

Workflow Infuses Services and Solutions - HxGN Live 2014



HxGN Live was held in Las Vegas in June for a third consecutive year. It was where everything came together for Hexagon AB. Synergy, BIM and consumer-driven stories were just some of the themes explored by the 3500 people who attended in the vast MGM Grand hotel. And Leica Geosystems is a focal point that continues to bring everything together for its Swedish parent, observes our reporter Adam P. Spring.

This year's HxGN Live was another milestone event for Hexagon as a company. It was as significant as its first conference back in 2011 in Orlando, Florida. Seamless integration between Intergraph and Hexagon - rival service and solution providers until Q4 2010 - had become second nature for all Hexagon employees. Numbers for the high definition survey (HDS) sessions were also at a record high of 800 attendees. This figure was up by 100

people from the 700 users that attended in 2013. HxGN Live in Hong Kong was announced for November 18-20 2015.

Point Cloud a Standard for BIM and CIM

The Leica Geosystems training day showed that scanning based solutions continue to evolve. For example, sessions for hybrid systems like the Nova MS50, the multi-station instrument that combines total station technology with GNSS and scanning, took place for the first time. Interactions between users and seasoned HDS trainers like Guy Cutting also indicated the point cloud was now an industry standard. This was especially the case in emerging application markets like Building Information Modelling (BIM) and Civil Information Modelling (CIM).

Scan to BIM

Joshua Rayburn, an HDS manager for part of the NAFTA region, presented scan to BIM using a Leica P15 laser scanner. This hands-on session began with scans collected in the training room. Point cloud information was then used to demonstrate a scan to BIM workflow, where data was processed in Cyclone and Cloudworx for AutoCAD. Decision-making processes were being informed by as-built information derived from point cloud data - real-world conditions for a building or structure. Navigating between what Hexagon viewed as the digital world and the real world is what makes BIM a powerful project management strategy. Information use now goes beyond standalone 2D plan drawings.

Overall, the HDS training sessions highlighted that P15 and P20 scanner solutions guarantee high-resolution data collection at industry leading speeds. Sessions like Rayburn's lay the foundation for numerous Cyclone related announcements made at HxGN Live 2014. Like Intergraph Imagine software (which used to fall under Security Government and Infrastructure - S,G&I), this included the use of solutions provided by Australian company Euclidean. Their technology has been integrated into several cloud-based viewers and was demonstrated at the conference in order to show how to manage large datasets. HDS hardware and software solutions therefore continue to meet the demands of Hexagon's worldwide user community.

The Keynotes

The opening keynote was entitled The Disruptive Power of Transformation. Hexagon has reshaped itself around information and communication technologies (ICT). This was achieved via its Smart Content Program (SCP) and GeoCaaS service. Outlined by president and CEO Ola Rollén, SCP was part of a business model "moving from product centric to workflow solutions." It also set the tone for a genuinely Live event based around intelligent and autonomous systems, a move away from technology isolation in favour of technology convergence and more efficient design and manufacture processes. Information capture and distribution lifecycles were also explored in the days that followed.

Geosystems, Geospatial and Metrology

Jeurgen Dold, president of Hexagon Geosystems, discussed market growth and data integration in his Leica Geosystems keynote. Whether it was investment in the mining sector or emerging unmanned aerial vehicle (UAV) applications, Dold confidently voiced his approach to change: "We need to create places where multiple datasets are coming together from multiple data providers. So, we can then take those and create information layers - to create this information for more and more users."

It was also the first time Mladen Stojic had attended HxGN Live as president of Hexagon Geospatial. Intergraph's geospatial portfolio had been rebranded at the end of 2013, and a new branch of the Hexagon family was created. In his inaugural keynote, Stojic demonstrated why he was the person to shape its future: "Our goal is to transform the industry and, ultimately, transform the geospatial economy

associated with capturing content, producing content, providing content as a service and using that content in solutions.”

Transforming industry was also at the heart of the Hexagon Metrology keynote. Norbert Hanke’s team were ahead of the curve in a sector where quality control and production lifecycle are primary considerations. Ken Woodbine, PC-DMIS developer, used the metrology management system (MMS) - a collaboration between Hexagon Metrology and Intergraph - to discuss integrated data. He explained how MMS continues to expand the concept of product lifecycle management (PLM) in the metrology world: “It aligns with several current software megatrends like big data, cloud computing and the Internet of Things.”

Nova MS50

Last year the Nova MS50 MultiStation was heralded in via a champagne reception in the Leica Geosystems keynote. One year later, numerous presentations highlighted why its Heerbrugg design team felt a great sense of pride toward their creation. In the HDS sessions, for example, Sean Douthett of David Evans and Associates showed how MS50 data could be integrated with ScanStation C10, P20 and HDS 6000 point cloud information. The range at which data could be collected was a notable consideration for Douthett as an MS50 user. High-resolution data capture over 150 metres was a key selling point in scan-data fuelled social circles.

