e - Katastar – The Browser of Cadastral Data

Damir PAHIĆ and Irena MAGDIĆ, Croatia

SUMMARY

Within the frame of the project e-Katastar, the Browser of cadastral data has been created to be used for having insight into the Central database of cadastral data of the Republic of Croatia. The Central database kept in the Central office of the State Geodetic Administration contains official cadastral data from all 115 cadastral offices. The cadastral offices where original data are kept are local cadastral offices and their branches, as well as Zagreb City Cadastre and Geodetic Office. One of the basic principles of the Browser is the "completeness" so it allows the insight into cadastral data for the whole state. The data available by means of the Browser reflect the official situation referring to cadastral data at specific date.

The insight is possible by stating the number of cadastral parcel or the number of possession registration sheet in the selected cadastral municipality.

SUMMARY (in Croatian language)

U okviru projekta e-Katastar izrađen je Preglednik katastarskih podataka sa svrhom da se omogući uvid u centralnu bazu katastarskih podataka Republike Hrvatske. Centralna baza katastarskih podataka vodi se u Središnjem uredu Državne geodetske uprave i u njoj se vode podaci koji su inače sadržani u bazama podataka koji se izvorno vode u 115 katastarskih ureda. Katastarski uredi u kojima se vode izvorni podaci su područni uredi za katastar i njihove ispostave i Gradski ured za katastar i geodetske poslove Grada Zagreba. Jedan od osnovnih principa Preglednika je "potpunost", pa je putem njega moguće izvršiti uvid u sve podatke za sve katastarske čestice koje postoje u državi. Podaci dostupni putem Preglednika odražavaju službeno stanje katastarskih podataka na određeni datum.

Uvid se ostvaruje unošenjem broja neke katastarske čestice u odabranoj katastarskoj općini.

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1. INTRODUCTION

The Republic of Croatia has 56 542 square kilometers and 4, 48 million inhabitants. Croatia has 20 counties and The Town of Zagreb which is the capital of Croatia. Counties are divided in local units - towns and municipalities. There are 124 towns and 426 municipalities.
Croatian system of registering real estates and real property rights is based on two registers – the Real Estate Cadastre and the Land Book.

The Real Estate Cadastre is register in which data about location, shape, area, type of use and buildings are registered for each cadastral parcel. Those data are official data for description of parcels in transfer of real property rights, and they are official data for establishment and maintenance of the Land Book. Location and shape of cadastral parcels and buildings are presented on cadastral maps. Written cadastral data are systematized is possession registration sheets and in that sheet there are data about number, name, type of use, buildings and area for each cadastral parcel. Data about owners in possession registration sheet are the Land Book data. The Real Estate Cadastre is kept and maintained in cadastral offices.

Basic spatial unit in which data about cadastral parcels are organized is cadastral municipality. There are 3.327 cadastral municipalities in Croatia, and 14.344.695 cadastral parcels. Cadastral municipality is also basic spatial unit for establishment of one land book.

The Land Book is register in which data about owners and holders of other real property rights are attached to the cadastral parcels defined by the Real Estate Cadastre. When it is about transfer of real property rights one legally becomes an owner by registration in the Land Book. Data in the Land Book are systematized in land sheets which have three parts. Part A with data about cadastral parcels, part B with data about owners and part C with data about mortgages. Land books are kept and maintained in municipal courts.

2. BASIC LAND ADMINISTRATION ACTIVITES IN CROATIA

Croatian system of registering real estates and real property rights has routs in Austrian registration system. Cadastre and land book were established for the first time while Croatia was part of the Austrian monarchy. Present reform of cadastre and land books started after Croatian independency and there are two basic laws regulating reform: The Law on Land Book and The Law on State Survey and Real Estate Cadastre.

Leading institutions for reform of cadastre and land books are the Ministry of Justice and the State Geodetic Administration.

Within the frame of the reform there are several activities:

- Reduction of the backlogs in the Land Book
- Transformation of paper based land books in digital form
- Transformation of written cadastral data in digital form
- Transformation of paper based cadastral maps in digital form
- Systematic renewal of cadastre and land books (based on cadastral resurvey)
- Sporadic renewal of cadastre and land books (based on new processes for cadastre and land book maintenance)
- Establishment of Common Information System which will contain data from the Land Book and data from the Real Estate Cadastre.

