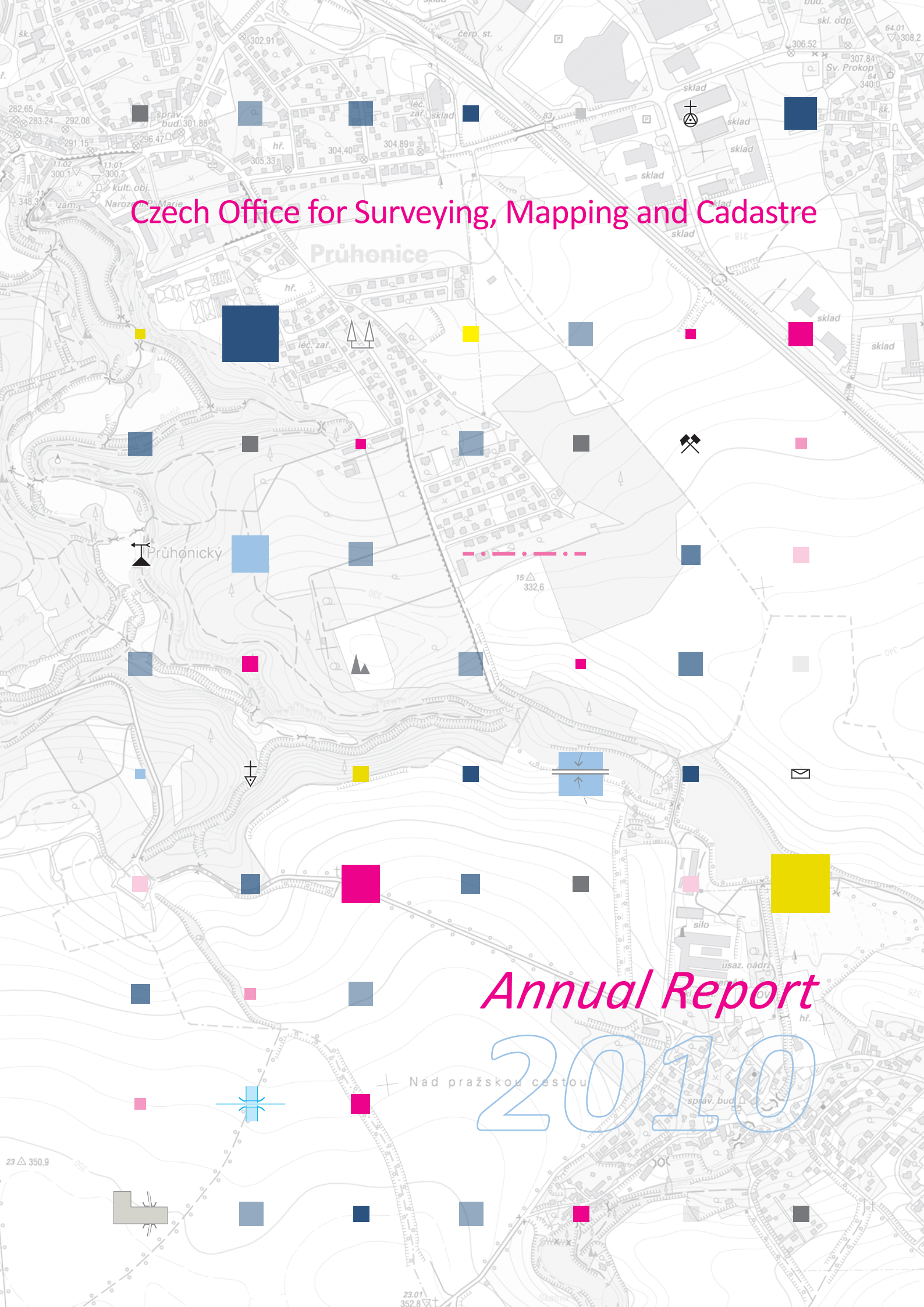


Czech Office for Surveying, Mapping and Cadastre

Annual Report

2010

Content

Introduction

State administrative bodies of the Cadastre of Real Estate managed by the Czech Office for Surveying, Mapping and Cadastre (ČÚZK) provide state administration in the area of registration of land parcels represented by the Cadastre of Real Estate. Apart from this they ensure performance of surveying activities in the public interest. The number of application for registration of property right and other matters of law regarding real estate are influenced by the development of the real estate and mortgage market. In contrast to previous years, when the number of submissions for the registration of property right and other matters of law have been yearly increasing of 10 % and more, in 2009 the decrease of 11 % occurred. In 2010 this decrease practically stopped. Cadastral offices have received 662 thousand proposals for registration of rights which represent yearly decrease of only 2 %. 670 thousands of them were completed, so that the average waiting time for completing the registration of the right to real estate further decreased in 2010. All cadastral workplaces in the Czech Republic were carrying out the registrations of rights in the statutory time in 2010, and that are 2 weeks from the submission of the application on average. That is valid for Prague as well, where long time for registration in the past complicated real estate businesses. The number of registration based on record and notation reached 943 thousands in 2010, which represents yearly decrease of 29 %.It is a very positive consequence of the change of legislation regarding the executory code, based on which the notation on writ of execution is recorded into the cadastre of real estate only in such a case, that the due is the owner of a property and the record of the notation is thus necessary for exacting the claim. Based on this change of legislation the number of notations on writ of executions decreased yearly on 450 thousand, whilst the number of other registrations of rights and further information by record increased yearly on 66 thousand.

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 82 % of more than 5.5 million by customers requested information from the cadastre of real estate. On the other hand the number of requests at desks in cadastral offices decreased on 20 %, whilst the number of provided outputs via verifiers (CzechPoint, notaries) increased on 19 %.It is the result of long-term conceptual steps regarding the electronization of this administration decreasing the costs, which enables managing of present governmental economic provisions without negative influence on activities of cadastral offices. Digitalization of cadastral maps went on in rapid pace in 2010. The number of cadastral districts with digitized cadastral maps for disposal increased yearly on 1 106 cadastral districts which means 8.5 %, with the result of completed 6 845 cadastral districts which means 52.5 % of the total number of the cadastral

districts in the Czech Republic. With regard to the economy measures it is impossible to speed up the pace of digitization that is why in further years the digitization is going to be carried out in the same pace with decreased personnel and its completion will be postponed on approximately 1.5 year due to mentioned economic measures.

In 2010, fulfilment of the long-term program of constructing the national geoinformation infrastructure provided by the ČÚZK branch continued. The modernization of the Czech network of GNSS permanent stations has been launched, which enables fast and precise positioning in the whole territory of the state with cm accuracy thanks to permanent reception of signals of global navigation system, so that it could use not only the signal from the GPS NAVSTAR satellites but also from the GLONASS ones, as well as from the system Galileo after its launch. Map products are provided via Geoportal of the ČÚZK in the form of web services, so that users can connect the updated data to their applications in the necessary amount - they are not forced to copy the updated data. In 2010 the first part of the project of acquisition of new terrain model of the Czech Republic was realized in cooperation with the Ministry of Agriculture and Ministry of Defence. With help of airborne laser scanning data of the earth surface were collected on one third of the state territory and the high precision terrain model of the 4th generation was created with the mean error of height assignment of 30 cm. The whole territory will be covered with this terrain model in 2012 and the resulting products will serve under others to the needs of state defence and for the flood control.

Karel Večeře
President

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

Cadastre of Real Estate

The Cadastre of Real Estate of the Czech Republic is a set of data about real Estate 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 Estate. The Cadastre of Real Estate 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.

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 hypsometry and the Central Archives of Land Surveying and Cadastre.

Organizational Structure of the Sector

ČÚZK governs 14 regional cadastral offices, which have 105 workplaces in larger towns and execute state administration of the Cadastre of Real Estate, 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 Estate and state documentation funds and the Land Survey Office (LSO), which focuses on other land survey activities that are provided in the public interest. ČÚZK is also the founder of the Research Institute of Geodesy, Topography and Cartography, p.r.i.

Administration authorities for the cadastre of real Estate 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.

Organizational Structure of the Branch of Land Surveying and Cadastre

14 regional cadastral offices

105 cadastral workplaces

2. Administration of the Cadastre of Real Estate

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

Cadastre of Real Estate in the Czech Republic is administered with help of the information system. The Information System of the Cadastre of Real Estate – ISKN is an integrated information support system for state administration of the Cadastre of Real Estate 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 Estate".

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.

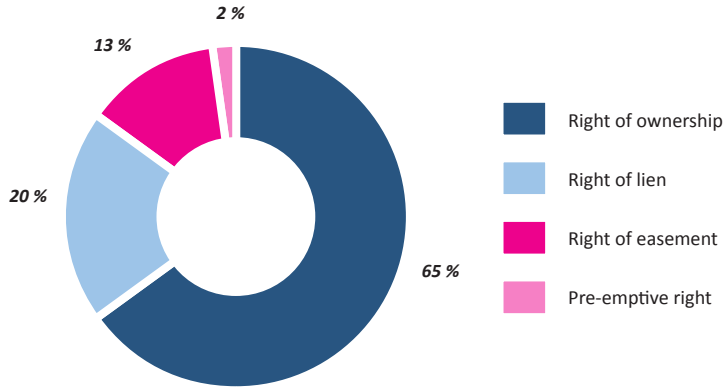
Main Tasks of Cadastral Offices

The main task of cadastral offices is recording of proprietary and other rights to real estate and other data by means of entry or registration and record of notations. Contractual transactions or setting up of material rights to real estate are completed by the constitutional entry of right into the cadastre of real estate, whilst the records or deletions of material rights arising or extinct by the decision of the public authority organ, by law a. o. are performed in a simpler procedural way, by means of so called registration. Similar procedure is used for record of some other data, in particular for record of notations, which should inform the users of cadastral data on important facts regarding the real estate.

Entries of Proprietary Rights into the Cadastre of Real Estate

Entry in the Cadastre of Real Estate 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 Estate. Property rights to real Estate are created by registering in the Cadastre of Real Estate with legal effect on the date of application for entry.

Chart 1: Share of Different Types of Rights Recorded by Entry in the Cadastre of Real Estate



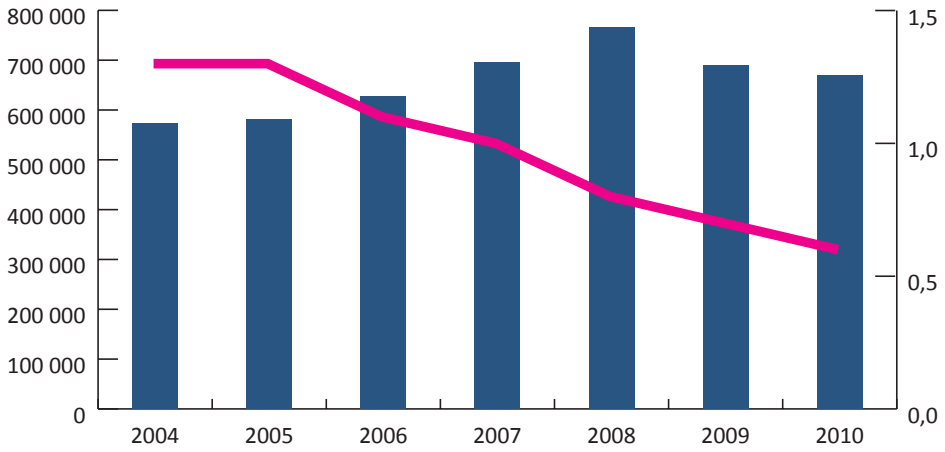
In 2010 the number of accepted proposals for entries of rights decreased on 2 % compared to 2009 – a total of 662 thousand. Proposals for entry of proprietary right were represented by 63 % of the total number, rights of lien concerned 20 % of proposals, 15 % of proposals concerned easements and 2 % pre-emptive right with material effects.

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 13 days in the Czech Republic, total time from submission of application to registration the right into the cadastre of real estate decreased to 19 days – see following chart 2.

