1 956 447	2 109 573	2 197 182	2 460 125
including: wage resourcesy[3)]	1 148 146	1 179 756	1 308 839	1 308 839	1 424 864	1 456 806	1 597 945
insurance and FKSP	421 717	434 688	452 144	483 848	527 530	539 126	575 343
other material costs	110 319	187 822	154 686	163 760	157 179	201 250	286 837
Program expenditure	429 516	500 302	563 362	528 266	677 493	580 634	679 225
Including: non-investment	218 804	247 735	256 231	356 631	414 244	402 841	437 128
investment	210 712	252 567	307 131	171 635	263 249	177 793	242 097
Research and development	24 263	24 600	27 405	28 664	28 664	28 664	31 300
Including: operational	23 763	24 100	26 405	27 664	28 164	28 664	31 300
investment	500	500	1 000	1 000	500	0	0
Number of employees in sector[4)]	5 680	5 616	5 523	5 445	5 430	5 412	5 596
COSMC	70	158	158	157	159	153	151
Cadastral Offices	5 106	4 902	4 816	4 755	4 755	4 738	4 935
Land Survey Office	411	466	455	443	430	427	417
Survey and Cadastral Inspectorates	93	90	94	90	91	94	93

1) Revenues are adjusted for resources from revenue accounts of the CNB with prefixes 4714 and 2110, used for increasing expenditure (resources of RF, FKSP, donations).

2) The given expenditure does not include state budget resources transferred to reserve.

Funds, which will be used in following years:
3) employee wages + other payments for work performed,

4) average corrected calculation.

6. Inspection and Supervision Activity

Professional inspection and Supervision

Inspection of state administration of the Cadastre of Real Estates, supervision over the certification of results of land survey activities used for the Cadastre of Real Estates and state map series, and decision-making on appeals against first instance decisions of cadastral offices (CO) are delegated by law to the 7 surveying and cadastral inspectorates (SCIs). SCI carried out a total of 1 648 documented inspections at cadastral offices in 2009. Particular cases of proven insufficiencies were specified and commented in the SCI quarterly analyses, in which all collected information were systematically organized in unified style and were being regularly passed to individual COSMC expert units for use.

Inspection activity of SCI´s in 2009 focused mainly on the inspection of the application practice of the utilization of the cadastral regulation No. 26/2007 Coll., in sounding of its amendment No. 164/2009 Coll., and on observance of technological processes during the digitalization of fathom cadastral maps as stated in the Instruction for renewal of cadastral documentation.

In the framework of supervisory activity (supervision of certification of the results of land survey activities) SCI performed a total of 562 documented supervisory actions in 2009. In 15 cases in the subsequently conducted administrative proceedings SCI decided that the verifier had committed an administrative offence of infringement of order in the sphere of surveying and imposed fines at a total of CZK 335 000.

In 2009 SCI accepted 20 applications for measures against the inaction of CO, which means decrease nearly by 30 % in comparison to 2008. The extent of decision-making agenda of SCI on appeals against decisions of CO decreased in 2009 on 8,2 % (649 appeals delivered in 2009 as opposed to 707 appeals delivered in 2008). The number of decisions of cadastral offices that is found illegal in appeal proceedings remains still high. The number of appeals in matters regarding correction in cadastral documentation decreased on 8,2 % in comparison to 2008 (390 appeals delivered in 2009 as opposed to 425 delivered in 2008), the number of appeals in matters regarding objections against the content of renewed cadastral documentation increased on 15,2 % (106 in 2009 as opposed to 92 in 2008) and the number of delivered appeals against procedural decisions of CO decreased by 13,5 % in 2009 in comparison to 2008 (148 in 2009 as opposed to 171 in 2008).