Figure 1 – number of backlogs in municipal courts – source – the Ministry of Justice

Reduction of backlogs is one of the most important activities in the Land Book. Activity is organized by the Ministry of Justice and significant result has been achieved until today. On Figure 1 there is a graphical presentation on reduction of number of backlogs which exists in the Land Book in municipal courts. The most of the backlogs exist in four biggest municipal courts – Zagreb, Split, Rijeka and Osijek.
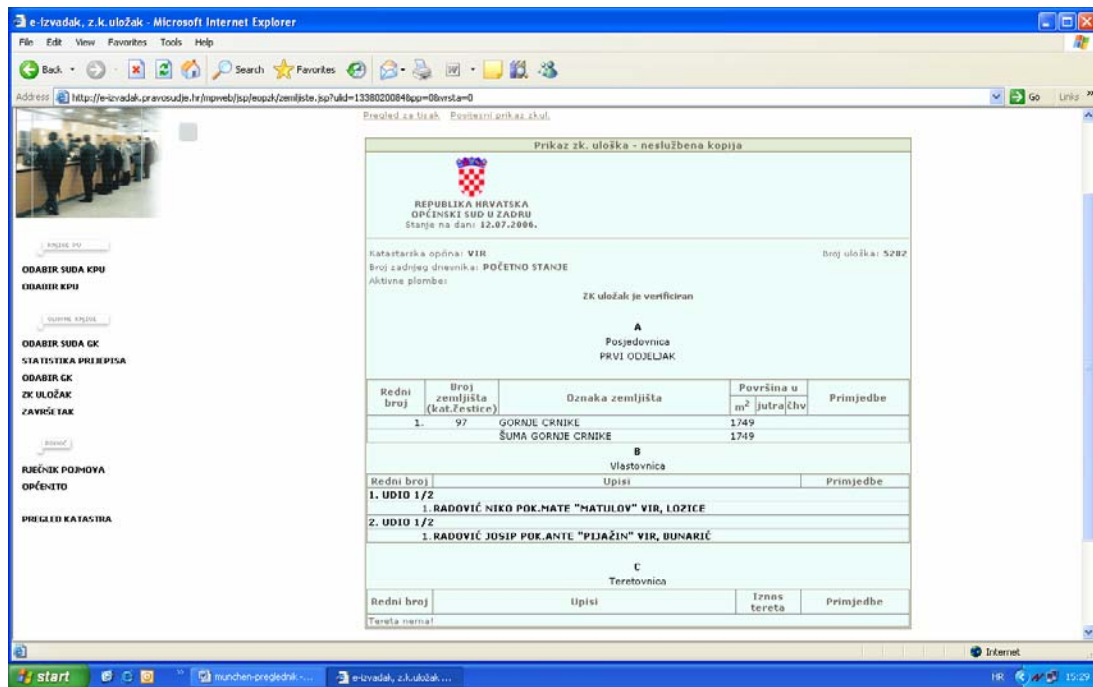
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Figure 2 – one land sheet viewed via Internet

Transformation of paper based land books in digital form is another important activity organized by the Ministry of Justice. About 75% of paper based land books are already transformed in digital form. Data transformed in digital form are available via Internet to all citizens. Internet address for having insight in the Land Book data is www.pravosudje.hr .
View in the Land Book data is free of charge and one can also view in data about mortgages which are inscribed in the Land Book. Data in the Land Book can be viewed by entering the number of the parcel in chosen cadastral municipality. Originally data in digital form are kept in municipal courts and central data base is in the Ministry of Justice. On Figure 2 there is a presentation of one land sheet which is already transformed in digital form.