662 000 proposals for entry into the cadastre in 2010

19 days for settlement

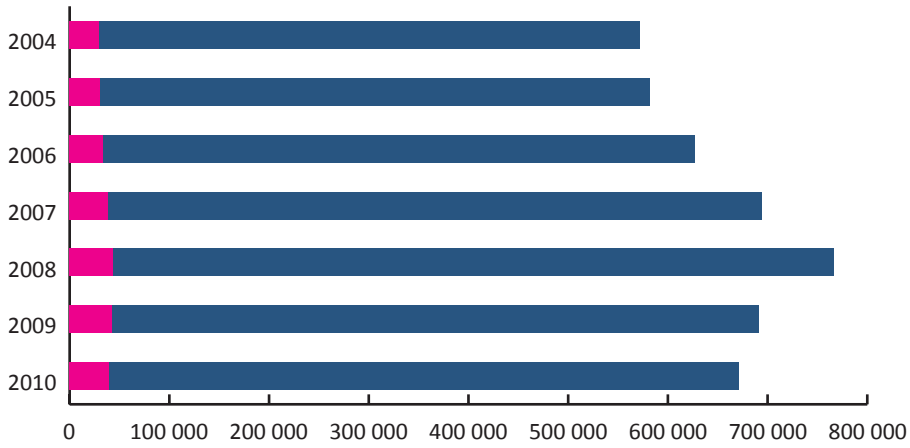
Chart 2: Development of the Total Number of Completed Proceedings on Entry



Year	2004	2005	2006	2007	2008	2009	2010
No. of completed proceedings on entries	572 296	581 025	626 948	695 564	766 305	689 920	670 048
Average time for settlement (in months)	1,3	1,3	1,1	1,0	0,8	0,7	0,6

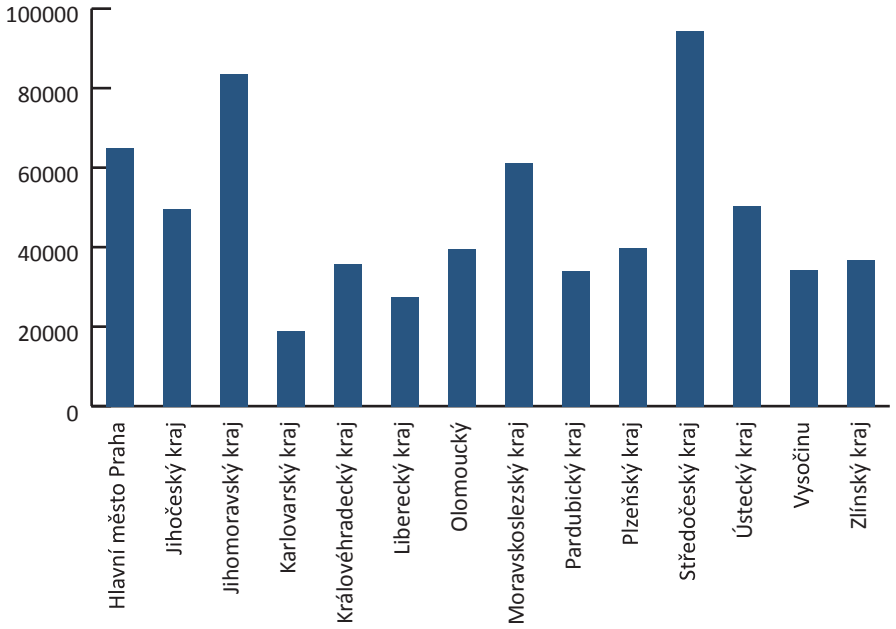
From the total number of yearly requests for entry, 94 % entries of rights are approved, the rest of administrative proceedings are refused or interrupted. In 2010 the total number of refused entries mildly decreased, as you can see in chart 3, however the percentage of incorrect requests at the total number of received requests for entries remains still high. This 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.

Chart 3: Development in the Number of Approved and Refused Entries



Year	2004	2005	2006	2007	2008	2009	2010
Number of approved	541 162	550 447	593 672	655 818	722 123	648 167	631 412
Number of refused entries	28 619	29 626	31 829	36 799	44 020	42 584	39 328

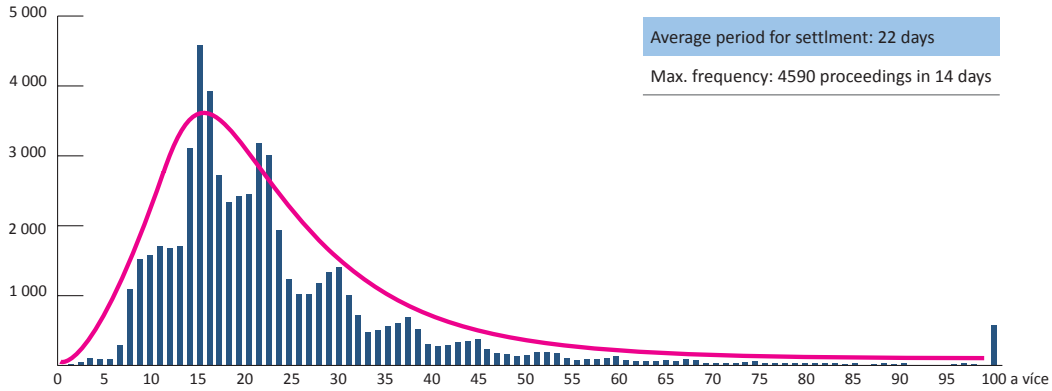
Chart 4: Number of Entries and Suppose Duration of Proceedings in Single Regions of the Czech Republic



Region	Hl. m. Praha	Jihočeský	Jihomoravský	Karlovarský	Královéhradecký	Liberecký	Moravskoslezský
Number of proceedings in the year	64 803	49 454	83 391	19 037	35 842	27 481	61 064
Region	Olomoucký	Pardubický	Plzeňský	Středočeský	Ústecký	Vysočina	Zlínský
Period for settlement in months	39 592	33 985	39 690	94 195	50 421	34 257	36 836

Following chart of dispersion of period for entries in the Cadastral Office for Prague-City depicts the proposals delivered and completed in 2010 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 is visible in chart 5 based on which it can be simply said, that the submitters of error-free proposals can expect completing of their submission practically for 2 or 3 weeks, even in Prague.

Chart 5: Dispersion of Periods for Entry Proceedings between 1. 1. 2010 and 31. 12. 2010 in the Cadastral Office Prague-City



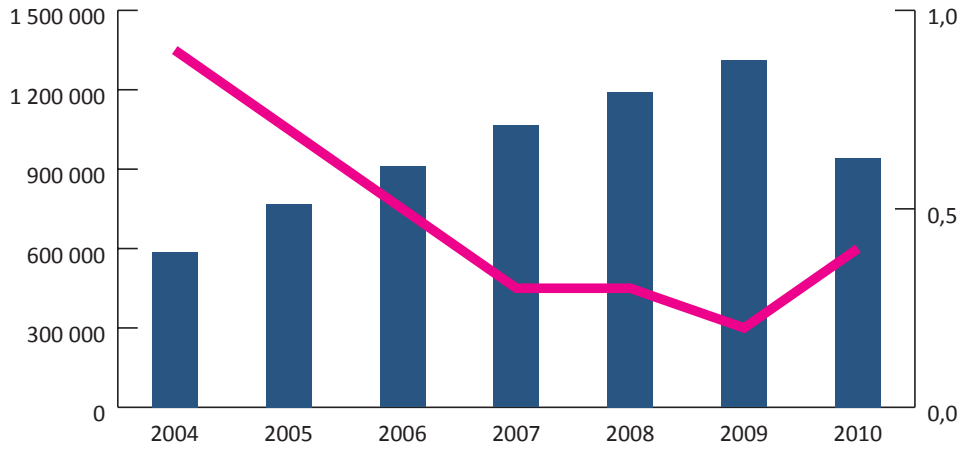
Registering of Rights by Record, Notation and Registering of Other Data

Cadastral offices perform also other registrations into the Cadastre of Real Estate, namely registering by record. This is the way registration of the rights to real estate established by law, by decision of other organizations of state administration, by knocking down of the auctioneer in the public auction, by prescription, by acquisition and processing and of annulment of extinct 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 Estate regarding e.g. change of land type, real estate protection etc.

In 2010 the significant decrease occurred in the number of submissions for registration by notation on the writ of executions as a consequence of the legislative change in the executor code. Whilst 1 291 thousand submissions for registration by record and by notation were delivered to cadastral offices in 2009, in 2010 the number of these submissions decreased on 919 thousand, which represents an annual decrease of more than 29 %. The cardinal influence on the decrease of these requests had the records and annulments of notations on writs of executions. Records of notations on writ of executions have been carried out since 2002, when approximately 40 thousand notations were registered. The number of them has been rapidly growing and reached 585 thousand in 2009. Legal regulations requested carrying out of records of these notations pre-emptively even if the concerned person was not registered in the cadastre of real estate as the owner of any property just for case that he would acquire some property during the process of execution. Together with records of writs of executions on subjects of a very low value, these legal regulations brought a senseless load of work to cadastral offices, which were forced to carry out immediately hundred thousands of records without any practical meaning and without any budgetary increase. Although these records are quite simple, the positive consequences of this change resulted in decrease of the number of employees carrying

out the registration into the cadastre of real estate on 130 in 2010. On the other hand the number of registrations of rights and other data by means of record increased yearly on 66 thousand in 2010.

Chart 6: Number of Completed Submissions for Registering of Rights by Record and Notations



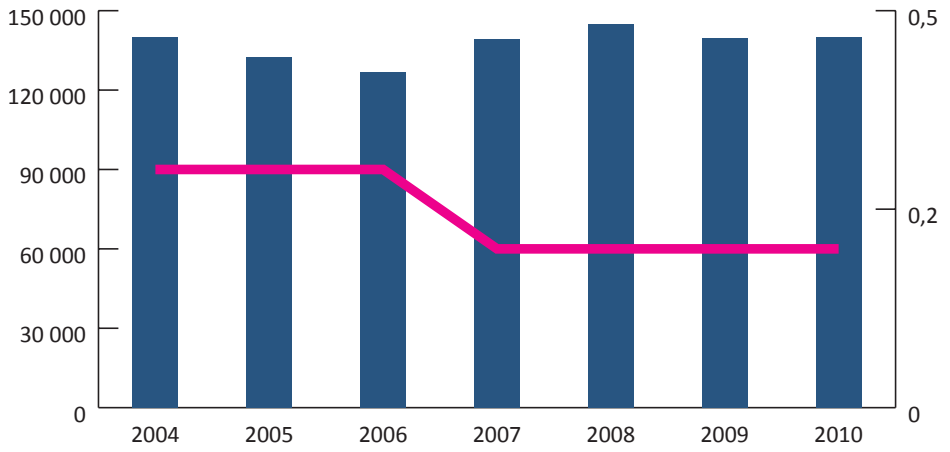
Year	2004	2005	2006	2007	2008	2009	2010
Number of Completed Proceedings	587 824	768 252	910 038	1 064 336	1 190 566	1 310 883	942 806
Period for Settlement in Months	0,9	0,7	0,5	0,3	0,3	0,2	0,4

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 Estate 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 officially authorised to certify the results of surveying activities by the ČÚZK 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.). Even in 2010 the number of requests for certification of survey sketches by the cadastral offices did not change rapidly in comparison to 2009. The average time for checking and certification of survey sketches by the cadastral offices shortened to 4 days.

