

#### New director of the State Geodetic Administration

On 2. February 2012, the Government of the Republic of Croatia appointed Danko Markovinović, PhD, a new director of the State Geodetic Administration.



Danko Markovinović was born on 27. July, 1967 in Vinkovci. After completing the primary school, he attended the secondary education centre "Matija Antun Reljković" in Vinkovci. He graduated in 1994 from the Faculty of Geodesy, University of Zagreb where he also earned his master's degree after defending the master's thesis titled "First Order Gravimetric Grid and Gravimetric Calibration Base of the Republic of Croatia". In 2006, he passed the state qualifying exam needed for adjunct type I. On 16. October 2009, he defended his doctoral thesis titled "Gravimetric Reference Systems of the

DGU

Republic of Croatia". From 1995 until 2012, was employed at the Faculty of Geodesy, University of Zagreb. He was a member of the management board of the Croatian Chamber of Chartered Geodetic Engineers and the president of the Committee for Lifelong Education in the Croatian Chamber of Chartered Geodetic Engineers. He has participated in many projects in Croatia and abroad, and has published dozens of professional and scientific works. At the moment, he is performing the function of the vice president of the Council of European Geodetic Surveyors (Comité de Liaison des Géomètres Européens - CLGE).

#### Regional workshop on the topic Transfer and Implementation of INSPIRE directive

The workshop on the topic of transfer and implementation of INSPIRE directive was held in Vienna from 17. until 18. January 2012. The workshop was organised within the frame of RENA project (Regional Environmental Network for Accession) by the consulting company Human Dynamics in collaboration with Umweltbundesamt, Environmental Agency the premises of which hosted the workshop.



There were 33 participants from 9 countries of the region present at the workshop. The Republic of Croatia was represented by Željko Hećimović, PhD and MSc Tomislav Ciceli who presented the experiences of the Republic of Croatia in implementing the INSPIRE directive.

The following presentations were performed during the workshop: Why INSPIRE Directive?; Octavian Stamate, European Commission, DG Environment; INSPIRE Directive - General Overview; Christian Ansorge, Umweltbundesamt; National Implementation of the INSPIRE Directive in

Austria; Wolfgang Fahrner and Rainer Hinterleitner, Austrian Ministry of Agriculture, Forestry, Environment and Water Management; National Implementation of the INSPIRE Directive in Slovakia; Martin Koska / Marek Zlacik, Slovak Environmental Agency; The practical use of INSPIRE: The example of protected areas; Gebhart Banko, Umweltbundesamt; The practical use of INSPIRE: The example of water management and Hydrography; Gabriele Vincze, Umweltbundesamt; INSPIRE and beyond - the link with GMES, GEOSS, SEIS, GGIM (UN); Octavian Stamate, European Commission, DG Environment / Herbert Haubold, Umweltbundesamt; Experience in implementing the INSPIRE Directive in Croatia; Tomislav Ciceli /Željko Hećimović, State Geodetic Administration; Implementing rules under the INSPIRE Directive; Martin Koska / Marek Zlacik, Slovak Environmental Agency; Experience in implementing INSPIRE Directive in Austria from the perspective of an IT expert; Michael Hadrbolec, Umweltbundesamt; Added value and socioeconomic impact of spatial data infrastructures?; Christian Ansorge, Umweltbundesamt; Electronic Data Management - An Integrated EGovernment-Application in the environmental Field in Austria; Franz Mochty, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria.

The organisers invested a lot of effort to provide a high level of all organisational details and to make it possible for the participants to perform high-quality work. You can find more about RENA project, as well as about the workshop itself on http://www.renanetwork.org.

Tomislav Ciceli/Željko Hećimović

### Contents

Regional workshop



**ELF** Task Force



Sveta Nedelja







Register of geographical names



#### ELF Task force /coordinating committee meeting, Brussels



*European Location Framework* (ELF) is a programme initiative of EuroGeographics. The mission of ELF is to develop the infrastructure for the reference geospatial data that will contain interoperable data and services. The infrastructure will be built on the basis of information sets provided by national geodetic agencies and will make it possible for users to develop new products and services there.

The activities of ELF are thematic continuation of ESDIN project of EuroGeographics

that was completed at the beginning of 2011. ELF is thematically included into the European initiative *Digital Agenda for Europe* being one of the initiatives for *Europe 2020 Strategy* that is intended for defining the role of information and communication technologies in Europe until 2020. Among other things, this strategy defines the programme of interoperability for *European public administrations (ISA)*, including local and regional administration for the period 2010-2015. ELF is also coordinated with EU *Public Sector Information Directive* that defines the principals of using the public sector information and that is carried out also through the implementation of INSPIRE initiative.