All written cadastral data are already transformed in digital form and available on Internet address www.katastar.hr. On Figure 3 there is a presentation of one possession registration sheet.
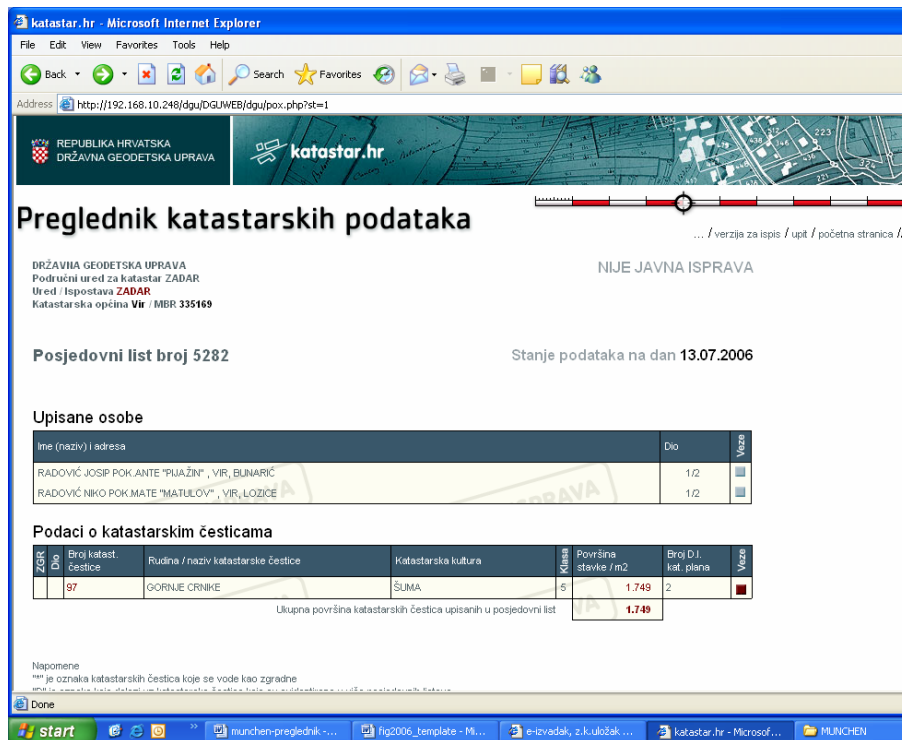
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Figure 3 – one possession registration sheet via the Browser of cadastral data

Transformation of paper based cadastral maps in digital form is another very important activity organized by the State Geodetic Administration. In Croatia there are about 57.000 detail sheets of cadastral maps. Paper based cadastral maps are first transformed in raster form and then vectorized by private geodetic firms or cadastral offices. More then one third of cadastral maps are or vectorized or in the process of vectorization. For the purpose of quality control of vector cadastral maps the Central cadastral map data base is established in the Central Office of the State Geodetic Administration. The Central cadastral map data base is an object oriented data base and for the moment available only in the Central Office on Intranet. Connection between the Central cadastral map data base and the Central data base of written cadastral data is already established. On Figure 4 there is a presentation of digital cadastral map in the Central cadastral map data base.

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Figure 4 – digital cadastral map in the Central cadastral map data base

Systematic renewal of cadastre and land books based on cadastral resurvey is going on in more than 150 cadastral municipalities. Result of these processes is renewed cadastre and land book and in cadastral municipalities in which that process is finished full security in legal transfer of real estates exists.

Activities on establishment of the Common Information System which will contain cadastral and land book data just started. Establishment of that system will be financed by the World Bank loan.

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3. THE BROWSER OF CADASTRAL DATA

Written cadastral data are the first set of land administration public data which was fully transformed in digital form. This job was done by cadastral offices and local data base for written cadastral data were established in each cadastral office. In those local data bases written cadastral data are kept end maintained. In year 2000 the State Geodetic Administration (SGA) took over responsibility for cadastral offices.

Data in local data bases were not standardized and procedures for maintenance of written cadastral data were not the same in all cadastral offices. Because of those reasons the Central Office of SGA, together with other activities, started the Project for establishment of the Central data base of written cadastral data. Today the Central database of written cadastral data is kept in the Central office of the State Geodetic Administration and contains official cadastral data from all 115 regional and branch cadastral offices.

3.1 e – Croatia (e – Hrvatska)

The Government of the Republic of Croatia started programme e-Croatia (e-Hrvatska). The goals of the e-Croatia programme were to create services which will enable access to information for citizens, citizen's active role in society trough information system, growth and connecting of Croatian economy and exchange of business information and experiences. One of the goals was to enable state administration to become transparent, fast and efficient service for citizens. Project e-Katastar is one of the projects within e-Croatia programme covering land administration activities.

Within the frame of the project e-Katastar, the Browser of cadastral data has been created to be used for having insight into the Central database of written cadastral data of the Republic of Croatia.