Chart 7: Development in the Number of Requests for Certification of Survey Sketch



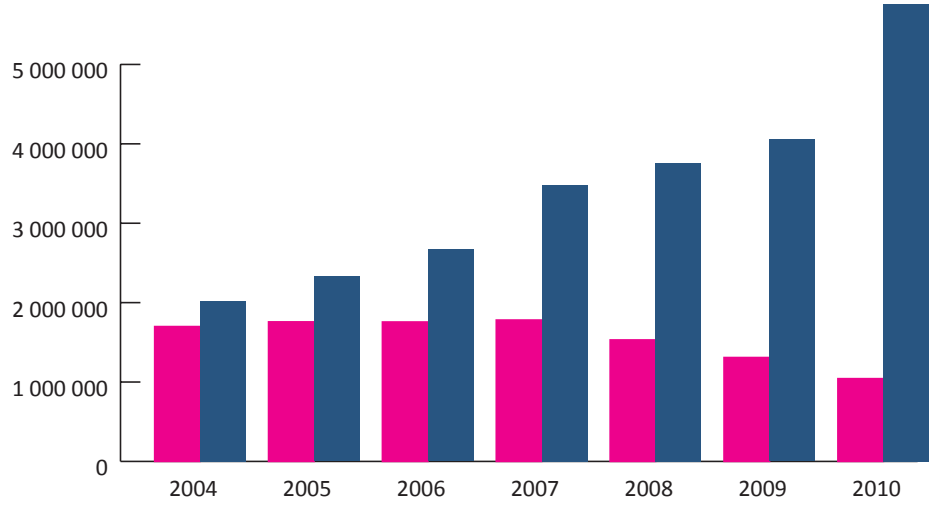
Year	2004	2005	2006	2007	2008	2009	2010
Number of Requests for Certification of Survey Sketch	139 994	132 309	126 746	139 198	144 744	139 576	139 949
Average Period for Settlement in Months	0,3	0,3	0,3	0,2	0,2	0,2	0,2

Provision of Information from the Cadastre of Real Estate

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 Estate 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 Estate.

Requests for provision of information at the counters of cadastral offices in 2010 decreased yearly on 20 %, while the total increase of satisfied requests for information from the cadastre of real estate including remote access was 42 %. Therefore in 2010 82 % of applicants for information from the cadastre of real estate were satisfied by electronic services. This progress was fundamentally influenced by the change of the Cadastral Act, based on which the remote access to the data from the cadastre of real estate is provided free of charge to the state administration bodies. It led to the growth of requests for free of charge data provision to more than double. Very similar result had the development of services on contact points of public administration (Czech POINT), which issued 442 thousand outputs from the cadastre of real Estate in 2010. 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 Estate with an electronic mark began. Such statements are considered as public documents. More in the chapter Electronic services of ČÚZK – Remote Access.

Chart 8: Development in Number of Provided Information: over the counter (number of requests), electronically (number of external outputs-reports)



Year	2004	2005	2006	2007	2008	2009	2010
Information Provided in Cadastral Offices	1 698 690	1 757 902	1 756 365	1 780 972	1 530 412	1 308 748	1 042 700
Included Information Provided Electronically	2 020 000	2 328 600	2 669 419	3 486 033	3 760 788	4 055 402	5 761 856

Digitalization of the Cadastre of Real Estate

Digitalization of the real estate registry is a vital step for effective operation and administration of the Cadastre of Real Estate. 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.

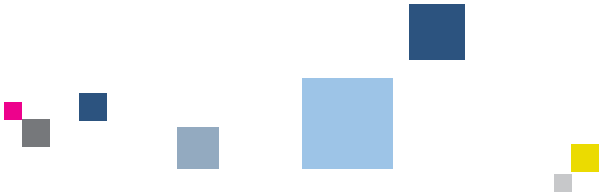
Digitalization of the file of descriptive information of the cadastre of real estate was realized in years 1993 – 1998, in the frame of which the cadastral database was completed with missing data on land parcels consolidated into large agricultural and forest areas, information on titles, some information 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 by the end of 2008.

Development of Digitalization of the File of Geodetic Information of the Cadastre (FGI): 2002–2010

Year		Until 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Digitalization Completed	c.d.	440	453	543	383	314	279	263	313	763	1 106
Total in Digital Form	c.d.	2 428	2 881	3 424	3 807	4 121	4 400	4 663	4 976	5 739	6 845
Yearly Growth from the Total of 13 027 c.d.		3,4 %	3,5 %	4,2 %	2,9 %	2,4 %	2,1 %	2,0 %	2,4 %	5,9 %	8,5 %
% from the Total Number		18,6 %	22,1 %	26,3 %	29,2 %	31,6 %	33,8 %	35,8 %	38,2 %	44,1 %	52,5 %

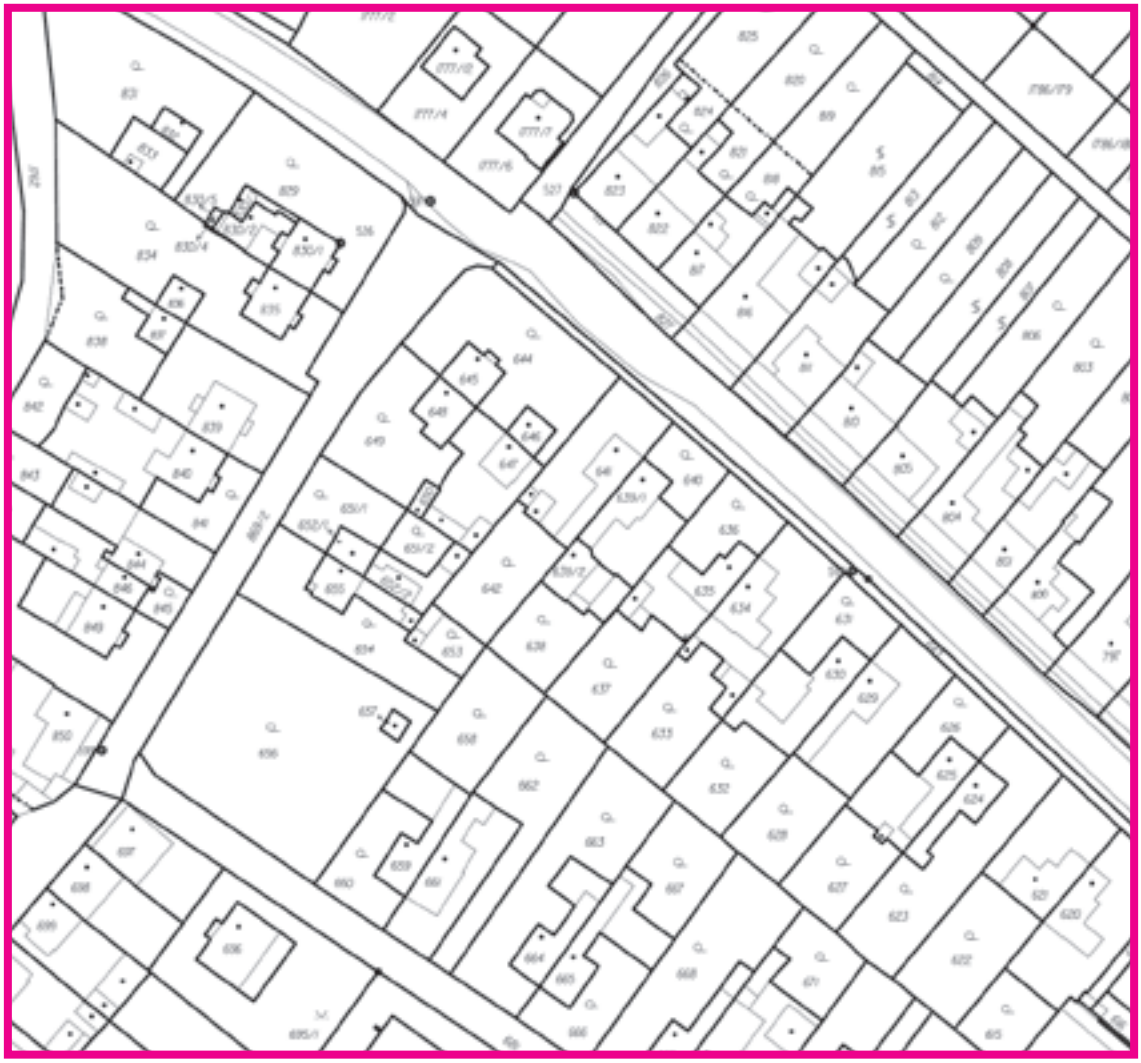
In 2009 the reversal occurred thanks to the provisions for acceleration of the digitalization, accepted by the government. The rate of digitalization reached nearly 6 % of the territory yearly. This growth in rate of digitalization went on even in 2010, when the increase of the number of cadastral districts covered by the digitized cadastral map reached 8.5 % from the total number of them. Attention was still focused on cadastral maps of cities and larger municipalities, where higher quality documentation is usually available and where more transactions on the property market and development objectives are realized.



Results of Digitalization in 2010

At 31. 12. 2010 the cadastral map was available in digital form in 6 845 cadastral districts, which represents 52.5 % 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 Trigonometric Cadastral Net) coordinate system to DCM in 1 106 cadastral districts.

The private sector remained active 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 supply in this way particularly the land surveying works in the field, because the private sector is very well equipped not only with the instruments but also with the knowledge for it. In 2010 the financing of digitalization of cadastral maps was successfully provided without significant cost reduction despite the governmental economy measures included public tenders.



Plan of Digitalization of Cadastral Maps in Further Years

Significant governmental economic measures were included into the approved state budget for 2010. Under these circumstances it was impossible to devote initially planned capacity to the digitalization of cadastral maps and even the financial resources prepared for this task had to be lowered. Nevertheless it is impossible to reach further growth in the rate of digitalization to 10 % of the territory yearly. Therefore the real target was set to keep present rate of digitalization in the approximate amount of 8.5 % of the territory yearly with existing capacity and financial resources. This change will be projected into the frame schedule of the digitalization of cadastral maps so as the deadline for completion of the digitalization will be postponed by 1.5 year, thus from 2015 to the first half of 2017. That is why in 2011 the number of cadastral districts covered with digitized cadastral map is planned to be 1 045 of the total number of all cadastral districts in the Czech Republic. The same increment of digitalization at the level of 8 % from the total number of all cadastral districts should be reached both in years 2012 and 2013, in further years the number of completed cadastral districts should be wound down together with winding down of devoted capacities.

