

GIM INTERNATIONAL INTERVIEWS DANIEL ROBERGE

Land Governance Key to Sustainability



Good, transparent land governance will serve a country's national resources, the rights of its citizens, and the reduction of poverty. Daniel Roberge is chair of FIG Commission 7 on Cadastre and Land Administration, and is director of the Office of the Surveyor General of Québec, Canada. He is convinced of the significant role that good land governance and transparent land management need to play in the future. The role of the surveyor will evolve to keep pace with the rapid growth of new ways of land management.

Having completed the first year of your four-year term as chair of FIG Commission 7 on Cadastre and Land Administration, what priorities have you identified?

The current Commission 7 work plan aims to promote land rights infrastructures and good land governance to contribute to pro-poor and sustainable development. In addition to cadastral perspectives, we want to develop a better preparedness and response to natural disasters and climate change, and we want to investigate how citizens can become more directly involved in e-land administration processes.

How do you want to achieve this?

FIG Commission 7 is one of the most influential networks of land professionals in cadastral and land management issues. Commission 7 can play an important role in the development of cadastral systems worldwide, in the fundamental infrastructure of sustainable development. This is why we are continually expanding our network, gathering surveyors from developing countries and from regions of the world which are currently under-represented. With this in mind, Commission 7 plans to hold its next annual meetings in Latin America and Africa.

What is your view on crowdsourced information and land administration?

Crowdsourcing is a trend in society in general and has proven

its effectiveness for geographic information purposes, namely after recent natural disasters. But can we use it in cadastral or land administration processes? We examined this question at the International Symposium Cadastre 2.0 organised by Commission 7 last October in Innsbruck, Austria. The answer was a resounding 'Yes'. Good land rights infrastructures exist in only between 35 and 50 countries, and only 25% of the estimated 6 billion land parcels are formally registered. This leaves more than 4 billion land parcels without land tenure security, and there are not enough land surveyors worldwide to fill this gap quickly enough to meet the immediate needs. So we will have to look for solutions involving citizens. One example would be to put a 'dot cadastre' in place, in order to be able to locate dot parcels on a map and identify their occupants.

Is this a task for land surveyors?

No. This enumeration process, which is also promoted by UN-HABITAT, can be achieved by reliable people with a basic level of training, not necessarily land surveyors. Such an approach will help the surveying profession to evolve from conducting field surveys to managing spatial data and quality, and take on a supportive and leading role in developing national spatial data infrastructures with a broad range of applications.

In countries with good land rights infrastructures, official cadastral and land administration organisations also have to work with land professionals, the professional citizens, and assess the potential of crowdsourcing to improve their updating process to create a win-win situation. For example, land professionals could collect unofficial data such as survey posts and marks of occupation such as fences, hedges, etc., that could benefit the surveying community while improving the quality of the cadastral data.

Can you elaborate a little on the survey accuracy debate, also taking into account the Québec case?

In term of survey accuracy, needs are completely different from one country to another. On the one hand, there are developing countries where the needs are basic: to improve land tenure security by implementing basic land administration systems using pro-poor land tools – tools which Commission 7 is working on together with other international organisations, namely UN-HABITAT with the Social Tenure Domain Model. On the other hand, there are developed countries where the cadastral systems often date back more than a century. In recent years, many of these countries have undertaken national cadastral reforms to modernise the quality of their cadastral data, and this is also the case in the province ▶

Daniel Roberge



Daniel Roberge is currently director of the Office of the Surveyor General of Québec and chair of FIG Commission 7. He holds a degree from the Faculty of Forestry and Geomatics at Canada's Université Laval and a graduate degree in International Administration from École nationale d'administration publique. He is a member of the Ordre des arpenteurs-géomètres du Québec and a member of the board of the Champlain branch of the Canadian Institute of Geomatics. He is also a founding member of the Fédération des géomètres francophones. Daniel Roberge has been involved in the design, development and implementation of two extensive land reforms: the reform of the Québec cadastre and the modernisation of the system for recording rights on public land. He is the author of numerous publications and presentations on the cadastre and land reforms.

