May has been an exciting and productive month for the 3D team, with visits and conference attendances to FIG, held in Rome, Italy and the GSDI World Conference in Quebec, Canada as well as a visit to the Quebec Land Registry. Our research was very well received internationally and we are confident that we are working at the forefront of technology in this field. We also held a vibrant discussion with Patrick Meehan from Vekta and look forward to meeting with our other partners in the near future. We would be delighted if you have any news or input for this newsletter and hope you find this month’s edition informative and engaging.

The Research Team is comprised of Chief Investigators, Research Fellows, industry members and postgraduate scholars

Chief Investigators:
Prof. Abbas Rajabifard (Project Coordinator)
Prof. Ian Williamson
Dr. Tuan Ngo

Researchers:
Dr. Mohsen Kalantari
Prof. Ian Bishop
Dr. Ida Jazayeri
Ms Jude Wallace
Mr Brian Marwick

PhD Scholars:
Mr Ali Aien
Mr Davood Shojaei
Ms Serene Ho
Mr Sam Amirebrahimi

Visitors

Vekta - Patrick Meehan, 24th May, 2012
Patrick kindly spent a morning with the 3D team, discussing the processes involved in large scale projects, from the conception phase right through to development.

Mohsen Kalantari

Reporting from FIG, Rome, Italy
3D land information was one of the major areas of interest in the FIG working Week 2012, in Rome. There were 3 sessions dedicated to 3D together with a number of 3D related papers presented in other sessions. Case studies from Finland, Malaysia, Indonesia, Italy, Brazil, Hungary, Russia, Israel and Germany demonstrate a tendency towards adopting the 3D digital data in land administration systems worldwide. An important observation from the working week was the strong presence of the Building Information Modelling. A dedicated session on the BIM and surveying, and a keynote speech by the RICS President emphasize on the growing importance of the BIM and its implications for the surveying industry. BIM is on the agenda of our research project.

Visit to Quebec’s Land Registry Office
From the project team, Abbas Rajabifard, along with PhD candidates, Serene Ho and Katie Potts, visited the Quebec Land Registry, as part of their recent visit to Quebec City, Canada, to attend the 2012 Global Geospatial Conference. Abbas met with senior representatives of the registry, who provided an overview of Quebec’s recent improvements to their land registry practices. Abbas was also invited to conduct a seminar for all land registry employees, which was transmitted live to other offices around the province. His presentation focused on the roles of SDIs, 3D cadastre and the multi-purpose cadastre in spatial enablement.

During the visit, talks were held to discuss the possible collaboration opportunities between the Quebec Land Registry and the 3D team. As they have also started to implement a 3D cadastre, there are exciting prospects for future teamwork. Quebec, which uses a deed system and a graphical cadastre, has unique challenges in managing land since 92% of its total land is public land - representing approximately 300,000 different rights over land. Consequently, separate land registers have been designed to manage public and private land uses, with public access facilitated through online information portals. It was interesting to note that the land registry is entirely self-funding.
Project Updates

3D Cadastral Data Modelling

>> Ali Aien

The project has proposed a 3D Cadastral Data Model (3DCDM) to provide a practical framework to model the legal information in survey plans (legal objects) and physical information of architectural and engineering plans (physical objects). The data model contains: the information of property owners; survey points, measurements and observations, and administrative information of surveying.

The results will be published in the in the peer-reviewed ‘ISPRS Annals of Photogrammetry, Remote Sensing and the Spatial Information Sciences’, the 22nd ISPRS Congress, Melbourne, Australia (2012) and have been submitted in the International Journal of Computers, Environment and Urban Systems (CEUS).

Report from the GSDI World Conference, Quebec Canada

>> Serene Ho

As a component of the joint 2012 Global Geospatial Conference held recently in Quebec City, Canada, the 7th 3DGeoInfo Conference provided the main focus for all things 3D, including current research into 3D land and property information. One of the key highlights was the plenary delivered by Richard Mongeau from Montreal City Council, showcasing his experiences designing, developing and implementing an integrated 3D land, property and infrastructure system over the last three years. Our research group presented a position paper as part of the GSDI component of the conference (published in the peer-reviewed conference publication) arguing the potential of land and property information in 3D to facilitate multi-level participation in a spatially enabled society.

Despite the variety of research presented, it is evident that current research trends in this area remain entrenched in the technical aspects. In this respect, the multidisciplinary nature of the research carried out at CSDILA will undoubtedly make a significant contribution to the body of knowledge in this area, and perhaps a timely one that will further our understanding of the increasing conflation of technology and people for spatially enabled societies.

Building Information Modelling

>> Sam Amirebrahimi

In the last couple of weeks, I have been involved in a review of BIM and its applications in the cadastral domain. In this process, a number of technologies for the exchange of data between stakeholders and systems in the Architecture, Engineering, Construction (AEC) domain as well as Geographic Information Systems (GIS) and Surveying domains have been investigated to understand and highlight the importance of using these technologies and their further utilization in the "Land and Property Information in 3D" project.

International Perspectives

Ida Jazayeri

With the International Society for Photogrammetry and Remote Sensing Congress not too far away (August 24th—September 3rd), we are looking forward to welcoming many old friends and new colleagues to Melbourne. A number of delegates have been in touch with us to organise a visit to the Centre while in Melbourne. We look forward to hosting delegates during the congress and using this opportunity to strengthen our international ties.