Schedule of Digitalization of FGI: 20110–2017

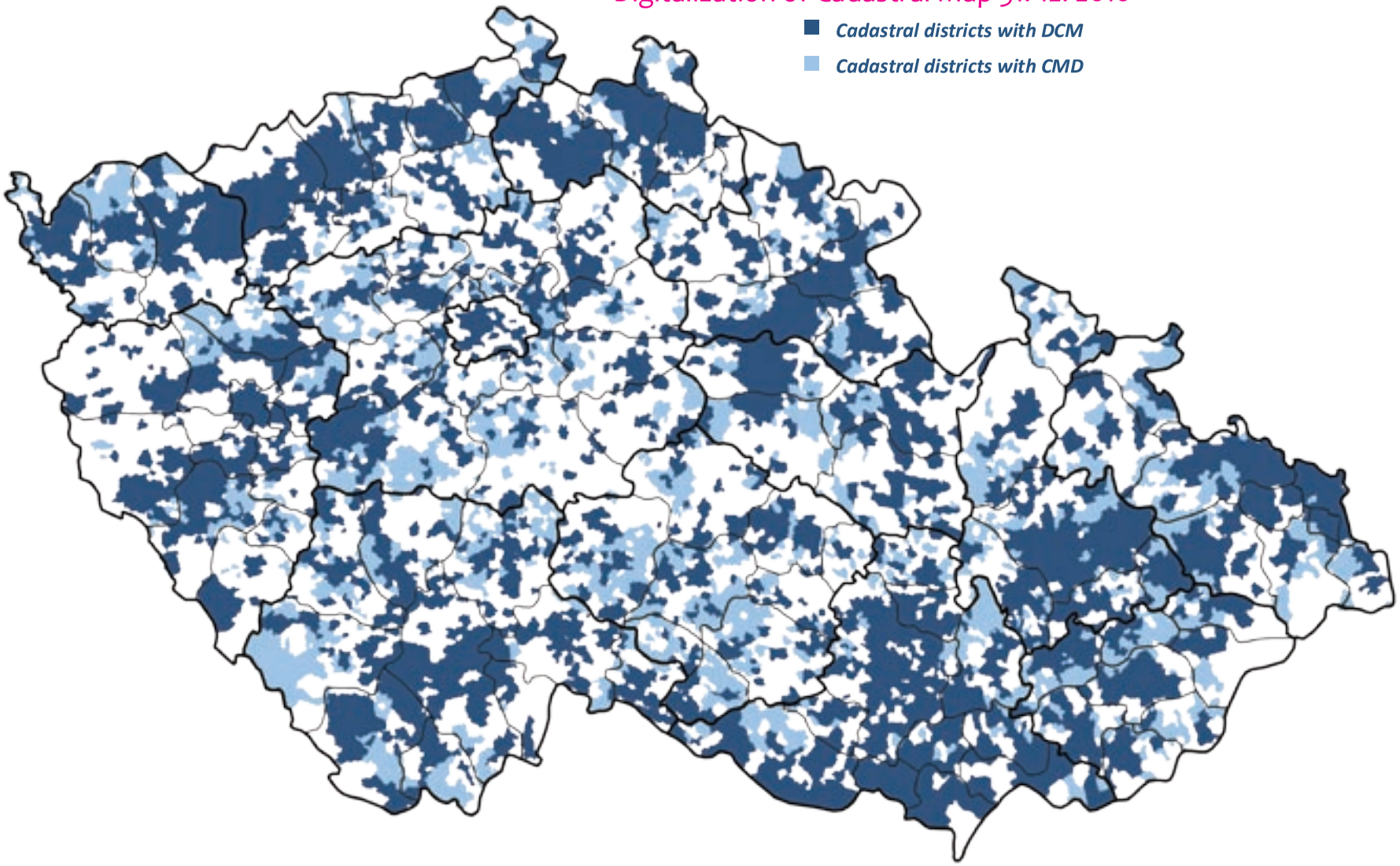
Year	1997 – 2010	2011	2012	2013	2014	2015	2016	2017
Proposal of the number of cadastral districts for map digitalization	-	1 045	1 045	1 045	998	879	760	410
Total number of cadastral districts with cadastral map in digital form	6 845	7 890	8 935	9 980	10 978	11 857	12 617	13 027
Yearly growth in % out of total number	-	8,0 %	8,0 %	8,0 %	7,8 %	6,8 %	5,8 %	3,1 %
% out of total number	52,5 %	60,5 %	68,5 %	76,5 %	84,3 %	91,1 %	96,9 %	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 need 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 receive reasonable financing of this task. 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 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 on the whole territory of the Czech Republic via applications Remote Access into the Cadastre of Real Estate, Consultation of the CRE and Web Map Services of the CRE.

Digitalization of Cadastral Map 31. 12. 2010



3. Land Surveying Activities in the Public Interest

Land surveying activities are just undergoing the phase of data quality improvement. Data precision, details and keeping them up-to-date are growing. At the same time the data are being step-by-step harmonized in the frame of the interdepartmental and international cooperation. Together with data quality improvement provided services are being enhanced and improved, in particular the net services being provided by the Geoportal ČÚZK and by the Czech network of permanent GNSS stations (CZEPOS). Even in 2010 the attention was paid to 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 provision of best quality services and monitoring of CZEPOS network by means of launch of new applications and on cooperation with private land surveying subjects regarding error detection on points. Since further development of geodetic control is impossible without connection to European terrestrial reference system ETRS89, necessary actions for implementation of new realization of its frame in the Czech Republic from 2. 1. 2011 were completed.

Huge effort has been given to keeping of the Fundamental base of geographical data of the CR (ZABAGED®) updated. The three- year updating cycle of the whole territory of the state for many significant object types has been replaced by the updating procedure realized once or more than once a year in cooperation with the external administrators. Completion of integration of the database of geographical names (Geonames) and ZABAGED® lead to elimination of inconsistencies and duplications between both these datasets. Next concept of Geonames meets main requirements of INSPIRE data specifications for the theme "Geographical names". The initiator of some changes in source databases ZABAGED® and Geonames was the realization of the new system for cartographic production, which has been launched after some years of preparations. The system is designed on the ArcGIS platform using modern trends of databases´ cartography. It is drawn up in such a way to efficiently ensure the maps updating in the connection to the existing schedule of ZABAGED® updating.

Further significant activity was the implementation phase of the inter-branch project of ČÚZK, Ministry of Agriculture and Ministry of Defence , regarding the laser scanning and processing of elevation data from the territory of the Czech Republic, which should result in some types of elevation territorial model of the Czech Republic and the model of land cover. Rapid improvement of the quality occurred in the dataset Ortophoto of the Czech Republic thanks to the changeover to the digital aerial photography with the resolution of 0.25 m.

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 CZEPOS apart from classic geodetic control represented by minor control.

In 2010 the geodetic control development was directed at completion of activities leading to launch of new realization of European terrestrial reference frame ETRF89 on the territory of the Czech Republic and publication of the global transformation key for the transformation between ETRS89 and S-JTSK and vice-versa. The communication with users – mostly private surveyors – who send the reports on damages or changes on points of minor control via internet for maintenance and rectifications of defects on the points of geodetic control and geodetic data updating, has been successfully developed.

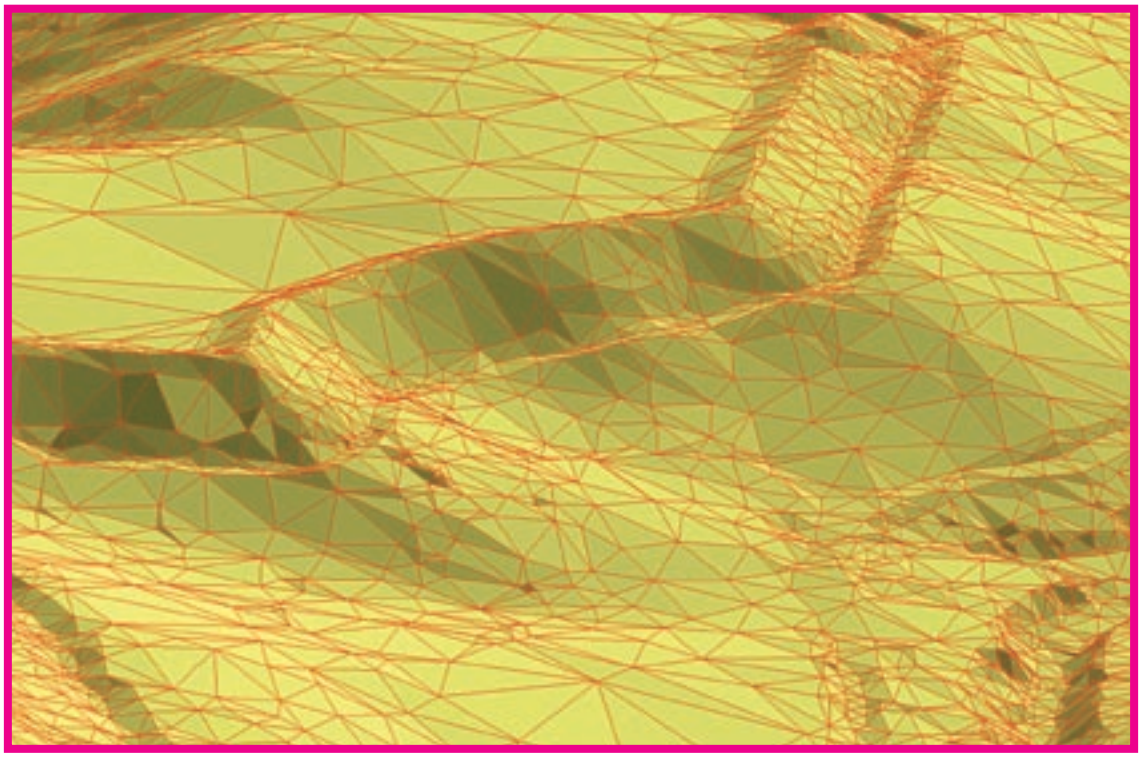
Maintenance and Documentation of the State Border

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. 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. New surveying of state borders and specification of positioning coordinates of all break points of the state border is just being realized only on the border with the Federal Republic of Germany.

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 (ZM10). The content of ZABAGED® represents 122 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 2010 the regular updating of ZABAGED® on the whole territory of the state went on with use of orthophotos, aerial photos and field investigation. In last years the updating cycle of ZABAGED® is three years in this regime. 23 significant objects such as roads, administrative boundaries being and others are being updated once a year or even more often based on changes delivered by their administrators. In cooperation with the Czech Statistical Office (ČSÚ) the inspection of the integrity of roads and their names was completed in 2010 and thereby the preparation for their use in the basic register of the territorial identification, addresses and real estate. In the cooperation with the T. G. M. Water Research institute, p. r. i. unrepeated updating of codes of water courses, which are in the responsibility of the institute, was performed. The inspection of correctness of object matching completed the integration of Geonames and ZABAGED® databases.

Digital Surface Model (DMP 1G)



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 solely in the areas not being covered by the laser scanning yet. 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. Based on the Agreement on cooperation on creation of CR altimetry digital databases between the Czech Office for Surveying, Mapping and Cadastre, the Ministry of Agriculture and the Ministry of Defence of 2008 the execution of the new altimetry mapping project of the territory of the Czech Republic with use of the technology of airborne laser scanning has been started . During 2010 the whole central zone of 29 460 sq.km and part of the west zone of 3 150 sq.km. Maximum automated processes ensured the processing of the digital terrain model into the point grid sized 5x 5m (DMR 4G) for more than one third of the territory of the Czech Republic. At the end of 2010 the provision of DMR 4G to users was launched. On the part of the central zone the manual inspection has been ensured as well as data classification necessary for creation of further products, such as digital terrain model in the irregular triangular net (DMR 5G) and digital surface model (DMP 1G).

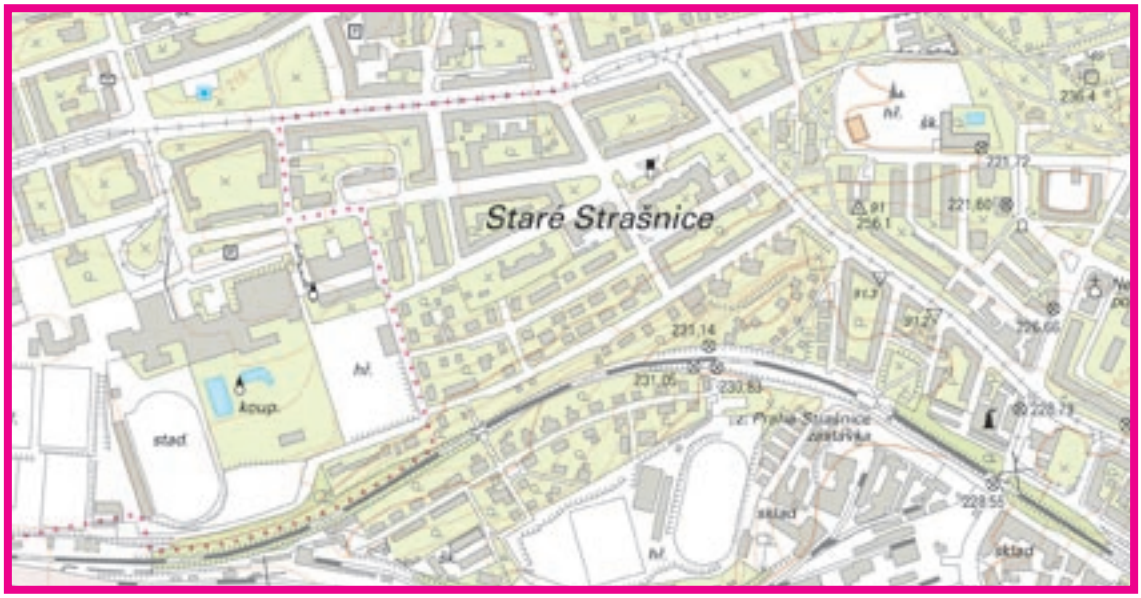
State Map Series

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 by the state administration body in the public interest. The sources of topographic content of the basic state map series are 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. In 2010 the maximum automated technology was used to collect data for the new edition of SM 5 on approximately 34 % of the Czech Republic. The new SM 5 is available via web map service, printed copies and file data will be launched in 2011.The last version is state map 1:5 000 – raster one (SM5R) based on the SMO-5 printing bases and being provided both in raster and printed forms. 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, Czech Republic – 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 2010 creation of new map series continued – 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.