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of Québec. When we started the Cadastral Reform Program back in 1992, some considered us crazy for undertaking a resurvey of four million private parcels while other countries were simply making the shift to a digital cadastre through digitising, compiling and rubber-sheeting their parcel plans at much lower costs. Today, with the development of e-government and the 'spatially enabled society' so intensively based on cadastral data, we are convinced our decision was right.

Are there other good examples?

Between both these ends of the survey quality spectrum, there are countries that have implemented land rights infrastructure at an incredible speed. As mentioned by Gavin Adlington, lead land administration specialist at the World Bank, at the same International Symposium Cadastre 2.0, last October, this is the case in many former socialist republics in Eastern Europe where cadastre and land registries have been implemented within the space of just a few years. Most of these land registration reforms, counting up to 300 million properties and covering more than 27.4 million square kilometres for a population of almost 900 million people, have delivered exact data rather than accurate data. But the main goal has been reached: implementing land rights infrastructure to support the land market. And the survey accuracy and quality is expected to be improved over time.

The government of Québec has also completed an innovative management reform of public land. Can you describe it?

In Québec, public land accounts for 92% of the total 1.6 million square kilometres of territory. For this huge expanse, the government has to conciliate sustainable development of natural resources, recreational activities and conservation of protected areas. This would be an impossible task if we didn't know

what was where, since the territory is covered by more than 300,000 rights, restrictions and responsibilities (RRR). That is why we have implemented the public Register of the Domain of the State, in which all rights and constraints are registered. In this common land rights

to be clear in the legal documents what parcel (in this case a 3D unit) has been acquired, without using specialised software. This is why indirect solutions representing 3D units on 2D plans will continue to be used until a solution has been found for conciliating technological

The surveying profession will evolve from conducting field surveys to managing spatial data and quality

infrastructure, each governmental or public agency stakeholder and all general users can see whether a portion of the territory is public or private, and what kind of rights or constraints apply to it. This national initiative is perfectly aligned with the aim of Commission 7 to promote good governance and transparent management of public land. In too many countries, management of public land (and the natural resources it contains) is neglected, and this weakness undermines sustainable development.

What will be the main development in 3D cadastre in your view? How important is 3D cadastre, and how soon will it take off?

