

During the FIG working week in Rome, from 6 to 10 May 2012, Bruno Razza, board member of the organizing Surveyors' association Consiglio Nazionale di Geometri e Geometri Laureate and long-time CLGE delegate for Italy, was appointed as incoming FIG Vice President. A few days after the start of his mandate, he gives us his first impressions and priorities.

Pedro J. Ortiz

Bruno Razza, incoming FIG Vice President, from Italy, takes our questions

Mr. Razza, please tell us about the challenges you will face as a FIG Vice President and how this will impact on your work for CLGE?

On 1st January 2013, I started my work as Vice President of FIG. Personally this is an important position that I hope to be able to perform with energy, enthusiasm and dignity. I have always had a particular interest in surveyors in the private sector, especially young surveyors, who live and work for their profession.

Work in the private sector is difficult. To be successful, you need courage and passion, as well as a high level of technical competence. This is particularly apparent now, because many economies are in a situation of global crisis.

Therefore, it is imperative that, at national and international level, we can find common synergies, which will help all surveyors in their work.

CLGE in Europe and FIG, within the world, can work together, with ideas and initiatives that will help to standardise the rules, regulations and procedures that guide the role of the surveyor.

How do you see this role of the surveyor and how it develops?

This is a role that has become historically irreplaceable and even more important as technology develops.

For this reason, the work of the surveyor, both in bygone times and in the present, has the best of historical features and also advanced techniques in technical achievement and cultural development. Also the focus of the surveyor is on the land, the property, the utili-



Bruno Razza, addressing the FIG General Assembly gathered in Rome

ties and the people who live there. All of these are identified in the overall determination of a modern cadastre, based on geo-information and the production of a universal database; moreover it is a technology which complements and provides for the service of citizens and society.

You spoke about standardization. Is there a real need for standardization and what are the chances of achieving this worldwide?

In Europe, CLGE is already working to standardise rules and procedures, helping to improve and intensify the free movement of labour in the world, the knowledge and competences, facilitating and promoting new business opportunities for young surveyors. So, this is a priority for European surveyors.

Then, since I am deeply convinced that this dream could become a reality, I hope to bring this commitment and these perspectives of global participation and sharing, within FIG, with the support of my Italian fellows, and especially with the support of other European surveyors.

By combining ancient topography mapping and modern Geomatics we can produce maps and specialised data sets and land management systems at every level and for every need.

But this can only be achieved with the skills and knowledge of highly trained surveyors on the land and amongst the people. The surveyors' expertise will be required everywhere to ensure proper representation of the places, the built infrastructure, the borders, the human resources and territorial development opportunities. More importantly, the work we do should complement the recognition of the rights that allow the improvement of the quality of life of every citizen.

The cadastre of Public Infrastructure at The National level in Slovenia

In this article the authors explain the success of the Slovenian PI. It results from the cooperation between the Public Sector (SMA) and the Private Sector (infrastructure owners and geodetic surveyors). After describing the system, the authors explain the benefits of their common approach and the plans for the near future.

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The cadastre of public infrastructure (PI) in Slovenia was designed in 2004 as a broad environment which functions as a meeting place for the infrastructure owners, who supply the data into the system, and the data users. Its purpose is to register all infrastructures, especially for local and state spatial planning, to prepare the database for the registration of the legal rights (ownership) of infrastructures, and to establish a system for prevention of damages. The establishment of the PI cadastre system resulted in direct benefits to the system users, as they can quickly and in one location, obtain data on all PI objects at a particular location. The Surveying and Mapping Authority of the Republic of Slovenia (SMA) is managing the whole system, whereas owners are responsible for sending the data, and geodetic surveyors are responsible for quality. The following types of the infrastructure are registered:

- traffic infrastructure (roads, railways, harbours, airports, cableways),
- energy infrastructure (electric energy infrastructure, natural gas infrastructure, heating infrastructure, oil transport infrastructure),
- public utilities infrastructure (water distribution system, sewer system, waste management infrastructure),
- water infrastructure and
- electronic communications.

As many as 6.100.000 facilities have been recorded in the cadastre since it was established on 1st January 2006. Up to now we have collected nearly 85% of the existing infrastructure in Slovenia.

The Cadastre of PI, along with other real estate records, is also a platform for developing new projects and applications, for example "Call before you dig", "Broadband coverage" or commercial mobile application "iObcina"