SCI Decisions on Appeals against CO Decisions

Matters	Not resolved at 1. 1.	Received after 1. 1.	In total	Forwarded	Appeal rejected	Decision amended	Decision repealed	Decision annulled and returned to CO	Still being resolved	Faulty proceedings
Correction of errors in the cadastre	41	390	431	8	181	42	8	132	50	10
Objections to revised cadastral documentation	6	105	112	3	41	15	3	36	10	4
Infringements of order in the sphere of the cadastre	-	-	-	-	-	-	-	-	-	-
Procedural	6	148	154	4	75	8	5	45	12	5
Changes in the boundaries of cadastral districts	-	-	-	-	-	-	-	-	-	-
Administrative fees	2	2	4	-	1	3	-	1	-	-
Rejection of applications for submission of information	-	-	-	-	-	-	-	-	-	-
Other	1	3	4		3			1		
In total	**56**	**649**	**705**	**15**	**301**	**67**	**16**	**215**	**72**	**19**

Total Number of Complaints for 2009

SCI	Not resolved at 1. 1. 2009	Received after 1. 1. 2009	In total	Forwarded	Legitimate	Not legitimate	Still being resolved
in Brno	-	9	9	6	-	3	-
in Č. Budějovce	-	3	3	1	-	2	-
in Liberec	-	8	8	3	-	4	1
in Opava	-	6	6	2	1	2	1
in Pardubice	-	2	2	-	1	1	-
in Plzeň	1	4	5	2	-	3	-
in Praha	2	47	49	30	2	15	2
In total	**3**	**79**	**82**	**44**	**4**	**30**	**4**

Financial Inspection

COSMC as administrator of budget chapter performed financial inspections according to the Act No. 320/1990 Coll. on financial inspection, at its subordinated bodies in 2009. According to the approved plan of public administration inspections for the year 2009 the inspection group of COSMC carried out public administration inspections together at following 12 inspected bodies: CO for the Region Central Bohemia, CO for the South Moravia Region, CO for the Region Moravia-Silesia, CO for the Region Pardubice, CO for Prague – City and all seven SCI´s, in which performing of internal audit is substituted by performing of public administration inspection in compliance with the Section 29, art. 5 of the Act No. 320/1990 Coll., on financial inspection.

Main goal of these inspections was not only to verify the financial management of inspected persons, following the binding legislation, economic and internal rules, functioning of internal managing systems, but also the creation of conditions for economical and efficient performance of the public administration. Inspection of accounting documents verified not only their requirements as of material and formal point of view, but in particular realisation of the previous, continuous and ex-post check. All inspected organizations were proved as of observance of the efficiency, economy and usefulness of public resources utilization for fulfilment of given goals in accordance with the article 2 letters m) to o) of the Act of financial inspection. Always on the spot the COSMC inspection group verified particular cases of utilization of public resources not only before, but also during and after their use. Important part of the inspection was also checking of the right range of administration fees, payments and prices for provision of data from the cadastre of real estates and results of land survey activities.

Inspections focused in 2009 on fulfilment of provisions, being adopted to eliminate insufficiencies from previous inspections and inspections performed in the COSMC branch by the Supreme audit office during its inspection of the management in 2005 and 2006. Public administration inspections of some inspected persons in 2009 found less serious formal and objective shortcomings emerging from the inconsistent compliance with some provisions of COSMC economic rules, some partial shortcomings in records of assets and in provision of information from the cadastre of real estates in the CR. No serious shortcomings were discovered by public inspections in 2009 that would unfavourably affect the activities of inspected persons. All documents from carried out inspections were delivered to the president of the COSMC, who then in compliance with Section 18, art. 2 of the Act No. 320/1990 Coll. on financial inspection were imposing measures to elimination of realized shortcomings and to prevention of their recurrence and then terminated the public administration inspections. Afterwards all inspections were completed. Summary report on results of the financial inspections for the year 2009, including beside the results of the public inspections also the results of the managerial inspections and internal audit activities, was submitted to the Ministry of Finance.

Internal Audit

Internal audit is in COSMC part of the system of financial inspection in accordance with the § 3 of the Act No. 320/2001 Coll., on Financial inspection in the public administration and on changes and amendments of some Acts in wording of later regulations (further only Act on the financial inspection). It is carried out by special mandated employees - internal auditors, whose systemized job positions are established in state administration bodies in the branch (further only SAB) - COSMC, LSO and all CO. The function of internal audit is not established in SCI and is substituted there by the public administration inspection. Organizational rules of SAB ensure fully independence of the auditors and their organizational separation from managerial and executive structures. They are directly subordinated to heads of SAB.