Basic State Map 1:50 000 Based on ZABAGED® Data

Basic State Map 1:10 000



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 Road Map of the Czech Republic 1:50 000, the Regional Road Map of the Czech Republic 1:200 000 and some other maps with thematic land surveying content.

For needs of creation and updating of the maps of 1:10 000 to 1:100 000 the new information system of state map series has been set into operation in cooperation with the provider – company T-Mapy Lmt.

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 (5 km^2). Data are in TIF raster format, JPEG or MrSID with resolution of 0.25 m (for "Central" and "East" zones) and 0.5 m (for "West" zone). Orthophotos 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. Since 2010 the aerial photographs are being taken by the means of digital scanning, which enables simplification of data processing and improvement of their photo interpreting quality.

Orthophoto

Geonames Database

The Geonames database provides a complete set of information on standardized geographical names (in total 165 types of designated objects) and names of settlement units in the detail of the Base Map of the Czech Republic 1:10 000 complemented with the terminological content of chosen small scale maps. The Geonames database facilitates the access to terminological data, allows their analysis for the needs of onomastic and historical research. It is increasingly used in map portals, web applications and search services. 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.

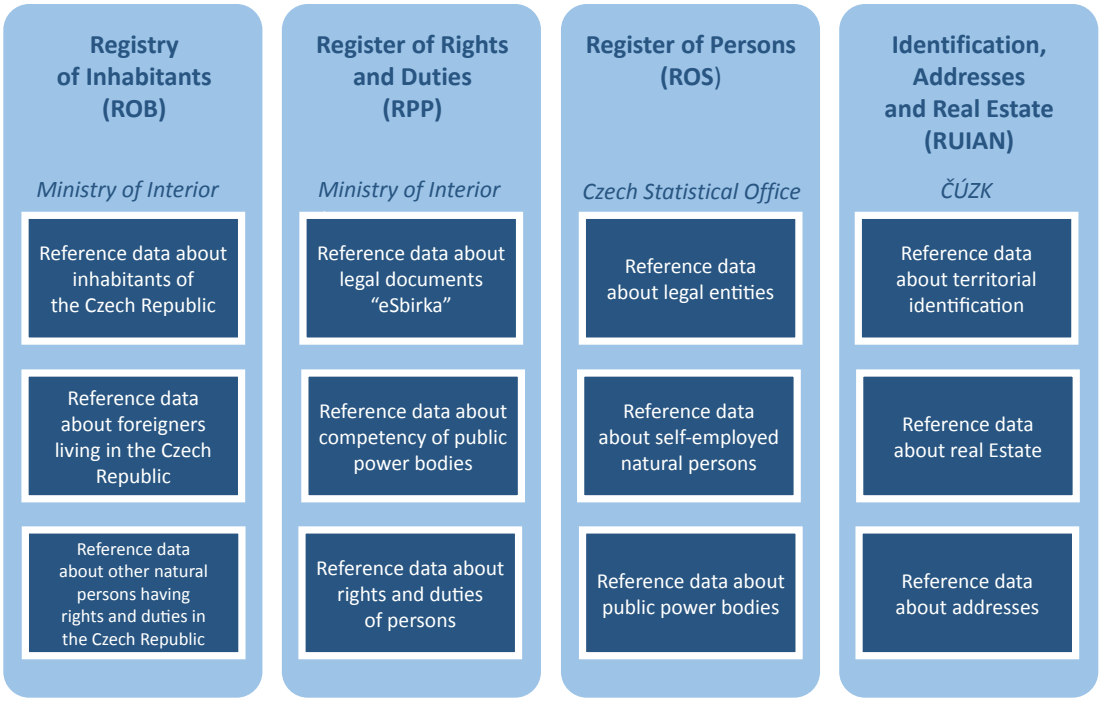
Updating of the Geonames database is going on in cooperation with municipalities harmonized with updating of ZABAGED® together with digitalization of cadastral maps. After completing of the data integration in both mentioned applications geographical names are connected direct to the objects and are set into the database only one time and not in the number of their occurrence in the map.

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 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.

Basic Registries and Their Content



The branch ČÚZK is in particular involved in the Registry of territorial identification, addresses and real Estate (RÚIAN). This 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 2010 the realization of the registry has started in two main steps. The first one is the integration of common central technological infrastructure for information systems of the cadastre of real estate, territorial identification (ISÚI) and RÚIAN. The second one is the preparation of the application programme equipment and databases for ISÚI and RÚIAN .The progress of the project has been influenced in a negative way since May 2010 because of non-existence of further parts of the system of basic registries, especially the Information system of base registries (ISZR), the implementation of which has not been launched by the Ministry of interior till the end of 2010. Different alternative solutions were therefore used in maximum number enabling to continue in the project. The data basis was completed twice from the source information systems and the mutual discrepancies were identified. ISÚI is prepared to the pilot run based on the mutual editing between municipalities and constructing offices. Further progress of the project is fully dependant on the steps of the Ministry of interior responsible for the realization of the system of basic registries.

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 Estate

https://katastr.cuzk.cz/

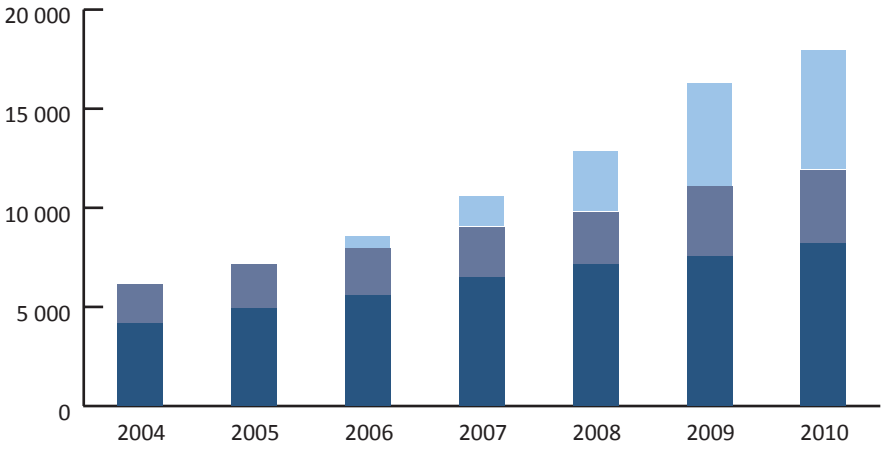
Remote Access (DP) allows the provision of data from the cadastre for the whole territory of the Czech Republic via the internet. Outputs from the cadastre obtained in this way – for example, statements from the cadastre and other configurations, are formally and materially completely identical to documents 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 Estate for the whole CR and those cadastral districts where digital cadastral 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.

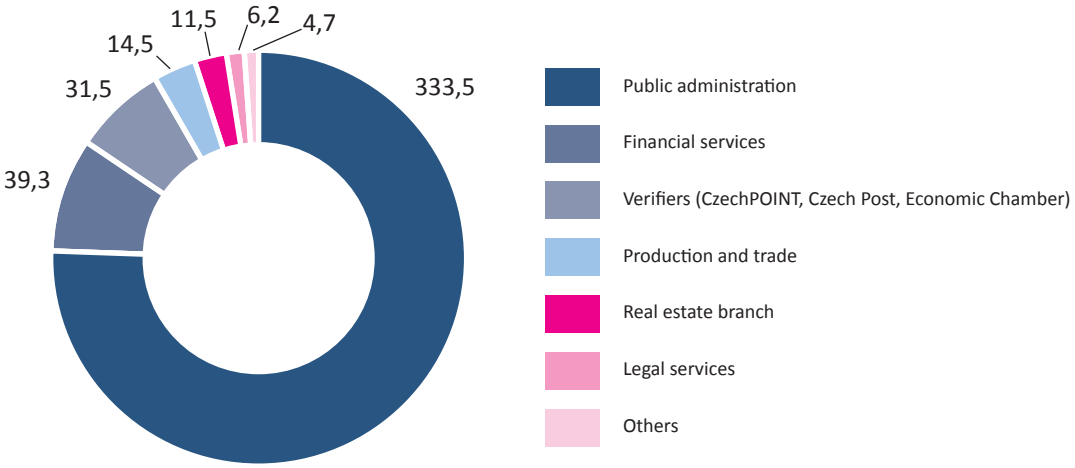
Outputs from Remote access are paid, but substantial group of users from state administration and self-government have been provided with data from the cadastre in this manner free-of-charge. Remote Access has been operated since 2001 and since its launch the number of clients actively using it has grown annually. The number of RA users increased by about 9 %; at 31. 12. 2010 the number of users´ accounts was at a total of 17 958, 3 714 of which were free accounts and 6 043 were accounts for certifiers (see later) in connection to the development of the project Czech POINT.

Chart 9: Development of the Number of Users – According to the Type of Acounts



Year	2004	2005	2006	2007	2008	2009	2010
Paying users	4 169	4 933	5 572	6 474	7 132	7 552	8191
Free Charge users	1 979	2 190	2 364	2 558	2 667	3 514	3714
Verifier´s	-	-	614	1 540	3 051	5 201	6043

Chart 10: Depiction of the Biggest Users of Remote Access – According to the Data Value

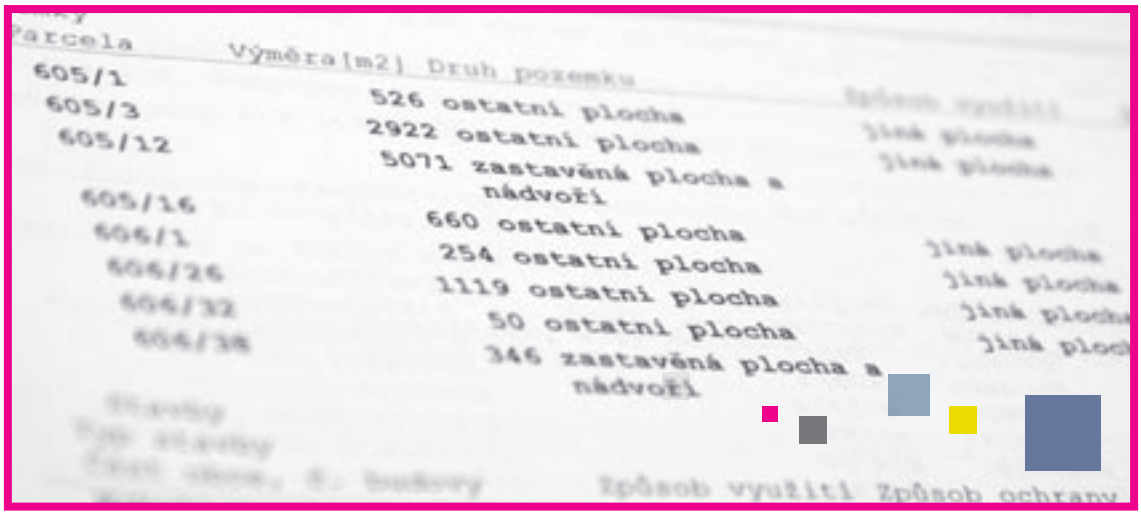


Despite the number of users has been growing, the income for provision of data via Remote Access slightly decreased in 2010. The income from paid accounts overreached 106.6 million CZK in total. Taking into account the paid users these services are most used by the banking sector for obtaining of the documents necessary for mortgage provisions. Other significant group were in 2010 the verifiers. Remote Access is provided free of charge to municipalities and regions for performing their competency and since 2009 to the state institutions, notaries and executors, as well. The very free of charge provision of services to court executors lead to slightly decreased income.