The activities connected with the ELF initiative are developed at several levels. ELF has become a part of the programme activity of EuroGeographics, and EuroGeographics performs a series of activities like presentations of EFL at various gatherings, the coordination with other European strategies, initiatives and projects. This was the second meeting of *European Location Framework (E.L.F.) Task force /co-ordinating committee* that was held in the premises of EuroGeographics in Brussels on 10. February 2012. The meeting was conducted by Antti Jakobsson and David Overton (EuroGeographics), with Dave Lovell (EuroGeographics, Secretary General and Executive Director), Athina Trakas (OGC), François Chirié (IGN France), Arnulf Christl (Metaspatial, Germany), Željko Hećimović (SGA, Croatia), Anja Hopfstock (BKG, Germany), Clemens Portele (Interactive Instruments, Germany) and Olaf Ostensen (SK, Norway), Laila Aslesen (SK, Norway) and Jorgen Hartnor (LM, Sweden) participating at the meeting.

The main topics of this meeting were the following:

- ELF presentation by Dave Lovell (EuroGeographics, Secretary General and Executive Director),

- ELF plans and objectives,

- There were the working plans and objectives of the working groups presented and discussed: Working Group for Strategy (head: Francois Chire), Working Group for Data Contents (head: Anja Hopfstock), Working Group for Services (heads: Clemens Portele and Željko Hećimović), Working Group for Data Management (head: Arnulf Christl), Working Group for Communication (external) (heads: Jorgen Hartnor and Athina Trakas), Working Group for Communication between the Working Groups and the members (heads: Anti Jakobsson),

- the revision of ELF/ESDIN data specification was discussed,
- putting of ELF Demonstrator of web browser into operation,
- including of EuroGeoNames system into ELF,
- preparation of the tools for data quality control,
- preparation of the service for demo data,
- preparation of EuroGeoCloud,
- the analysis of project proposal for financing from ICT-PSP EU funds.

ELF is one of the main activities of EuroGeographics that will be performed in the period from 2011 until 2015, intended to develop the infrastructure for Pan-European products and the needs of national geodetic agencies.

Željko Hećimović

#### The exhibition of data obtained from new cadastral survey completed, Sv. Nedelja

Very soon there will be two more new cadastral municipalities in use in the Regional Cadastral Office Zagreb, Branch Office Samobor.

The cadastral survey at the territory of the settlements Kalinovica and a part of Mala Gorica with the area of 467 ha started in 2007 according to the contract made between SGA and the Town Sv. Nedelja, as ordering parties, and the Institute for Photogrammetry d.d. from Zagreb as contractor, and it was completed in August 2011.

The cadastral survey data for new cadastral municipalities Kalinovica and Mala Gorica were submitted for public consideration in the premises of the Town Sv. Nedelja. The procedure that was conducted by the cadastral commission together with the judicial commission in the same room started on 15. February 2011 and was completed with a short break on 31. January 2012. For both cadastral municipalities there were altogether 1588 cadastral parcels submitted for consideration. After completing the procedure, the Ministry of Justice will pass the decision about the foundation of land registry, and then SGA will pass the decision about the beginning of usage of new cadastral documents for the cadastral municipalities Kalinovica and Mala Gorica, which is expected in March 2012.

Mirko Dumić



Since January 2012 web page of the State Geodetic Administration is available in English.

## Open Geospatial Consortium (OGC)

The State Geodetic Administration became an associate member of Open Geospatial Consortium (OGC) on 1. January 2012.

OGC is an international non-profit standards organisation led by its members participating in a consensus process. OGC develops the standards in the field of computer interoperable geoprocessing and provides global collaborative discussion forum and solutions connected with interoperability in geospatial domain. OGC consortium is a consortium of organisations participating in solving mutual processes (problems, operations) that cannot be solved within an individual organisation.

OGC mission is to promote open development and usage of the standards of advanced systems and technologies in the field of geoinformation processing and supporting information technologies. The work on OGC standards is supported primarily by the voluntary participation of its members. Permanent OGC employees and the supporting infrastructure needed for the activities of the Consortium are financed out of the membership fees, and in smaller amount, through partnership and publicly financed corporation programmes. The primary products of OGC are the standards in the field of computer interoperable geoprocessing. OGC standards are defined, discussed, tested and checked by its members in formal processes. They are free of charge and publicly available on OGC web pages (http://www.opengeospatial.org/standards). OGC Network (http://www.ogcnetwork.net) is a web platform containing technical documentation, training materials, test pages, implementation references and other interoperable resources.