The main task of performed internal audits is independent inspection and evaluation of appropriateness and efficiency of the managerial inspection, including verification of accuracy of chosen operations in conditions of particular SAB.

The activity of internal auditors results from the medium-term plans and on yearly plans based on them. Planning of audits is based on the risk evaluation and is focused on priority processes in conditions of particular SABs. The part of the plans of internal audits is also performing further tasks in compliance with Standards for the professional practice of internal auditors. Internal auditors carry out methodical and consultation activities and take part on the creation and amending of internal regulations.

Integral part of their activities is their professional development. 13 out of 15 internal auditors in the branch (86 %) hold the certificate on passing the basic training class of the unified system of professional training of public administration employees in the area of financial inspection and internal audit.

In accordance with approved plans for 2009 internal auditors performed together 95 internal audits, 4 extra audits were not mentioned in the yearly plan. From the total number of internal audits 28 were financial ones focused on the proof of the economy of SABs, 34 were audits of systems proving the administration of public resources, 10 were audits of operation dealing with the functioning of the internal inspection system and 23 were other audits.

Performed audits were addressed in particular to proving of functionality and efficiency of the internal inspection system of particular SABs, verification of existing state of the fulfilment of suggested recommendations stemming from completed audits and inspections in previous year, performance of the risk analysis based on the risk evaluation and creation of the map of risks, verification of procedures connected with submission of public tenders, managing of state property, accounting administration and dealing with budgetary financial resources, stating administration fees for data provision from the cadastre of real estates and others. Performed audits were completed in the written reports with proposed recommendations, which are submitted to particular SAB heads. In 2008 all recommendations were accepted and measures were issued to eliminate revealed insufficiencies. Audit survey proved that monitored processes were in compliance with generally binding rules so as with internal regulations of SABs, and public resources were utilized economically and efficiently. Auditing activities were considered to be without critical insufficiencies and risks, which could basically influence fulfilment of crucial tasks and proved goals of the COSMC branch.

7. International Cooperation

In the first half of the year 2009, in the frame of the presidency of the Czech Republic in the Council of European Union, the Czech Office for Surveying, Mapping and Cadastre was in the head of the Permanent Committee for Cadastre in EU (PCC), main goal of which is to represent a privileged link between cadastral institutions and the institutions of the European Union and other entities requiring cadastral information to carry out their activities. In the frame of the presidency the publication was issued, depicting the cadastral systems in 6 EU member states, carrying on the previous work of latter presidential states. The presidency of the Czech Republic was crowned with holding a workshop and PCC plenary meeting in Prague, devoted in particular to the consequences of the financial and real estates crisis on the cadastral services of member states. The presidency was handed over to Sweden there.