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 Estate 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 Czech Post s.c. 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, 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 estate, from the trade and commercial registries and from criminal record. The verified 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 estate and the possibility of issuing copies of digital cadastral maps is under preparation.



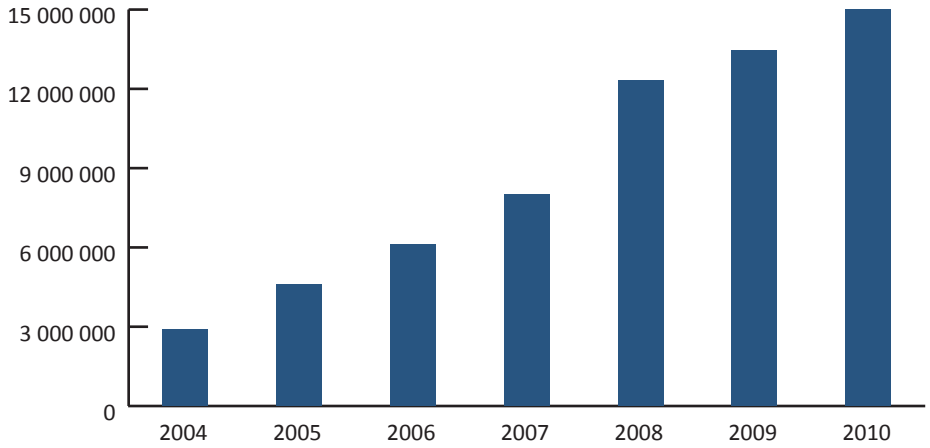
Consultation of the Cadastre of Real Estate

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 Estate 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. In 2010 the modification of the application was completed being more user-friendly and enhancing the data updating.

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 2010 it had more than 15 million visits. Yearly growth in the number of visits is 11.5 %. 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 estate direct from their worktable.

Chart 11: Development of the Number of Visits to Consultation of the Cadastre of Real Estate



Year	2004	2005	2006	2007	2008	2009	2010
Number of accesses in thousands	2 900	4 600	6 100	8 000	12 315	13 419	15 000

Web Map Services for Cadastral Maps

http://wms.cuzk.cz

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. This service is also free of charge. Yearly growth in the volume of provided data is 92 % and even 180 % in the number of requests.

Geoportal ČÚZK

http://geoportal.cuzk.cz/

The Geoportal of the ČÚZK 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 the half of 2010 the new version of Geoportal of ČÚZK was launched. ČÚZK 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.

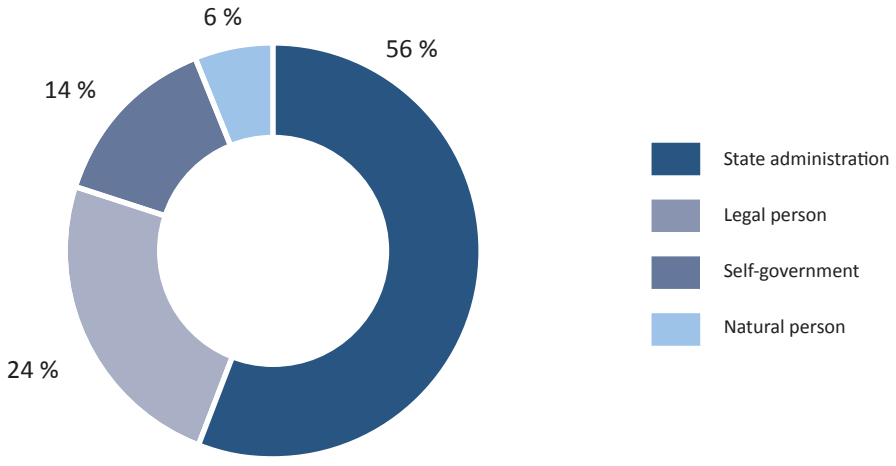
In accordance with requirements of the Implementation rules of the INSPIRE Directive the meta-information file on provided data and services was completed in 2009 in line with the branch metadata profile and in 2010 the management system of the metadata publication and records on products and single sale units has been changed. Apart from the metadata on datasets there are even more detailed data on single map sheets for most products at the disposal and newly also published the information on the state of the digitalization of the cadastral maps. Searching in metadata is enabled by the searching service.

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. Share of single users´ types on the total number of issued units provided in 2010 via commercial module is depicted in following figure.

Chart 12: Structure of Geoportal Users in 2010, Included Map Services



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 request signed by the University.

Map Services

Standard map services of the ČÚZK Geoportal enable on-line internet access to datasets administered by the branch of land surveying and cadastre. Registered users 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. They 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, which they can use in their own application

Viewing map services is at disposal for wide public via applications map window and Geoviewer. The same datasets are offered there solely for viewing without necessary registration as those provided to the registered ones and in addition the map service from data of the database of geodetic control points is available. Graphical searching of geodetic points in this database (included depiction of point location sketch) is available via Geoviewer. Fully free, without necessary registration and not only for search but also for use in all feasible users´ applications, following items are for disposal: cadastral map, provided in the form of map service, data of raster map MCR 500 and MCR 1M, and list of map sheets of the basic map and the net for the geographical system WGS84.

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 ČÚZK 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 who uses in such a form provided data for preparation of population, houses and flats census in 2011.

Archive Maps

http://archivnimapy.cuzk.cz

In 2006 the application Archive Maps was launched within the Geoportal of the ČÚZK. 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 1824 to 1843 in scale of 1:2880, now completed with the comparison records of areas between 1845 and 1948, prints of topographical sections of the third military mapping between 1872 and 1853 in scale of 1:25 000, collection of maps and plans from the second half of the 16th century until 1850. 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 of the ČÚZK it is possible to order copies of archival documents or digital sets in printing quality.

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 2010 5 new CZEPOS station were after pilot operation officially accepted into the International network of permanent stations GNSS EUREF (EPN), the goal of which is to define the system ETRS89 at the territory of Europe.

Overview CZEPOS Map Depicting the History of Connecting of Foreign Stations

The new application Permanent control of the precision of the network solution, which was developed in the cooperation with the Czech Technical University in Prague, has been launched on the CZEPOS website. The users can get the update information on the development of the precision of the CZEPOS services provided in chosen locality and chosen day. Together with it the application Monitoring of CZEPOS service operation has been launched, where the users can get the information about existing functionality and availability of services and single stations with the possibility of depicting the history of this functionality. In the second half of 2010 the innovation of CZEPOS data products provision has been realized serving for post-processing. To access the products another application has been launched, which provides not only products but also overviews and detailed outputs on their availability and quality.

By means of before mentioned applications the users got the complementary overview on the availability and quality of the provided CZEPOS services and products and single parameters can be verified on the internet website in on-line regime. CZEPOS gains its wide ground in geodesy, navigation or in the area of intelligent control systems. At 31. 12. 2010 there were 992 registered CZEPOS network users, in comparison to the end of 2009 it means grow by 163 users.

Database of Geodetic Control Points

http://bodovapole.cuzk.cz/

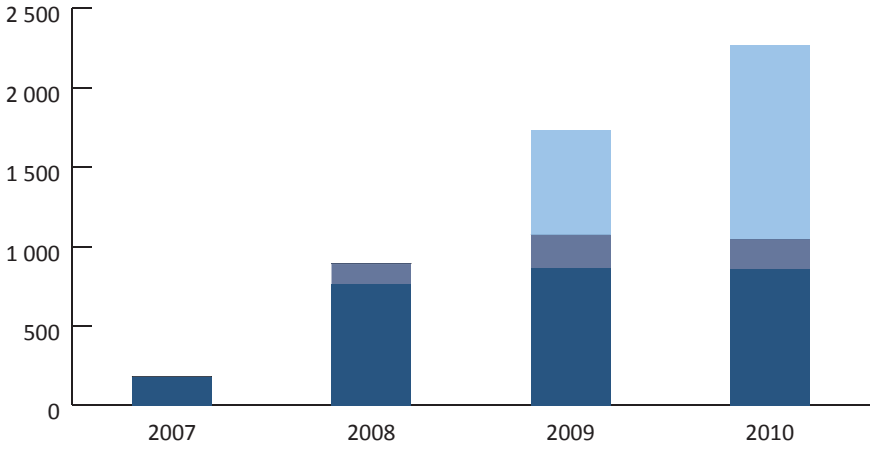
Database of geodetic control points serves to administration of data on geodetic control points. It contains geodetic data on points of fundamental horizontal, vertical and gravimetric control, data on densification and minor vertical control points. The Land Survey Office performs administration of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

By the end of 2010 the database of geodetic control points included 72 250 centres of trigonometric and densification points and 35 040 associated points, further 1 313 levelling lines of the Czech state levelling network in total 25 112 km long, 118 358 levelling points (82 347 out of them are fundamental vertical control points) and 460 gravimetric points.

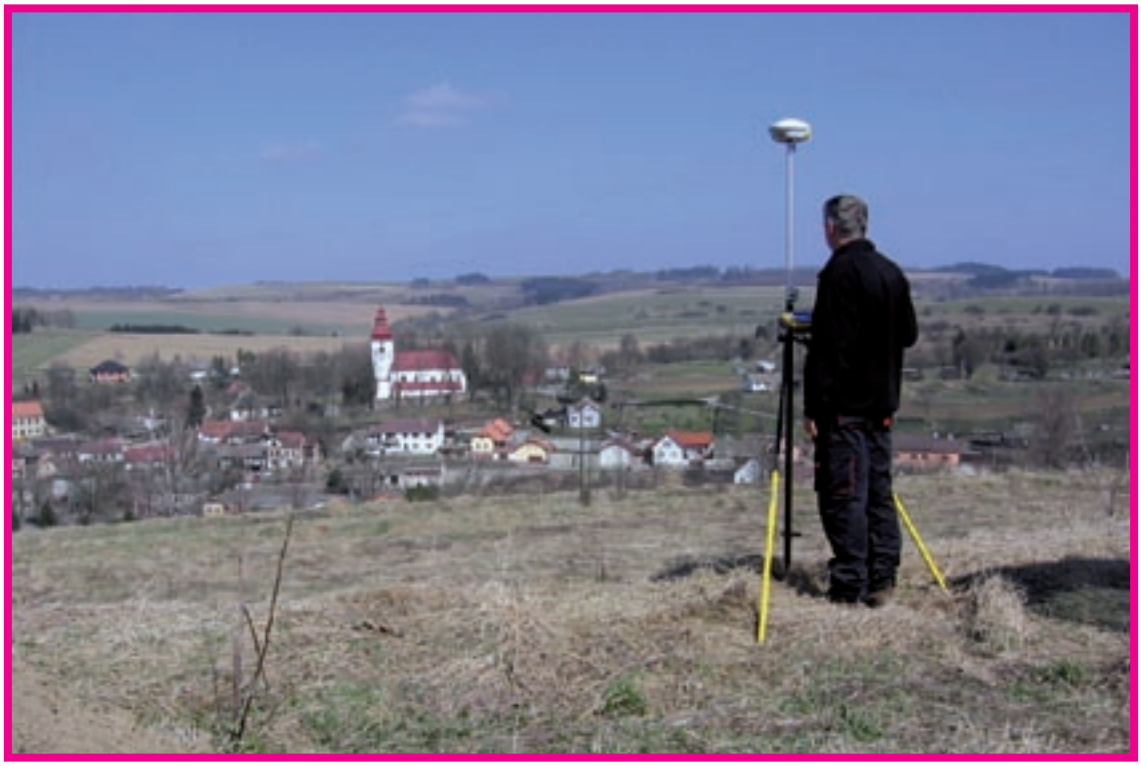
At the end of 2010 together 955 cooperating users of DGCP were registered, it means users who fill in the web announcements on defects on geodetic control points. In comparison to 2009 there is increase of further 265 users in 2009.