OGC membership makes it possible to solve business problems, accelerate technological development, to stimulate economic development or desired social changes. It opens new business possibilities and provides new business methods. OGC members are globally located government and administration agencies, universities, institutes, private companies and other organisations like: US National Aeronautics and Space Administration (NASA), Statens kartverk (Norway), US Geological Survey (USGS), Institut Geographique National (IGN) (France), Danish National Survey & Cadastre, Federal Agency for Cartography and Geodesy (BKG), Geospatial Information Authority of Japan, ESRI, Google, Intergraph Corporation, Oracle USA, Pixia Corporation, Autodesk Inc., CNES, Eurocontrol, European Space Agency (ESA), IBM Corporation, Microsoft Corporation, Trimble Navigation Ltd., GFZ Potsdam, Land Information New Zealand, World Bank Institute, Stuttgart University Institute for Photogrammetry, University of Washington, University of Tokyo CSIS and others (on 26.1.2012, OGC had 445 members). After becoming its member, SGA was included into the OGC community receiving thus the possibility of participating in the field of geospatial data standardisation.

SGA OGC contact persons are: *Technical Committee Representative* Željko Hećimović (zeljko.hecimovic@dgu.hr), *Planning Committee Representative* Tomislav Ciceli (tomislav.ciceli@dgu.hr) i *Business Representative* Tanja Lerotić (tanja.lerotic@dgu.hr).

Željko Hećimović

#### **NSDI** Metadata Specification

The former director of the State Geodetic Administration, Prof. Željko Bačić, PhD, passed the Decision about the Official Use of Metadata Specification of the National Spatial Data Infrastructure (NSDI) according to the conclusion of NSDI Council.

The basis for the preparation of the Specification is defined by the following documents: Directive 2007/2/EC of the European Parliament and the Council of 14. March 2007 establishing the Infrastructure for Spatial Information in the European Community (INSPIRE), the Law on State Survey and Real Estate Cadastre (National Gazette 16/2007, 124/2010), and the Metadata Implementing Rules (National Gazette 102/2010). The consultants of the company Con terra, the members of the Working Group for technical standards of NSDI, the employees of the Department for NSDI at SGA, an all interested parties participated in the preparation of the Specification invited by the public call published on web pages of NSDI (http://www.nipp.hr), where the versions of documents were also published in the preparation inviting all interested parties to offer their suggestions, remarks, comments and observations referring to the preparation of documents. The same pages offer the possibility of uploading the final, official version of the Metadata Specification of NSDI (version 1.0) (http://www.nipp.hr/default.aspx?id=11) and the Decision of the director about its official use.

NSDI Metadata Specification was made in accordance with the following international and Croatian standards: *EN ISO* 19115:2005, *Geographic information - Metadata, Technical Corrigendum, ISO* 19119:2005, *Geographic information - Metadata, Technical Corrigendum, ISO* 19119:2005, *Geographic information - Services, ISO* 19119:2005/Amd 1:2008, *Extensions of the service metadata model, EN ISO* 19108:2005, *Geographic information - Temporal Schema 2, ISO* 639-2, *Codes for the representation of names of languages - Part 2: Alpha-3 codeda control, ISO* 8601, Data elements and interchange formats - Information interchange - Representation of dates and times, *ISO/TS* 19139:2007, *Geographic information - Metadata - XML Schema Implementation, CSW2 AP ISO, OpenGIS Catalogue Services Specification* 2.0.2 - *ISO* Metadata Application Profile, Version 1.0.0, *OGC* 07-045, 2007, *Metadata Implementing Rules, Decision about the establishment of Measures and Standards for Data Exchange, Ref. No.:* 5030120-10-1, *August* 2010 (National Gazette102/2010), *INSPIRE Metadata Implementing Rules:* Technical Guidelines based on *EN ISO* 19115 and *EN ISO* 19119, Version 1.2, *IETF RFC* 1738: Uniform Resource Locators (URL), December 1994.

The Specification was made in accordance with the most recent experiences in the creation of national metadata profiles in other countries. The Specification supports *Geography Markup Language* (GML) 3.2.1 standard with the recommendation for the usage of *l'Equipe D'Experts en Normalisation* (EDEN) *XML Schema Definition* (XSD) based on *International Organization for Standardization* (ISO) 19139 standards. The Specification defines the following elements of metadata: number of metadata elements, the name of element, the definition of element, whether there is an equivalent INSPIRE metadata element and its compliance, whether there is an equivalent ISO element of metadata and its compliance, XPath expression, numbering, type of data, value domain, example of metadata element, and implementation instructions. NSDI Metadata Specification defines the metadata and their elements that will be filled with sets and series of sets to be included into NSDI.

Željko Hećimović

#### Register of Geographical Names in the Republic of Croatia

Geographic names are proper names of various physical and geographical, as well as of social and geographical objects on the surface and below the surface of the Earth (caves, pits, chasms), as well as at the sea bottom (grooves, ridges). They present a large source of data for various anthropological, archaeological, geographical, linguistic, historical and other researches. The existing geographical names offer the possibility to analyse the changes in space revealing the formation, origin, distribution and duration of names, as well as its usage on maps as important landmarks. Geographical names are not only the integral parts of maps, but also an important communication means needed for the orientation in space. The science dealing with geographical names is called toponymy. The toponymy or the totality of geographical names in space presents a linguistic expression of physical and geographical, as well as of social and geographical objects.