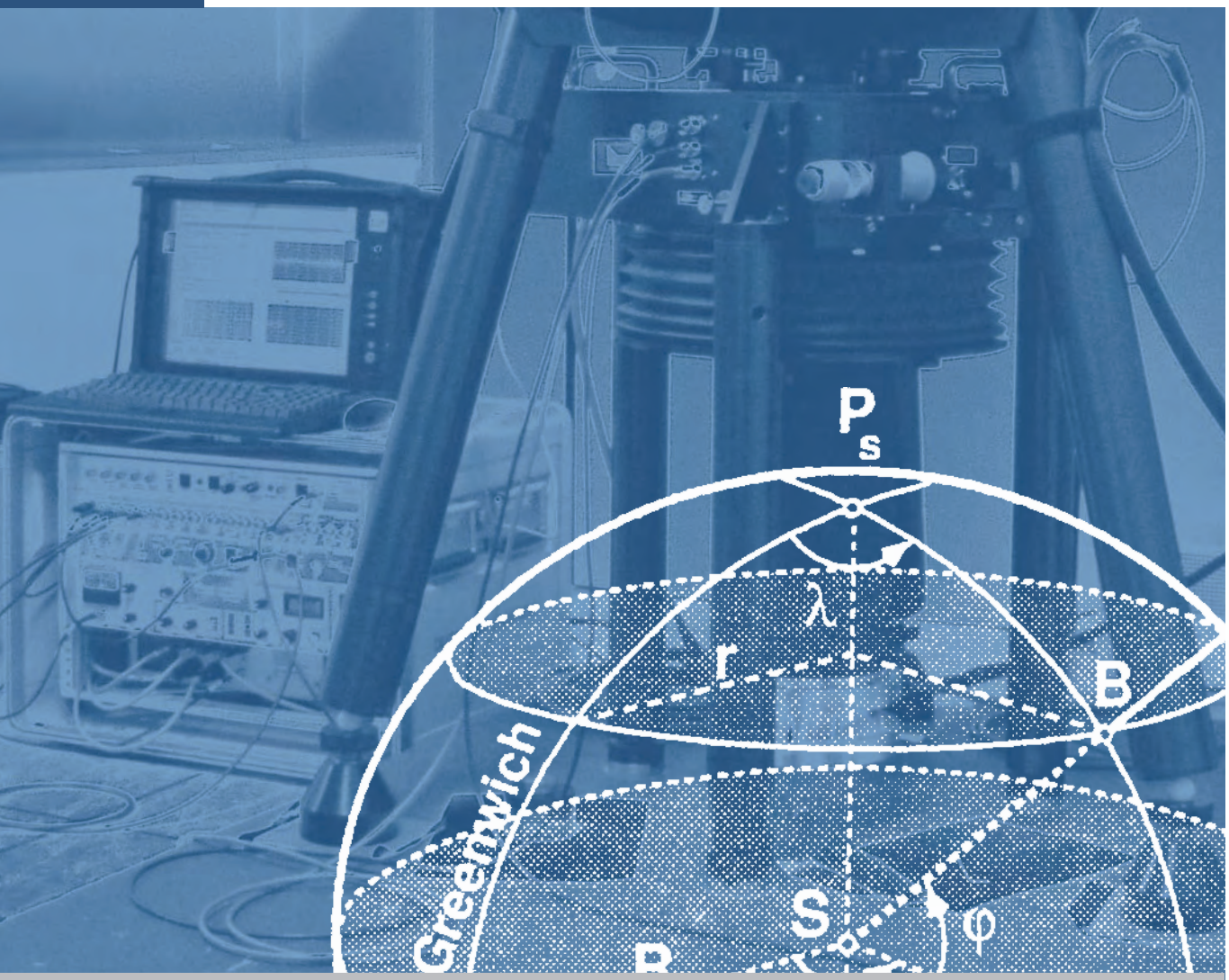
The bilateral cooperation with the land surveying services of neighbouring countries Slovakia, Germany, Austria and Poland went on in 2009 in particular in the area of documentation of common state borders, establishing of networks of permanent GNSS stations and exchange of data and experience in cadastre of real estates and land surveying. Concrete results of a couple of year developed cooperation in the area of GNSS permanent stations networking occurred. The Czech Republic is now gaining the data from 27 abroad stations located nearby the state borders and uses them for improvement of provided services.

The development of new map services and products aimed at constructing a unified infrastructure of spatial data in Europe is the remit of the international organisation EuroGeographics. COSMC is its active member and in 2009 participated on projects EuroRegionalMap, EuroBoundaryMap, EuroGeoNames, ESDIN, EuroSpec and others, the goal of which is to create the pan-european products with consistent parameters for all European countries and harmonization of access to reali-

zation of pan-european projects delivered by the national governments, in particular access to implementation of the INSPIRE Directive (Infrastructure of Spatial Information in Europe). It deals in particular with disclosure of spatial data in electronic form especially for needs of the environment in the European territory. COSMC was actively involved in testing of data specifications for INSPIRE implementation, which was successfully completed and proved our preparedness for its implementation in most of tested areas.