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.

Chart 13: Number of Accepted Announcements on Defects on Geodetic Control Points



Year	2007	2008	2009	2010
Points of minor horizontal geodetic control	181	764	863	857
Points of vertical control	-	129	211	189
Trigonometric and densification points	-	-	658	1224



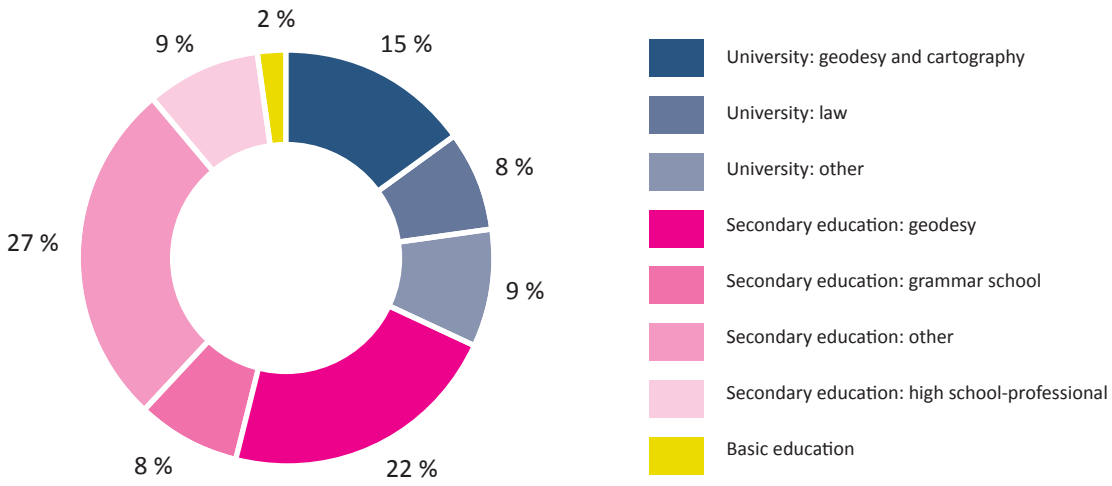
CZEPOS network is widely used in geodesy, navigation or in the area of intelligent control systems.

5. Economics and Human Resources

Employees and Education

The overview of the personnel structure in 2010 according to age and education still confirms the positive trend of the last few years – a constantly increasing share of university graduates among employees (increase of 1.5 %).The share of the secondary educated employees decreased by 1.39 % and the share of the basic education employees yearly decreased by 0.11 % (it is 10 employees). In the youngest age categories (to 40 years) there are practically no longer employees with basic education. A reality is constantly increasing representation of other fields than geodesy and cartography; above all these are employees with training in information technology, law and economics. However, this difference has decreased in 2010 by 0.61 % as a consequence of increase of the number of employees in the category geodesy and cartography needed for the digitalization of cadastral maps.

Chart 14: Overview of the Personnel Structure According to Education Type in 2010



Training in the ČÚZK 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 2010 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.

Based on the approved plan of education in the Czech Office for Surveying, Mapping and Cadastre in 2010 a lot of educational activities were realized by the personal department for the employees of the branch and ČÚZK. These activities were mainly focused on deepening education in further areas 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 ČÚZK 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 of real estate 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 2010 in accordance with section 14 of the Act No 200/1994 Coll. on surveying and mapping.

In the year 2010 the total number of completed applications was 64 (12 of them from 2009). Based on the professional competence exams new official authorization was granted to 45 applicants and 10 applicants enhanced their existing authorization. 2395 persons have been registered on the updated list of officially authorized land surveying engineers administered by the ČÚZK by the end of 2010. Two official authorizations were deleted from the registry.

Economics

Legally approved state budget of the Czech Republic for 2010 specified revenue of CZK 567 541 thousand and expenditure of CZK 3 431 973 thousand for the ČÚZK. The budget of revenues and expenditure was increased within 2010 by CZK 208 thousand for project co-financed by the EU budget - Operational project Human resources and employment and the budget of expenditure by extra 222 thousand in the frame of the Operational program Environment. Except for these budget adjustments in responsibility of the Ministry of finance another budget adjustments were realized in the responsibility of the branch ČÚZK.

In 2010 the chapter had two specific revenue indicators "Revenue collection" and "Non-revenue collection, capital incomes and accepted transfers in total". Revenue collection, coming to the budget from the administrative fees, were prescribed in the amount of CZK 53 000 thousand, their fulfilment reached CZK 62 770 thousand, it is 118 %. Adjusted budget of non-revenue collection of CZK 514 749 thousand (CZK 314 749 thousand of the total amount from the EU budget) was filled in by the amount of CZK 214 172 thousand, it is 41.6 %. The reason of low level of revenues were low incomes from the EU budget being in 2010 CZK of 3 423 thousand in total. Other non-revenue collection and capital incomes of the branch were filled in the amount of CZK of 210 749 thousand, it is 105 %. In comparison to 2009, when the incomes reached CZK 241 576 thousand, the decrease achieved in 2010 was CZK 30 827 thousand. The main reason was the increase in the number of subjects having the legal right to acquire the data from the cadastre of real estate free of charge, as follows governmental bodies, administration bodies, notaries and executors.

The expenditure in 2010 were used mostly on employees´ salaries, other payments for work carried out and associated expenditure, 63 % of the total expenditure of the branch. Due to the frozen sources these expenditure decrease by 4 % in comparison to 2010.The average monthly income achieved in 2010 reached CZK 23 075 per employee, it means decrease on 2.9 %.The reason for the decrease were not only frozen sources, but also the transfer of the sources from the employees´ salaries towards the non-budgetary expenditure necessary for the compensation payments.

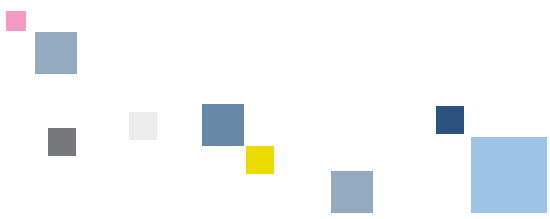
The second big group of expenditure were those used on financing of programs administered in the Information system of programmed financing EDS/SMS, it means the expenditure allotted for procuring and modernisation of sector tangible and non-tangible property of the branch. It was 30 % share of the total expenditure. Significant part of the programmed expenditure was those used on realization of projects co-financed by the EU budget, in particular Building of RÚIAN and modernization of the Information system of cadastre of real estate ČÚZK (CZK of 398 million). Further important item are the programme noninvestment expenditure, serving for securing the operation, maintenance and repair of state assets and for the lease of computer technology and administrative buildings. The total expenditure consisted further of other material expenditure and those used for research and innovation. Further material expenditure, being in connection with the fulfilment of the legally stated material tasks, were used in 37 % for postal services and 29 % on digitalization of cadastral maps. The remaining part of other material expenditure covered particularly the expenditure on material, travel costs, training and educational expenditure on the compensation for the loss of salary during the illness and other services included the meal allowances for the employees.

Summary of Obligatory Indexes of Chapter 346 of the State Budget for the Years 2003 – 2009

Financial Indexes in CZK ´000s

Index/ Year	2004	2005	2006	2007	2008	2009	2010
Revenues of the chapter[1)]	158 315	143 125	157 572	175 459	214 158	271 592	276 942
Including:tax revenue						30 016	62 770
Administration fees	486 472	544 156	549 614	644 280	682 226	596 489	541 442
Data provided free	336 544	438 426	536 376	630 959	664 009	761 934	917 612
Total expenditure of chapter[2)]	2 327 168	2 421 660	2 513 377	2 815 730	2 806 480	3 170 650	3 336 483
Including:projects co-financed from EU budget						26 778	400 226
Current expenses without non-investment	1 802 266	1 830 893	1 956 447	2 109 573	2 197 182	2 460 125	2 351 702
Including: wage resources[3)]	1 179 756	1 308 839	1 308 839	1 424 864	1 456 806	1 597 945	1 536 985
Insurance and FKSP	434 688	452 144	483 848	527 530	539 126	575 343	549 632
Other material costs	187 822	154 686	163 760	157 179	201 250	286 837	252 145
Program expenditure	500 302	563 362	528 266	677 493	580 634	679 225	984 781
Including: non-investment	247 735	256 231	356 631	414 244	402 841	437 128	396 053
Investment	252 567	307 131	171 635	263 249	177 793	242 097	588 728
Research and development expenditure	24 600	27 405	28 664	28 664	28 664	31 300	22 159
Including: operational	24 100	26 405	27 664	28 164	28 664	31 300	22 159
Investment	500	1 000	1 000	500	0	0	0
Number of employees in Sector[4)]	5 616	5 523	5 445	5 430	5 412	5 596	5 532
ČÚZK	158	158	157	159	153	151	159
Cadastral Offices	4 902	4 816	4 755	4 755	4 738	4 935	4 864
Land Survey Office	466	455	443	430	427	417	416
Survey and Cadastral Inspectorates	90	94	90	91	94	93	93

1) revenues are adjusted for resources from revenue accounts of the CNB with prefi xes 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 Estate, supervision over the certification of results of land survey activities used for the Cadastre of Real Estate 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 1 560 documented inspections at cadastral offices in 2010.

Inspection activity of SCI´s in 2010 focused mainly on the inspection of the application practice of the utilization of the cadastral regulation Nr. 26/2007 Coll.,; on observance of technological processes during the digitalization of fathom cadastral maps as stated in the Instruction for renewal of cadastral documentation; on the application of the sounding of the provision of section 18 of the Decree Nr 31/1995 Coll., on electronic verification of results of land surveying activities submitted or documented in electronic form; on the findings in chosen cadastral districts, whether the change of original relative connections of fathom cadastral maps after their adaptation to S-JTSK are positive or negative together with detection of existing delays between retirement of the cadastral documentation after the complex land consolidation, legal power decision of the land office on the change or transfer of the ownership rights and final announcement of the validity of the renewed cadastral documentation by the cadastral office.

In the framework of supervisory activity (supervision of certification of the results of land survey activities) SCI performed a total of 455 documented supervisory actions in 2010. In 14 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 295 000.

Surveying and cadastral inspectorates performed in 2010 in total 1560 inspections at cadastral offices.

The extent of decision-making agenda of SCI on appeals against decisions of CO increased in 2010 on 22.5 % (795 appeals delivered in 2010 as opposed to 649 appeals delivered in 2009). The number of appeals in matters regarding correction in cadastral documentation increased on 10.8 % in comparison to 2009 (432 appeals delivered in 2010 as opposed to 390 delivered in 2009), the number of appeals in matters regarding objections against the content of renewed cadastral documentation increased on 29.2 % (137 in 2010 as opposed to 106 in 2009) and the number of delivered appeals against procedural decisions of CO increased by 44.6 % in 2010 in comparison to 2009 (214 in 2010 as opposed to 148 in 2009).

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	50	432	482	12	249	35	2	133	42	9
Objections to revised cadastral documentation	10	137	147	1	66	15	1	49	13	2
Infringements of order in the sphere of the cadastre	-	1	1	-	1	-	-	-	-	-
Procedural	12	214	226	2	74	4	5	134	6	1
Changes in the boundaries of cadastral districts	-	-	-	-	-	-	-	-	-	-
Administrative fees	-	8	8	-	3	-	-	5	-	-
Rejection of applications for submission of information	-	-	-	-	-	-	-	-	-	-
Other	-	3	3	1	2	-	-	-	-	-
In total	**72**	**795**	**867**	**16**	**395**	**54**	**8**	**321**	**61**	**12**

Total Number of Complaints for 2010

Inspectorates	Not resolved at 1.1.	Received after 1.1.	In total	Forwarded	Legitimate	Not legitimate	Still being resolved
in Brno	-	8	8	1	2	4	1
in Č. Budějovice	-	5	5	-	-	4	1
in Liberec	1	7	8	5	-	3	-
in Opava	1	5	6	-	1	4	1
in Pardubice	-	1	1	-	-	1	-
in Plzeň	-	4	4	1	1	2	-
in Praha	2	52	54	36	2	13	3
In total	**4**	**82**	**86**	**43**	**6**	**31**	**6**

Financial Inspection

ČÚZK as administrator of budget chapter performed financial inspections according to the Act No 320/1990 Coll. on financial inspection, at its subordinated bodies in 2010.