3.2 Completeness

One of the basic principles of the Browser is the "completeness" so it allows the insight into all written cadastral data for the whole state. The Republic of Croatia is fully covered with cadastral maps and cadastral parcels and by viewing data in the Central data base one can find written cadastral data for each part of Croatia. This also means that the Central data base of written cadastral data is, for the moment, the only land administration data base covering whole state.

Total number of possession registration sheets in the Central data base is 2.530.538, total number of cadastral parcels is 14.344.695 and the Central data base contains data about 2.379.619 persons registered in possession registration sheets.

The data available by means of the Browser reflect the official situation referring to written cadastral data at specific date. For the moment data available by means of the Browser are updated once a week (for some small cadastral offices once a month), but there is more and more cadastral offices directly connected with the Central data base. When direct connection

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is established than overnight update of the data is in place. By the end of 2006 all cadastral offices will be directly connected with the Central data base.

3.3 Availability of public data

Data in the Central data base of written cadastral data can be viewed by entering the number of the parcel in chosen cadastral municipality, or by entering number of the possession registration sheet in chosen cadastral municipality. On Figure 5 there is a front page of the Browser.
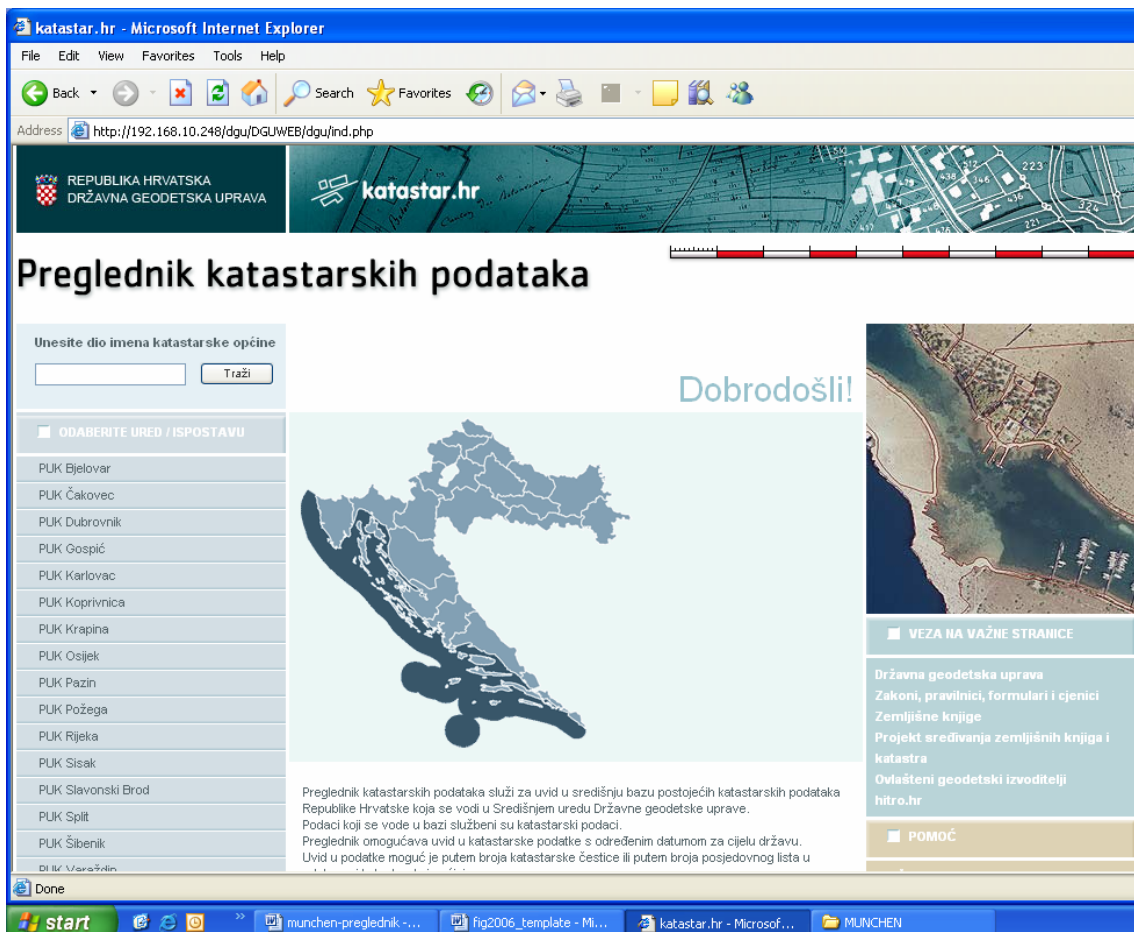