Also through the COSMC the Czech Republic became involved in preparations for inclusion to the EULIS service (the European Land Information Service), which has the objective of creating a European multinational portal allowing on-line access to information on real estate in various states of the EU. Currently the service is functional for a total of 6 European states – Sweden, the Netherlands, England & Wales, Norway, Lithuania and Ireland. After completion of the preparatory phase in the EULIS PLUS project the Czech office for surveying, mapping and cadastre should connect up to the portal during next years by means of its „Remote Access to the Cadastre of Real Estates“ service.

COSMC is represented in the management board of the Working Party on Land Administration (WPLA), working under the auspices of UNECE, which is engaged in land and real estates information and related thematic. Main goal of WPLA is to promote the land administration ensuring material rights, develop the real estates markets in developing countries and modernize registration systems in other European countries. Furthermore, COSMC actively participates in regular meetings of cadastral service providers of succession state of the former Austro-Hungarian Empire, who share with us a common cadastral tradition. In 2009 26th meeting was held in Slovak city Košice in attendance of participants from Croatia, the South Tyrol, Austria, Slovakia, Trentino, Hungary and the Czech Republic.



8. Research and Development

Research and development in the sector of surveying, mapping and cadastre is subject to the needs of state administration with the aim of acquiring and using new knowledge usable for its improvement. It also takes account of needs in the sector for use of information and communication technologies and the needs of international cooperation in the field. Resolution of tasks of research and development is the concern of the Research institute of geodesy, topography and cartography (RIGTC) in the framework of the research aim Research and development in geodesy, the cadastre and geomatics in 2005-2009, prolonged till 2011, which the COSMC provides with institutional support.

Tasks resolved in the scope of the research aim in 2009 were completed pursuant to the stipulated technical and economic parameters in line with the agreement between the COSMC and RIGTC. Minutes from inspection days provide information on the course of individual tasks in the course of 2009.

The projects, which were part of main goals in 2009, will be further proceeded within 2009. It refers, in particular, to proceeding with the development of tools for renewal of the cadastral documentation by means of new mapping and its conversion into digital form. The technology and software for

creation of the digital record of the detailed surveying of changes was being further developed and the technology of current measurements and surveying for renewal of the cadastral documentation with use of GNSS instruments, including electronic transmission of measured data, was completed and prepared for practical use.

In 2009 further monitoring GNSS techniques were being developed and so as the use of collected data from the data centre of the geodetic observatory Pecný to examine the influence of the environment on the results measured by global navigation methods of the time changes of the gravity field of the Earth. Monitoring of interface between the outputs from GNSS system CZEPOS and permanent network VESOG went on so as monitoring and stability testing of permanent GNSS networks CZEPOS and VESOG were in operation on the territory of the Czech Republic. Methodology was compiled and proposed solution was prepared to include the permanent stations of other providers into the program "Positioning verification and monitoring of stability of coordinations of permanent stations´ GNSS".

The results of project realization, focused on creation more precise reference frame ETRF and on users´ system JTSK/05, are of great importance for development of geodetic control in the CR. Using modified Křovák´s projection enabled to reach the mean square variation value in position of 14,5 cm and 21 cm while using classical Křovák´s projection. Partial result of this process is the assessment of more precise coordinates of CZEPOS network stations in the ETRS system in the era 1989.0. Works on the new realization of ETRF 2000 frame were completed.

In the area of metrology RIGTC owns valid certification for gauges´ calibration in the frame of Accredited calibration laboratory (ACL) included enclosures proving the best abilities of laboratory measurement and list of gauges for calibration of which is authorized. ACL fulfils the function of associated laboratory of Czech metrological institute as well. Calibration laboratory and Authorized metrological centre provided also other subjects with metrological activities based on a contract.

State standard for acceleration of gravity and State standard of long distances being launched in 2008, were completed in 2009 by the positive result of inter-laboratory comparative tests in the parameters angle and declaration of Skalka testing base for Reference position standard.

RIGTC worked on grant tasks from other Czech subjects so as from other international organizations in the frame of cooperation, mainly for EU, except for work for COSMC. This activity is closely connected with the main goal of the institute, which is the work for the COSMC, and represents 35 % of total capacities of the Institute.