According to the approved plan of public administration inspections for the year 2010 the inspection group of ČÚZK carried out public administration inspections together at following 12 inspected bodies:

CO for the Region Ústí nad Labem, CO for Region Vysočina, CO for the Region Zlín, CO for the Region Olomouc, CO for the Region Karlovy Vary 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 ČÚZK inspection group verified particular cases of utilization of public resources not only before, but also during and after their use. Part of the inspection was the checking of the call for public tenders and their realization, the right range of administration fees, payments and prices for provision of data from the cadastre of real estate and results of land survey activities.

Inspections focused in 2010 on fulfilment of provisions, being adopted to eliminate insufficiencies from previous inspections and inspections performed in the ČÚZK branch by external audit organizations particularly financial offices and financial directorates. Public administration inspections of some inspected persons in 20 found less serious formal and objective shortcomings emerging from the inconsistent compliance with some provisions of ČÚZK economic rules, some partial shortcomings in records of assets and in provision of information from the cadastre of real estate in the Czech Republic. No serious shortcomings were discovered by public inspections in 2010 that would unfavourably affect the activities of inspected persons. All documents from carried out inspections were delivered to the president of the ČÚZK, 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 existing insufficiencies. After the information on provisions accepted to elimination of existing insufficiencies all inspections were completed in due course Summary report on results of the financial inspections for the year 2010, 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 the branch ČÚZK part of the system of financial inspection in accordance with the section 3 of the Act No. 320/2001 Coll., on Financial inspection. It is carried out by special mandated employees - internal auditors, whose systemized job positions are established in state administration bodies (further only SAB) in ČÚZK, LSO and all CO. Organizational rules ensure fully independence of the auditors and their separation from managerial and executive structures. They are directly subordinated to heads of SAB.

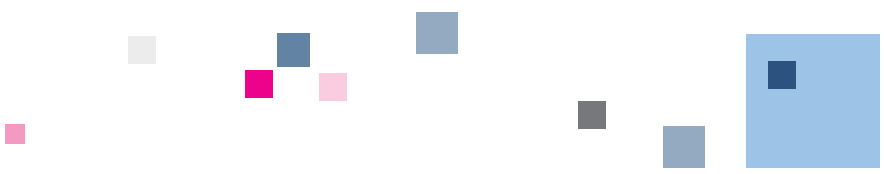
The main task of performed internal audits is independent inspection and evaluation of appropriateness and efficiency of the managerial inspection, including verification of accuracy of chosen operations in conditions of particular SAB. The function of internal audit is not established in SCI and is substituted there by the regular yearly public administration inspection.

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 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 2010 internal auditors performed together 92 internal audits, 3 extra audits were not mentioned in the yearly plan. From the total number of internal audits 19 were financial ones focused on the proof of the economy of SABs, 34 were audits of systems proving the administration of public resources, 17 were audits of operation dealing with the functioning of the internal inspection system and 22 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, updating of the performed risk analysis 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 resources, check of administration fees and others. Performed audits were completed in the written reports with proposed recommendations, which are submitted to particular SAB heads. Most of recommendations were accepted. The audit results proved that monitored processes run 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 ČÚZK branch.



7. International Cooperation

In the year 2010 Czech Office for Surveying, Mapping and Cadastre participated in two meetings 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. The bilateral cooperation with the land surveying services of neighbouring countries – Slovakia, Germany, Austria and Poland developed in 2010 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 Estate 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. ČÚZK is its active member and in 2010 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 realization of pan-european projects delivered by the national governments, in particular access to implementation of the INSPIRE Directive (Infrastructure of Spatial Information in Europe). Also through the ČÚZK the Czech Republic has been preparing the 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. In 2010 the new project EULIS LINE has been launched, striving to connect the EULIS service to the project e-Justice. In following years even ČÚZK should join EULIS service by means of its service Remote access to the cadastre of real estate ČÚZK 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 estate information and related thematic. Main goal of WPLA is to promote the land administration ensuring material rights, develop the real Estate markets in developing countries and modernize registration systems in other European countries.

Furthermore, ČÚZK 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 2010 27th meeting was held in Croatian city Vukovar in attendance of participants from Croatia, the South Tyrol, Austria, Slovakia, Trentino, Hungary and the Czech Republic.

In 2010 some professional delegations from abroad hosted in the ČÚZK, coming to establish fair cooperation and draw the experience of functioning and updating of the Czech cadastre of real estate. The experts coming to the ČÚZK were from Bosnia and Herzegovina, Mongolia, the Republic of Cape Verde and China.

INSPIRE - Infrastructure for Spatial Information in Europe

eulis
EUROPEAN LAND INFORMATION SERVICE

PCC

FIG

8. Research and Development

Resolution of tasks of research and development in the branch is in responsibility of the Research institute of geodesy, topography and cartography (VÚGTK) in the framework of the research aim Research and development in geodesy, the cadastre and geomatics in 2005 – 2009, prolonged till 2011, which the ČÚZK provides with institutional support. In 2010 organizational and personal changes were realized, being necessary for more efficient operation of the institute with decreased part of the branch budget assigned to its activities.

Tasks resolved in the scope of the research aim in 2010 were being completed pursuant to the stipulated technical and economic parameters in line with the agreement between the ČÚZK and VÚGTK.

The long-lasting projects belonged among the main goals in 2010. It refers, in particular, to proceeding with the development of software 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 prepared for practical use.

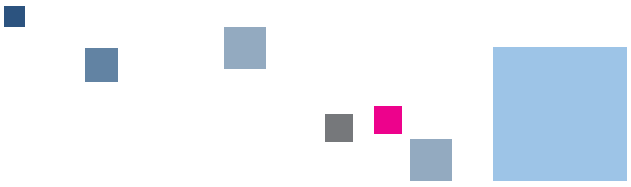
In the second half of 2010 further monitoring GNSS techniques were being developed and so as the use of collected data from the data centre of the Geodetic observatory Pecný to examine

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 and stability testing of permanent GNSS networks CZEPOS and VESOG were in operation and the works on the building of the reference frame for the new European navigation system GALILEO went on. Since 1. 9. 2010 VÚGTK has been performing and publishing the results of independent monitoring of the permanent GNSS stations of variety of providers, with the goal to ensure the quality and homogeneity of the surveyed results that use GNSS for the purposes of the cadastre of real estate.

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 Czech Republic. 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 VÚGTK continued in delivery of gauges´ calibration based on the valid certification for gauges´ calibration in the frame of Accredited calibration laboratory (ACL). ACL fulfils the function of associated laboratory of the Czech metrological institute as well. In 2010 calibration laboratory and Authorized metrological centre provided 1443 gauges´ calibrations in total.

The task of quality assessment of mapping continued based on the analysis of the mapping technology for the renewal of the cadastral documentation. With regard to ISO 19115 and ISO 19114 following parameters were taken into account: quality of coordinates of the detailed survey points, number of records for further proceeding and number of objections in frame of the objection proceeding regarding the renewal of the cadastral documentation. The procedure for evaluation for quality assessment of the renewal of the cadastral documentation by means of new mapping has been created VÚGTK 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 ČÚZK. This activity is closely connected with the main goal of the institute, which is the work for the ČÚZK, and represents 35 % of total capacities of the Institute.



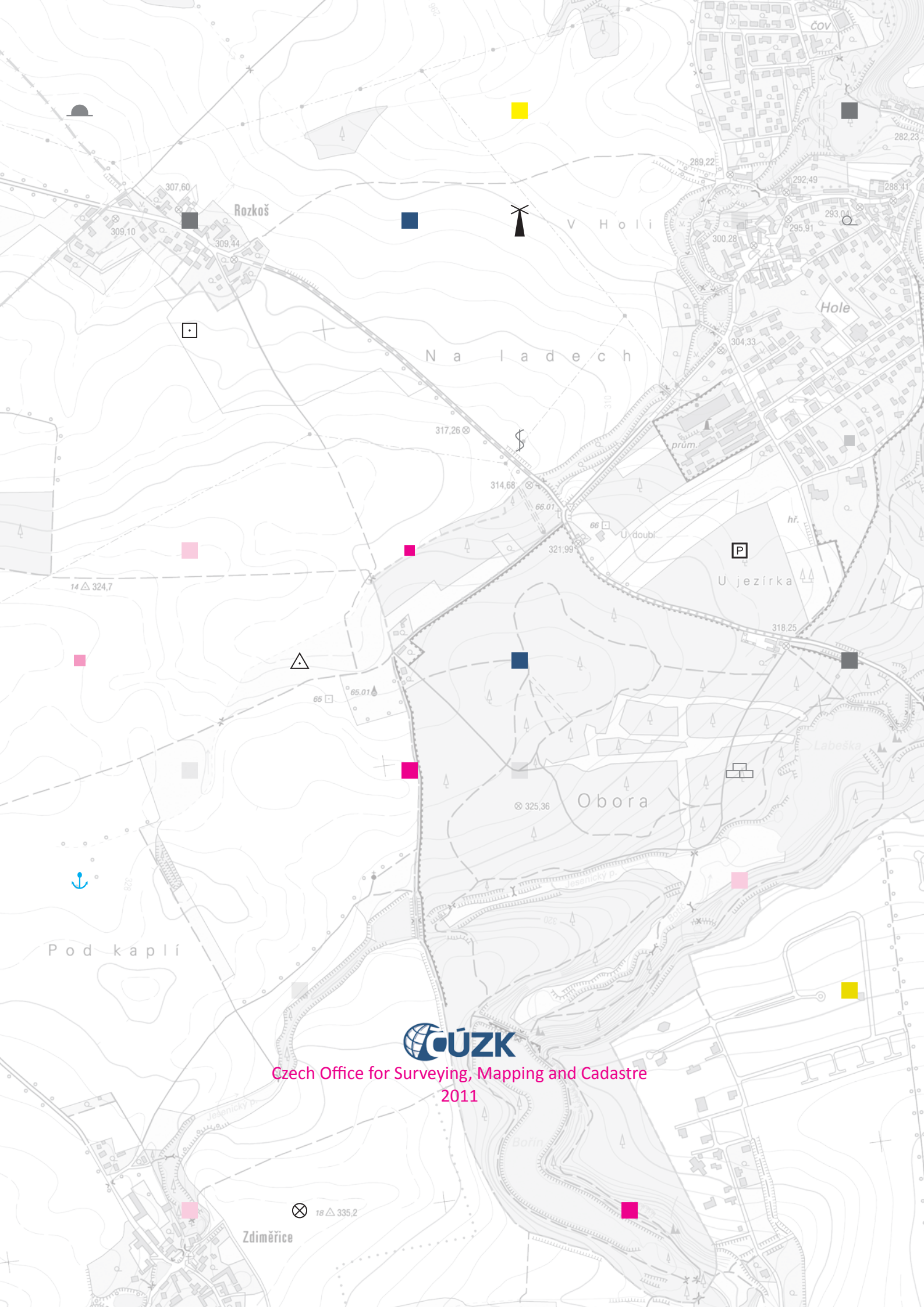
Annual Report 2010

Český úřad zeměměřický a katastrální

Prepared by composite authors from Český úřad zeměměřický a katastrální
Graphic design: Tomáš Polívka
Issued by Český úřad zeměměřický a katastrální in 2011

Printed by Zeměměřický úřad in 2011

ISBN 978-80-86918-63-1



ČÚZK

Czech Office for Surveying, Mapping and Cadastre

2011