Figure 5 – front page of the Browser

Visitors of the Browser first have to select regional cadastral office. This can be done by clicking the name of the cadastral office or by clicking on the map. Then branch office must be selected and the list of cadastral municipalities will appear. Next step is to enter the number of the parcel or number of the possession registration sheet. Viewing in is free of charge, so one who is viewing cadastral data must enter the control number which is presented on the page on which number of the parcel or number of the possession registration

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sheet will be entered. This number is prevention of misuse of the data, and it is different for each entrance to the data.

479.688
74%

64.046
10%

106.715
16%

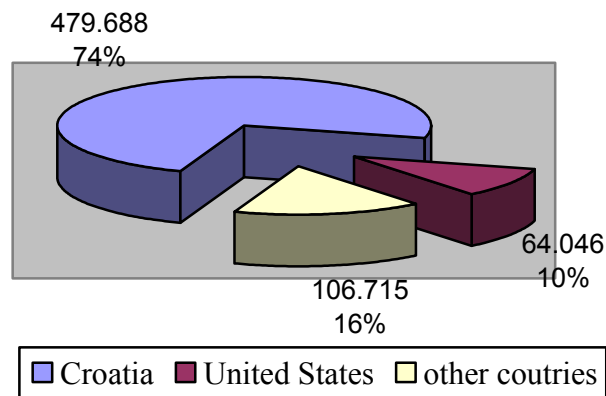☐ Croatia ■ United States ☐ other coutries

Figure 6 – chart of the visitors

As viewing in is free of charge not only Croatian citizens are using the Browser. The Browser is available from 9th of November 2005, and until 1st of June 2006 the total number of visitors was 601.269. Data about visitors shows that 10% of visitors are from the United States and 16% from other countries. On Figure 6 and Figure 7 there are charts presenting number of the visitors from different countries.
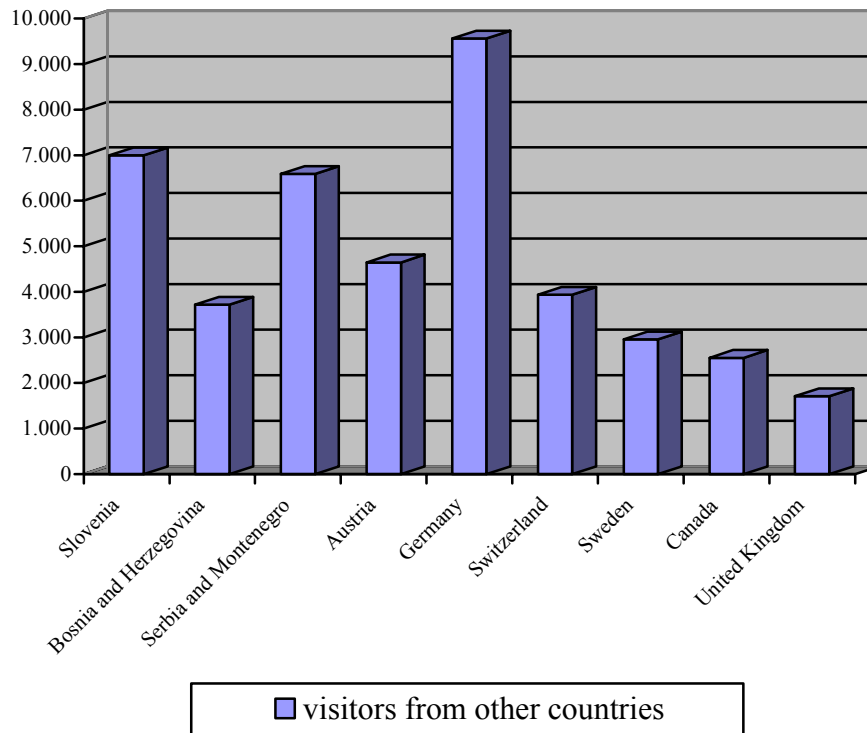
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Figure 7 – chart of the visitors from several countries

3.4 Transparency

Possibility for each citizen to view in cadastral data is best prevention against possible unauthorized changing of those data. If citizens are able to see official cadastral data from their homes possibility of corruption and fraud is much lower.