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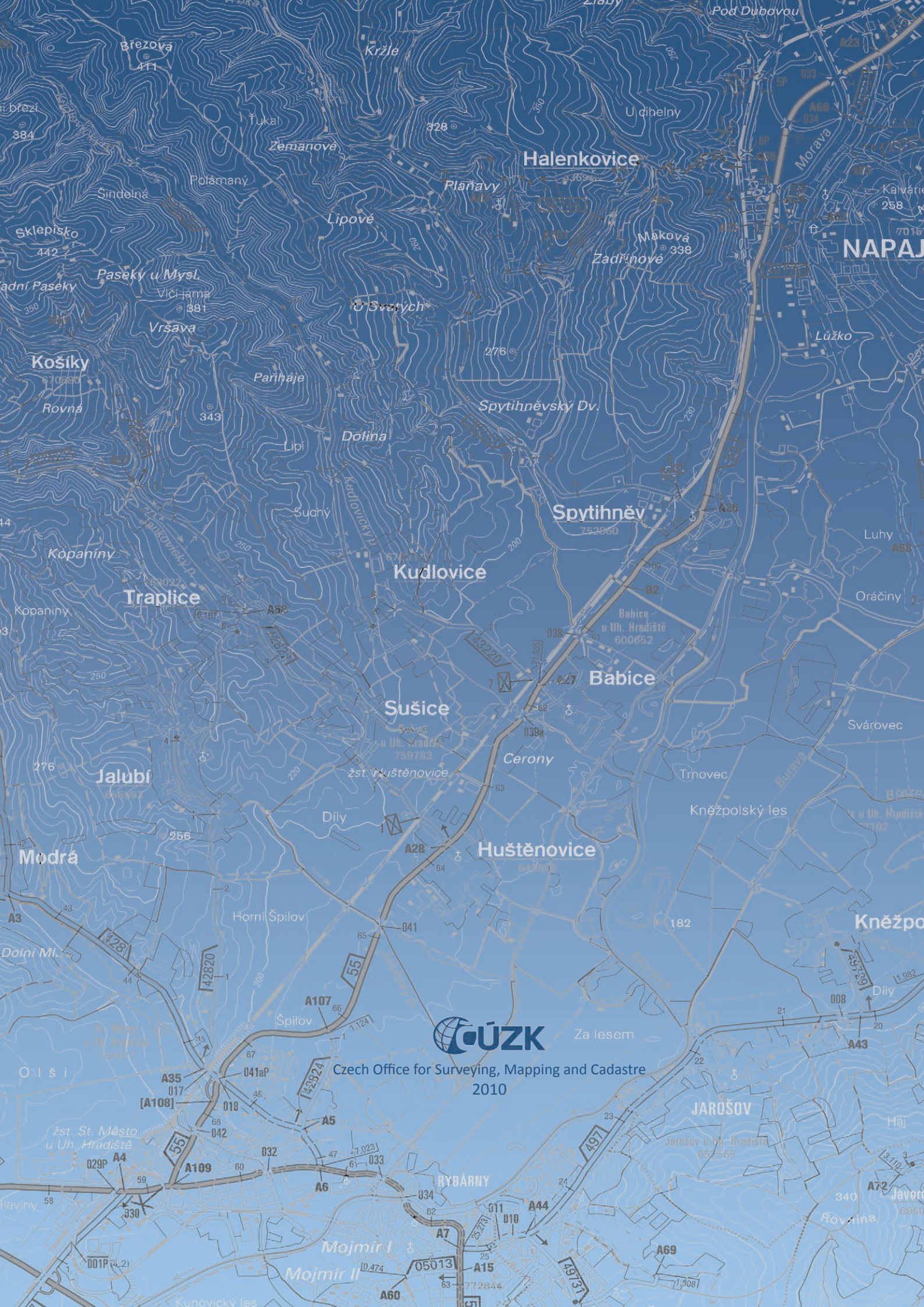
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