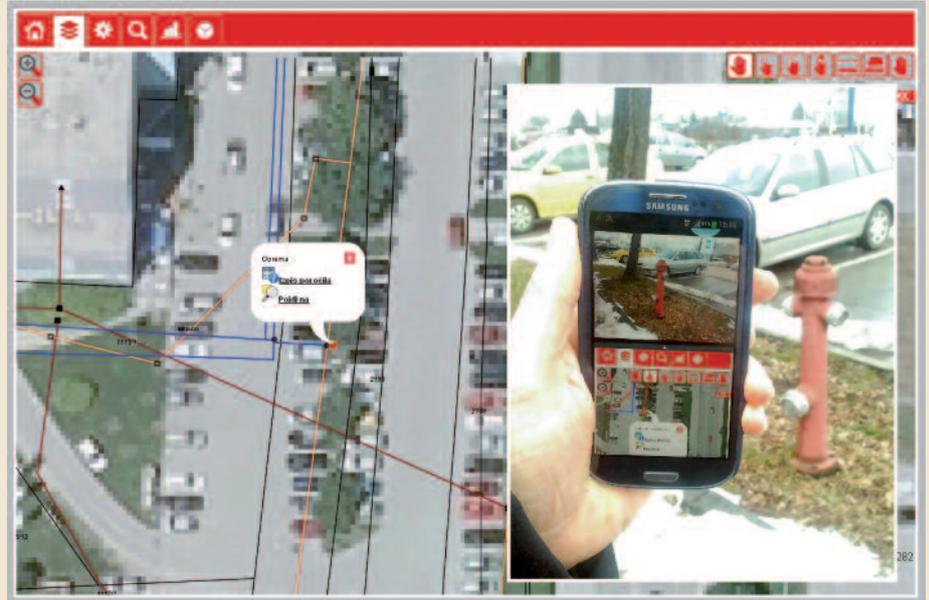
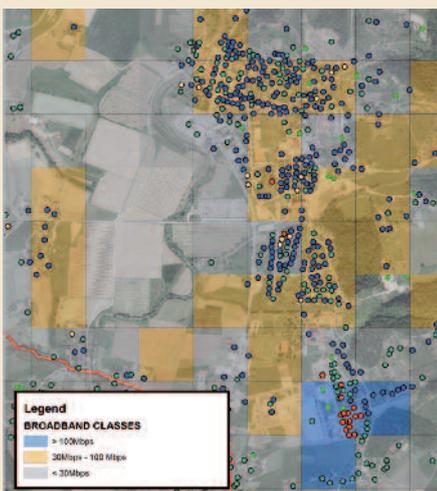
which covers the entire territory of Republic of Slovenia.

Knowing where the underground utility lines are buried before each digging project begins helps to prevent injury, expense and penalties. The costs (direct and indirect) incurred as a result of damaged or destroyed infrastructure are huge. SMA has put in place a system of damage prevention via the Internet. The application is operating in areas under the municipality jurisdiction of Celje for now. This application is not based only on the data collected in the PI cadastre, but also on working closely with individual infrastructure owners and operators of utilities for the purposes of verification and data update. The web application »Call before you dig« is free of charge for all users and was created after the Faculty of Civil and Geodetic Engineering – Institute for Public Utility - released a study addressing the best practices relating to damage prevention.

Another very important system that has recently evolved is the "Broadband coverage information system". This is an important tool for supporting broadband development activities in Slovenia. The 'Act of Electronic Communication', regulating the broadband coverage, was passed in early 2013. Owners of electronic communication infrastructure are, from now on, obliged to transmit not only the basic data about their infrastructure but also the broadband coverage information to the cadastre of PI. The information on broadband coverage for the entire territory of Slovenia has been very successful, particularly for planning and decision-making in the field of broadband communication, one of the priorities of the Digital Agenda of Europe – European Commission. This project can also be provided as an example of good practice for other EU states.

PI is an important factor in the development of each environment and information about it is important in the management of space. Since the establishment of the cadastre of PI in Slovenia, we have achieved rationalization in the processes related with space. Space management in Slovenia with the PI data has not only improved, but has also facilitated spatial monitoring. With easy access and wider use, the PI data is gradually becoming more comprehensive and of higher quality. PI data with modern technologies and access methods are today accompanied by this information practically at every step. Mobile application »iObcina-mobile« is a WEB GIS software solution designed to run on smart phones, tablet computers and other mobile devices. It is based on HTML5 and supports most modern mobile devices. In general it is used to: search for, view, analyse and gain reports of the quantities of elements. It is also used for measuring distances and surfaces of all kinds and types of geospatial data (especially PI information) in a place that can be displayed on maps or digital orthophotos. Each citizen can access the data in real time. This application also takes advantage of devices with integrated GPS systems to provide current user location or even track the user position in real time.

The Government of the Republic of Slovenia passed the 'Mass Real Estate Valuation Act' in May 2006. The mass valuation system is fully implemented in Slovenia and has already been used as a basis for limiting social transfers. The new national property taxation law, based on the new mass valuation system, is still waiting for the politicians. Some of the data from PI cadastre, which significantly influences the value of real estate (such as proximity to rail, highway, gas pipeline and power line) were used in the real estate mass valuation.



Interoperability and interdisciplinarity are trademarks of the cadastre of PI in Slovenia. Inter-ministerial projects, such as broadband coverage, could address best practices that can be applied in other countries in Europe.

Finally, current benefits of the PI cadastre at a national level in Slovenia are:

- Centralization of and access to data (centrally accessible basic information about all kinds of networks and facilities of PI),
- Interoperability and interdisciplinarity (all information about the occupancy of space),
- Indicator to stakeholders and owners (the possibility of obtaining more detailed information about PI),
- Analytical power to examine policy issues and options in a variety of contexts (support processes of spatial planning, environmental assessments, and spatial analyses of data monitoring):
 - Making strategic and operational spatial planning documents,
 - Building land and municipal tax,
 - Basis for the mass appraisal of real estate,

- Implementation of spatial policy instruments,
- Basis for prevention costs and damages "Call Before you dig",
- Basis for the »Broadband coverage" investment....
- Foundation for a database for all commercial mobile applications.

Our plan for the future is to try to improve the positional accuracy of data in the PI cadastre. We practice geodetic surveying methods where there is reconstruction and replacement of infrastructure currently underway. In other cases we use non-invasive methods such as GPR (ground penetrating radar). In the end our ultimate goal is to record the complete ownership of the infrastructure which we are hoping will happen within the next few years.