Not only data about parcels and possession registration sheets are available by means of the Browser. In the Browser one can find data about numbers of official acts according to which data in the cadastre were changed. Also one can see data about numbers of cadastral projects (elaborates) produced by the private licensed surveyors which are the technical base for changing cadastral data. Via the Browser (www.katastar.hr) one can also view in data which are registered in the Land Book (www.pravosudje.hr) and find out are the data homogeneous. Also, transparency of cadastral data is very important for maintaining of cadastral data. Maintenance of cadastral data is based on owner's obligation to inform cadastral offices about changes on their parcels which have influence on cadastral data. Nobody can say that present data in cadastre are not known to him.

3.5 Services for Citizens

In the Browser there is possibility to view in data about contact information of cadastral offices. There is also basic dictionary describing cadastral terms and instructions for usage of the Browser.

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From 9th of November 2005 until 1st of June 2006 first page of the Browser was entered 1.060.586 times and the number of opened pages in the Browser was 23.949.515. Analyse of the data about entering the first page and data about numbers of opened pages (Figure 8) shows that once first page is entered a lot of additional pages were opened.

This means that visitors were really using data and information available by means of the Browser.
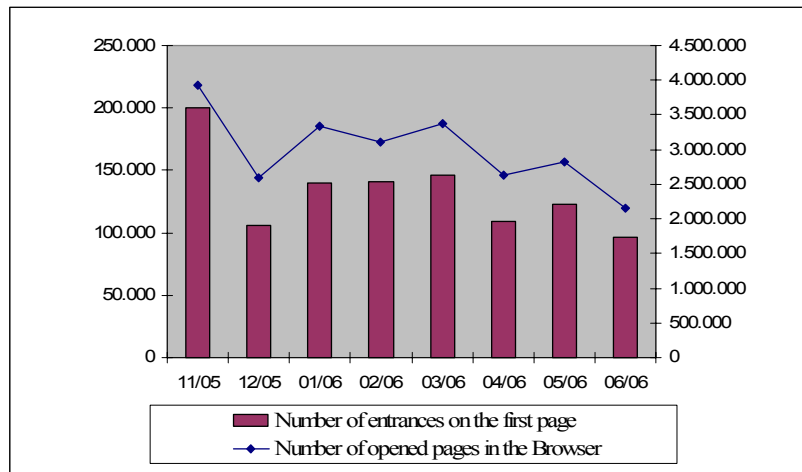

Figure 8

From 9th of November 2005 until 1st of June 2006 data about parcels and possession registration sheet were viewed 3.595.065 times. From Figure 9 it is clear that in the beginning of usage of the Browser number of entrances on data about parcels or possession registration sheet were lover than today. From January 2006 number of entrances on the first page correspondences with number of entrances on data about parcels or possession registration sheet. This means that visitors are really using the Browser for the right purpose.
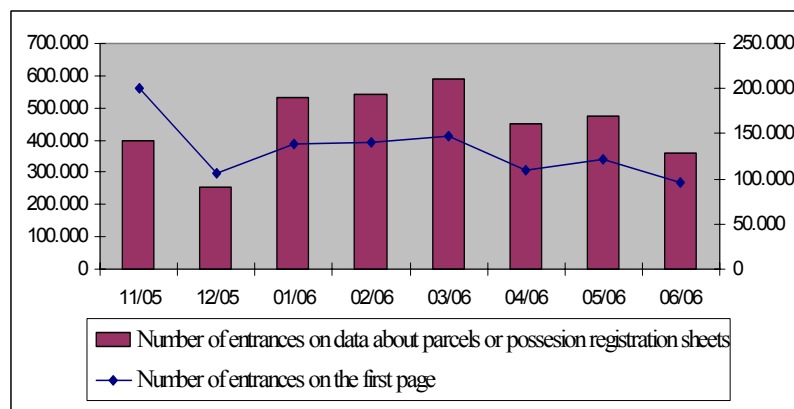

Figure 9

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By means of the Browser citizens can make suggestion on quality of the Browser. From 9th of November 2005 until 1st of June 2006 150 suggestions were send via Internet address available for suggestions. According to received suggestions quality of the Browser was improved. Citizens can also ask question and receive answers via Internet address available for that purpose. In the same period of time 850 questions were received. All questions were answered within 7 days. Frequently asked questions and answers are also available by means of the Browser.