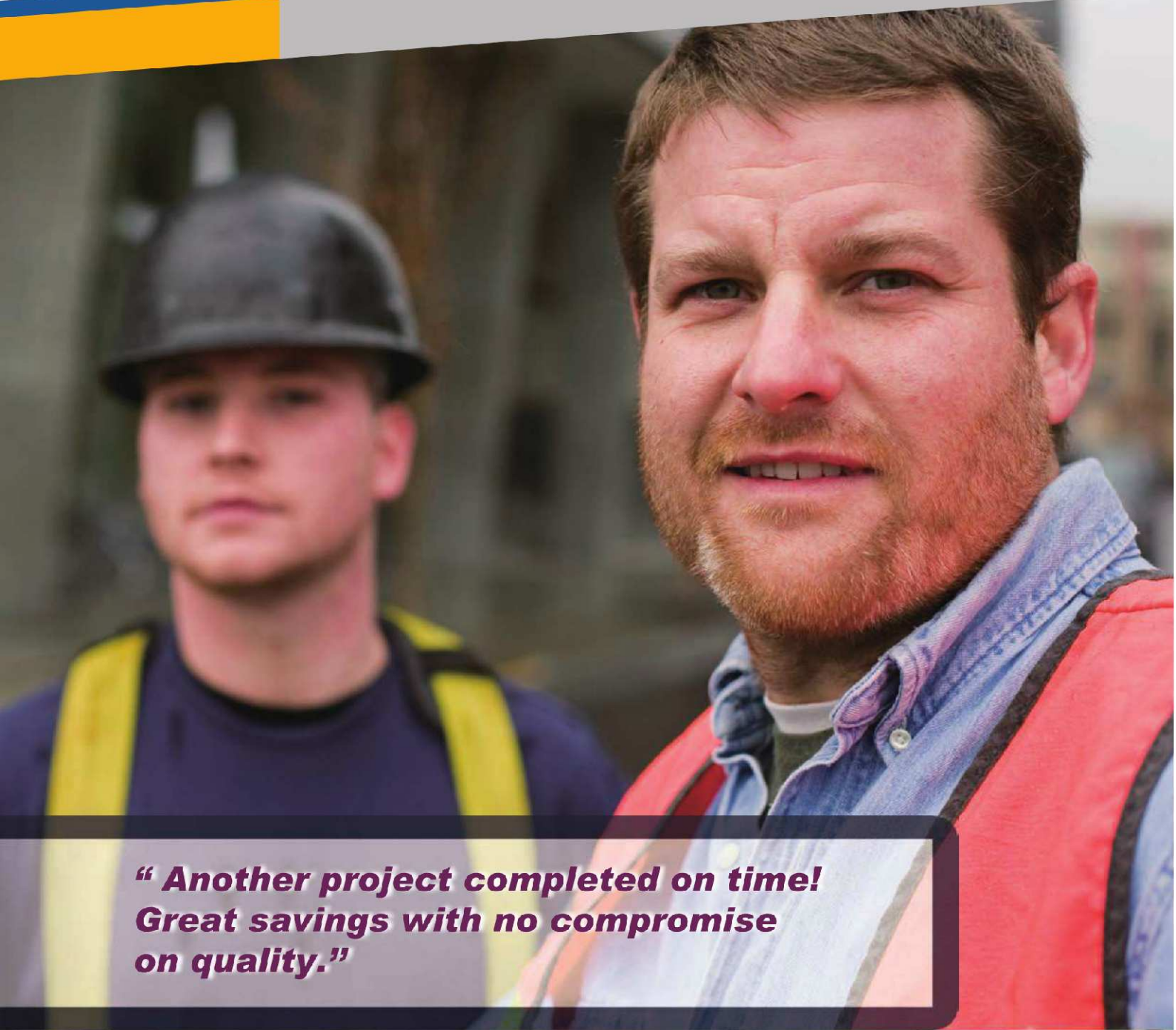
3D is now being used in a wide range of applications including architecture, communications, planning, security, design and transport, yet not much in cadastre so far. One of the main obstacles is the legal constraint. This was one of the conclusions emerging from the 3D Cadastre Workshop, jointly organised by FIG Commissions 3 and 7 last November, in which more than 40 countries were represented. In fact, despite all the research and progress made in the last decade, still not a single country in the world has a true 3D cadastre.

Cadastre and Land Register are both public registers. When a citizen buys property such as an apartment, it has

and legal aspects. But it is clear that, with the proliferation of apartments and superimposed rights and restrictions in large cities, the need for 3D cadastres will increase. Academics, land professionals and jurists must continue their research and discussions on this matter to find solutions for putting real 3D cadastres in place.

What are the next steps in pro-poor land administration?

Commission 7 continues to work with international organisations to improve land rights security to alleviate poverty and contribute to sustainable development. In this regard, we continue our work with UN-HABITAT to develop pro-poor land tools based on the Social Tenure Domain Model, which is part of the Land Administration Domain Model that is being prepared to become an ISO Standard. We are collaborating closely with the World Bank to improve land governance and security of tenure worldwide and, once again this year, FIG will be an important partner of the World Bank Conference on Land and Poverty. With FAO, FIG has been an important collaborator in elaborating and validating the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests. Commission 7 will support its implementation as soon as the ▶



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Commission 7 also aims to be more present in developing countries and, in this perspective, we plan to hold our 2013 annual meeting in a francophone African country. We are in touch with the Federation des Geomètres Francophones and FIG Commission 2 on Education with the intention of organising a joint International Workshop at the same time.

And what about post-conflict and post-disaster land administration?

In terms of disaster management, Commission 7 is working closely with FAO to develop e-learning materials on natural disasters, land tenure and administration. Through this initiative, we want to raise awareness

of various aspects of land tenure and land administration in the case of natural disasters. We also want to provide a training tool to support the integration of land tenure and

land tenure issues in their DRM work. Also, during the next FIG Working Week in Rome, there will be a half-day technical session at the FAO headquarters on Disaster

We want to raise awareness of post-disaster land administration through e-learning

administration issues into the Disaster Risk Management (DRM) country strategies and programmes. The e-learning materials will be designed for both land tenure professionals that deal with natural disasters and for natural disaster professionals who need to include

Risk Management and Land Tenure. This will be a unique opportunity to strengthen our collaboration with FAO on this important topic. ◀

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