

GIM INTERNATIONAL INTERVIEWS CHRIS GIBSON, TRIMBLE SURVEY DIVISION

Future Bright for Surveying



The clouds of economic recession are parting to reveal a bright future for the surveying profession. Both in the United States and in economically booming regions of the world, adding value to products is broadening the role of the surveyor. GIM International talked to Chris Gibson, vice-president of Trimble's Survey Division, about strategy and the future. He told us, "The future role of the surveyor will be adding value to make the customer more successful." The future for surveying, together with the role of the surveyor, is not shrinking. On the contrary, Chris Gibson is convinced we need to think outside the box, the current domain, to recognise opportunities beyond the boundaries of current working practices. Surveying is a different, broader profession than it was ten years ago. Surveyors have become information managers, and that adds significant value to the decision-

making process.

What are your views on the current state of the economic crisis and its effects on the business worldwide?

The decline in the survey business in the United States has been significant over the past year, and the recovery plan put forward by the Obama administration isn't a magic tool for surveyors. Only a small proportion of the USD700 billion recovery funding is going directly to survey businesses. Europe continues to struggle, although we see signs of encouragement. In China Trimble is doing well, especially in the high-end market where we offer value-added solutions for infrastructure projects such as building high-speed railways, bridges, roads and airports. Africa is performing strongly, with the mining market as one of the economic engines, mainly driven from South Africa. The Middle East is still strong, although the situation in Dubai has been a hiccup. Economic developments in South America have been flat for the past eighteen months, but Brazil offers promising opportunities, as does the region to the north around the Panama Canal. In Russia, mining, oil & gas and large infrastructure projects should mean future growth. I am an optimist, and strongly believe there is a bright future for the business. There will be new opportunities, new technologies and unexpected synergies coming out of this period.

How is Trimble deciding on the post-crisis strategy for the Survey Division?

From a strategic standpoint, one of our company values is to couple all our efforts to market objectives, staying centred on a clear definition of our customers and their needs. They are looking for solutions that enhance quality, add value and improve productivity. Trimble delivers by listening carefully and working with them to define problems in their daily work and develop solutions to meet their needs. For example, sensor technology for data capture will continue to be the basis of the solution, but the software that sits on top of the hardware adds that last 10 to 15% that customers need to make the difference. The synergy and seamless interaction between software and hardware in our solutions is extremely important.

Market segmentation is the second pillar of our strategy. We serve the following five market segments: the public sector, private survey services companies, natural resources, A/E/C (architecture, engineering and construction), transportation, and utilities. Private survey companies can participate in all these different environments, but workflows differ in each segment, so too demands on software applications. That is why we are creating more customised software modules for specific projects. Again, that last 10 to 15% needs to be tailored to specific customer requirements. For example, an application specifically designed to comply with Australian mining companies can easily be adapted for mining companies in South Africa, tweaking the application module to meet their specific needs. But this applies not only within market segments, but also regionally. Take cadastral systems that in most countries are subject to local regulation; the flexibility to adjust to specific local workflows and regulations makes all the difference between a good and a great solution for our customers. We provide such accommodation through Trimble Access.

What's the outlook for the profession of surveyor?

We see a blurring in traditional survey industry boundaries. The field and office are overlapping as data processing and engineering expertise move closer to projects. Surveyors are adding data-management capabilities to their skills portfolio. Engineering and spatial data are being tracked using project timeline and accounting data. Survey instruments are combining GPS, optical and imaging capabilities. Construction machinery is utilising GPS and lasers to enable 3D machine control that puts design surfaces, grades and alignments in the cab, allowing automatic, accurate real-time positioning for earthmoving operations.

Surveyors are recognising the changes and responding in ways that can enhance and grow their businesses. Changes in the use of technology, both sensor and digital-data transfer, offer new opportunities and new challenges. Many surveyors today already see themselves as project information or data managers. Rather than just providing the bricks-and-mortar tasks of property line surveying, mapping and stakeout, these forward-thinking surveyors are managers of the critical data required by the entire team throughout the construction cycle. Surveyors are usually on site from start to finish, from construction staking to as-built. These progressive surveyors are some of the most valued team players in the management of design documentation and the creation, revision and archiving of data.

throughout the project.

But while surveyors have for some time performed a data-management role, the format in which the data is managed, and even the data itself, has changed. Until recently surveyors worked primarily in the 2D space. With GNSS, RTK and laser technology, robotic field equipment, imaging, and the capacity of desktop computers to manipulate, store and transfer vast amounts of data via wireless communications and the internet, surveyors have become capable of defining and referencing the actual 3D surface and more efficiently sharing information with their customers using imaging technologies and pictures. This opens up significant new ways to manage, plan, transfer and use data.

To prepare for the future, survey organisations can embrace their role as data managers by enhancing their skills-set through ongoing education, making the necessary technology investments and looking at how they can take advantage of growth opportunities provided by emerging industry trends such as spatial imaging and engineering applications for tunnelling and monitoring.

How do you suggest surveyors prepare themselves over the next five years for the future?

There are always changes taking place that affect the way surveyors work. For example, it wasn't that long ago that GPS was a highly specialised tool only useful for survey work a few hours a day. Today surveyors use GPS daily and have access to an amazing toolbox of technologies, from GNSS to sophisticated optics, 3D scanning and imaging. Surveyors will need to be able to keep up to date with the technological advancements that are available. The skills that will set the surveyor apart are knowing how to use the tools productively, the potential errors and limitations in their operation, and what specific data to collect to create deliverables.

Finally, survey customers are beginning to expect highly graphical deliverables, most of the time in 3D. The surveyor of the future will need to know how to generate and manage this data. These rich deliverables will also provide the potential to work in new industries or markets where surveyors have not traditionally served.

What other challenges do you see for the industry?

We are aware that educational institutions and universities teaching geomatics are suffering from a lack of new students. From our position in the marketplace we see it as essential to support academia. The students of today are the engineers, scientists and managers of tomorrow. Trimble is involved in a worldwide network of educational institutions to drive interest in the surveying profession through specific programmes for students. I see great careers for young people coming into the geomatics professions.

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