On the Browser there are links to important land administration and governmental web pages. Important web page is SGA web page (www.dgu.hr) on which data about cadastral regulations and data about private licensed surveyor are available.
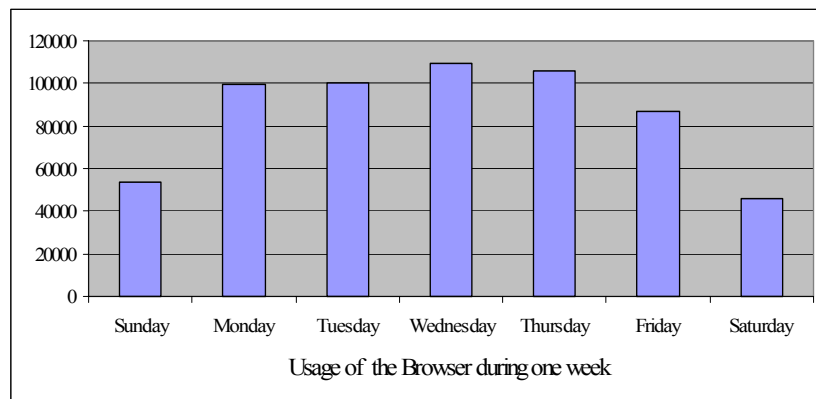

Figure 10

The Browser is operational 24 hours a day and 7 days in week. Analyses showed that a lot of citizens are using the Browser during Saturday and Sunday (Figure 10).
The Browser is used even during the night (Figure 11) probably because of the users from all over the world.

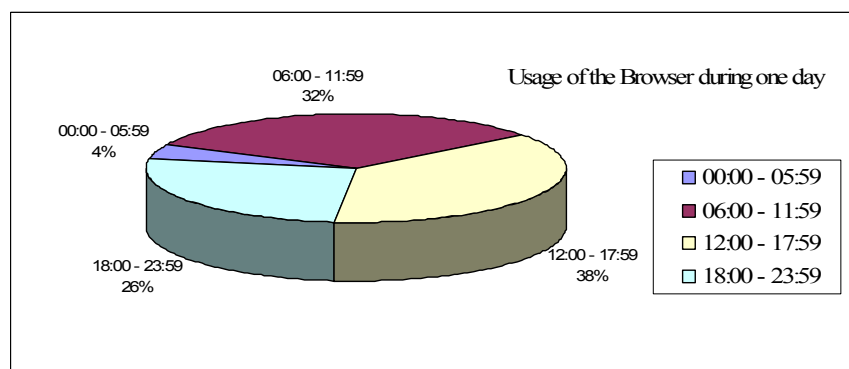Such analyze rises a question about free access to the data.

Figure 11

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3.6 Final Remarks

The Browser of cadastral data is the first step in land administration activities in Croatia on the way to e-society. Together with land books on Internet it serves citizens and raises awareness in important state registers. Links to the Browser exist on the web page of the Government of the Republic of Croatia, on governmental service HITRO.HR, on web page of the Ministry of Justice and on few more web pages. Independent Croatian magazine – "BUG" last year made independent overview of new web pages in the domain of services to the citizens. The "Bug" jury proclaimed www.katastar.hr as one of the best ten web pages in Croatia with following comment: "When it comes to the state administration something is finally going on. In the bundle of new services which make easier life for citizens we chose Katastar.hr because it looks like the most advanced project. Nothing spectacular but useful.

BIOGRAPHICAL NOTES

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Born on October 10th 1958 in Varaždin, Croatia.
Graduate geodesy on the University of Zagreb.
From 1986 to 1992 head of branch cadastral office in the Town of Zagreb
Since 1992 employed in the State Geodetic Administration of the Republic of Croatia.
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Born on September 17th 1970 in Slunj, Croatia.
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Since 2006 head of the Department for cadastral documentation in the Sector for Cadastral System of the State Geodetic Administration of Republic of Croatia

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