Hans Moller, lead surveyor at Bechtel Oil, Gas, & Chemicals, also discussed the advantages of an MS50 based workflow. Set in Australia, the story he told was driven by point cloud data for industrial sized containers from the Curtis Island natural gas processing facility. The MS50 provided high-quality data as both a total station and laser scanner. Results for site monitoring activities and various surface analysis tests were particularly impressive.

The variety of applications outlined in Douthett’s and Moller’s presentations teased out an important point about the Nova MS50. It had become a powerful gateway technology for users who might be unfamiliar with laser scanning. It had, no doubt, opened doors for the Leica Geosystems HDS brand since its release – such as applications where users may otherwise be resistant to change.

Market Growth

User diversity and an increased number of first-time attendees demonstrated that interests in geospatial information were growing. In order to capitalise on it, Ola Rollén likened the approach Hexagon was taking to the Apple iTunes model. His Content as a Service (CaaS) strategy took advantage of data integration, market consolidation and the long-term value of what he sees as actionable information. In other words, the non-linear workflow was here to stay.

Customer feedback on architectural, engineering and construction (AEC) work in the US revealed that the NAFTA region was in full economic recovery. The amount of work Hexagon users were getting in comparison to previous years was certainly a shopfloor indicator. Texas-based companies like Lanmar Services had, as its CTO Larry Kleinkemper put it, “never been busier.” BIM and CIM were reshaping the way spatial information was being used in the “new world”. Clients were also having more of a say in decision-making processes.

The Power of BIM

Leica Geosystems was well placed within Hexagon to reap the benefits of BIM related applications. The HDS brand had clearly matured, and the idea of 2D plan drawings as the baseline dataset had clearly become a thing of the past. For example, scan to BIM could be used to describe how as-built conditions were documented through a point cloud. This had also translated over into the work environments of Intergraph Process, Power and Marine (P,P&M) users. Hence, the rise of the term CIM, civil information management.

Data integration was also promoted in BIM work cycles through integrated project delivery (IPD), which helps utilise the talents of all project team members to obtain the best results possible. Cathi Hayes, BIM manager at Leica Geosystems, reiterated this throughout her “Field Trip” sessions - even pointing out that BIM and IPD are intricately linked to one another. Market and user outcomes seemed limitless to anyone sitting in the Hayes sessions held in 2014.

Synergy

Synergy between all parts of the Hexagon family was discussed throughout HxGN Live 2014. Jack Ickes, President of the geospatial solutions division at Leica Geosystems, demonstrated how a ScanStation P20 scanner was combined with acquired solutions like GeoCue. This created the Pegasus Two, a powerful mapping solution new to the Leica portfolio. A cart-based system was also showcased. Called the T2 (that title is bound to send a frisson through old hands and lovers of the ubiquitous Wild T2 theodolite, which sold 90,000 over 70 years for Wild, Leica’s predecessor company), it includes a Velodyne sensor. Future developments based around the growing relationship between P, P&M and Leica Geosystems were hinted at too.

Mining

Hexagon has repositioned itself within the mining industry over the last year. Design, exploration and operation are the key components of its onsite workflow. Its mining software and fleet management markets have been merged in order to make Hexagon the number one services and solutions provider in the mining sector. In other words, MineSight, Leica Mining, SAFEmine and Devex were brought together in order to “leapfrog” the competition. In the Leica Geosystems keynote entitled Dirt, Diamonds and Data, president of Hexagon Mining, Guilherme Bastos outline his 360 plan for the future: “ We cover mine surveying, mine planning and scheduling, real-time management for open pit and underground mines, process automation, 3D visualisation and safety.”

Mining infrastructure and asset management are set to have a noticeable impact on future streams of income for Hexagon. Acquisition of the UAV company Aibotix (an ideal solution for data capture in open pit mine mapping), complimented motion extraction based solutions like SAFEmine. This all-in-one traffic safety and collision avoidance solution was already being used on the ground to make open mine environments safer.

Gold to Go

The Golden Nugget casino is located in downtown Las Vegas. It is the largest casino on Fremont Street and has featured in films like Diamonds Are Forever. In 2011, a new chapter was added to its history when a Gold to go vending machine was installed in its Gold Tower Lobby. Prices are updated every ten minutes and 24 carat gold bars are sold in 1, 5 and 10 gram sizes. Boxes of gold coins can also be purchased.

Las Vegas is one of 20 locations where Gold to go vending machines can be found. They are also in other parts of North America, the Middle East and Europe. For example, Westfield Shopping Centre in West London had a Gold to go machine installed in 2011. The business aspiration of Germany based TG-Gold-Markt is to have 500 Gold to go machines in operation around the world.

Summary

Hexagon AB was pragmatically transparent about its immediate and long-term goals at HxGN Live 2014. The mantra of a world shaped by an evolving information flow, which had been presented to its customers, was now a fundamental part of its day-to-day business operations. Divisions like P,P&M - outlined as having sizeable growth potential in the capital markets day presentation - provided insight into what to expect at the next HxGN Live event. User stories will not only be told in Las Vegas in 2015. They will also be presented in Hong Kong.

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