In accordance with the resolution of the United Nations and its roof organisation for the standardisation of geographical names UNGEGN (United Nations Group of Experts on Geographical Names), as well as the National Spatial Data Infrastructure (NSDI) of the Republic of Croatia, the State Geodetic Administration has created the Register of Geographical Names of the Republic of Croatia. The task of the Register is to collect, record, process, publish and put into use the geographical names transferred from topographic and other maps, as well as from other official documents into the information system of the Republic of Croatia (National Spatial Data Infrastructure (NSDI) of the Republic of Croatia).

The Register of geographical names is a systematic list of geographical names derived from geographical objects with the indication about their position, classification and other attributes. The register is made on the basis of the official document, the topographic map at the scale of 1:200 000 (TK200). Apart from the given source, and for the purpose of more comprehensive contents, there were also other valid documents of the Republic of Croatia used (cultural heritage, airports, legally protected natural objects, etc.). In the register of geographical names, a geographical object is defined by means of geographical name of the object itself, its affiliation to a certain administrative area, its position in space (coordinates), its affiliation to object group, object type, object subtype and code.

In order to make the Register of Geographical Names of the Republic of Croatia more appropriate in the sense of its understanding and application, there was also a catalogue of geographical objects and names produced for the map scale 1:200 000 (TK200). Catalogue of Geographical Objects and Names includes a complete geographical inventory of maps (within the borders of the Republic of Croatia), and it contains also the list of those geographic objects that have been taken over from other official documents. Each geographical object in the Catalogue is presented by means of object group, object type, object subtype, English name, code and object definition. At the moment, there is the Register of Geographical Names of the Republic of Croatia being prepared and it is based on map at the scale of 1:25 000 (TK25) and on other official documents. The Catalogue of Geographic Objects and Names is being prepared simultaneously with the Register of Geographical Names.

Zvonko Štefan

# Register of Geographical Names of National Minorities in the Republic of Croatia

After the creation of the Republic of Croatia, the state assumed the obligation to implement the law on equality and the realization of freedom and rights for 22 national minorities. The inhabitants that are members of other nations are considered a national minority. The Constitution of the Republic of Croatia guarantees the equality to all members of the national minorities, as well as the freedom to express their national affiliation, free usage of their language and script, and cultural autonomy.

The Constitution of the Republic of Croatia, II Basic Provisions, article 12., defines that Croatian language and Latin script (ISO-hrv) are officially used in the Republic of Croatia. Official maps and all geographic objects in official documents of the Republic of Croatia are written in Croatian and in Latin script. However, respecting the European (EuroRegionalmap, EuroGeoNames) and UN regulations (UNGEGN-United Nations Group of Experts on Geographical Names), it is necessary to introduce and keep social and geographical objects on official maps and in other official documents in the language and script of national minorities.

The Register of Geographical Objects of the Republic of Croatia was made in the State Geodetic Administration on the basis of the map at the scale of 1:200 000 (TK200) and of other official documents. The Register of Geographical Names of the Republic of Croatia is being made on the basis of the map at the scale of 1:25 000 (TK25) and of other official documents. European and UN regulations recommend the introduction of the provisions from the Croatian laws into the Register referring to the official usage of language and script of national minorities as the second official language and script.

Therefore, the Register of Geographical Names of National Minorities in the Republic of Croatia has been created. It can be seen from the official documents (the Constitution of the Republic of Croatia, the Constitutional Law on National Minorities, the Law on the Use of Minoritiy Language and Script in the Republic of Croatia, the Law on Education in Minority Language and Script, Statutes of Counties, towns and municipalities, etc.) which national minorities are entitled to use their language and script along with the official Croatian language and Latin script. Pursuant to the provision about one third of inhabitants being a part of the total number of inhabitants, or to some other act (e.g. based on the acquired rights of indigenous ethnic minorities), it is possible to define the right to pass a statutory decision about the use of minority language and script. In the Republic of Croatia, the members of Czech, Hungarian, Russian, Slovak, Serbian and Italian minorities have the right to use their language and script.

The Register respects the rights of national minorities through: Introduction; Legal basis of using the language and script of national minorities, on the example of geographical objects; National Minorities in the Republic of Croatia; the Documents that regulate the rights of national minorities; the Law on Minority Language and Script Use in the Republic of Croatia; the Law on Education in Minority Language and Script; Territorial Units where the national minorities exercise their right to use their language and script, and Conclusion.

Zvonko Štefan