COMMITMENT TO THIRD DIMENSION

Bentley User Conference Europe

Bentley hosted its first European user conference two weeks after the one in Charlotte, USA. More than a thousand participants met in Prague from 11th to 14th June for training, best-practice sharing and networking. A third Geospatial Research Seminar took place on the Sunday before the official opening. The programme allowed for football addicts to watch World Cup matches.

On the first day of conference Greg Bentley confirmed commitment to all developments within Oracle Spatial, Microsoftâ€™s Windows VIsta, Adobe PDF, all the new releases of Autodeskâ€™s DWG, and Google Earth. The most important development is Microstation XM, built on a new object-oriented platform based on XML Feature Modelling (XFM) technology. Real-world objects are modelled as features with identification attributes including those for presentation: colours, symbols - behaviour (constraints) and relationships to other objects (including constraints between objects). Microstation V8XM, launched at the conference in Charlotte, is very fast and allows the user to work with rendered models and carry out advanced processing, such as integrating PDF files of drawings with a 3D model. The new version of Project Wise XM, launched in Prague, allows for extended management of files such as SHAPE, DWG, IFC and PDF, and features within these files.

3D Solutions
The R&D direction for Geospatial vertical, â€˜true 3D integrationâ€™, was demonstrated by a case-study on planning and setting up a new cable network in Toronto. A map was prepared with all the data from cadastre, info on possible customers, documents from municipalities etc. Fibber, Field and Publisher were presented using this case-study, Oracle connector Bentley Cadastre, and Bentley Electric, a newly acquired company. Many aspects of interoperable 3D solutions have yet to be addressed but commitment to the third dimension was clearly demonstrated. New applications will soon be made available in 3D: Bentley Map and Bentley Cadastre, and Geospatial Extension, freely available to SELECT users. The most limited version of Geospatial Extension incorporates all interoperability functions and Oracle topology support. Bentley Cadastre is the application with most functionality, supporting a topological structure soon to become 2.5D. The modules performing surface computations exist but still need to be converted into XFM before the focus is completely on multilevel properties.Â

Education
Bentley continues to provide open-standard solutions. The OGC web service WMS is already available within Bentley Publisher, and Web Feature Services (WFS) is under development. There are also plans to support opensource DBMS; the first connector will be to the spatial-data types of PostGIS. Besides the proprietary 3D formats, Web 3D standards such as X3D, for visualisation and interaction of 3D models, will be provided. There was great interest in CityGML, recently accepted as an OGC open document. As a company highly dedicated to education, Bentley fosters contacts with universities and schools. Recently updated tools for new products may be found on networks and in manuals, books, training materials andÂ demonstration videos, and on the website. The newly founded Bentley Press will also contribute to helping students and users understand and develop tools and applications.

Seminar
The Geospatial Research Seminar is aimed at giving users, Bentley developers and academia the chance to meet and outline future developments and research. This yearâ€™s theme was Advancing GIS for Infrastructure. Over recent years the demand for spatial data across all disciplines has revealed many points of friction. For example, repetitive re-entry of data within the infrastructure sector is both tedious and prone to error. A common geometric framework for infrastructure is required for true integration.

Data Maintenance
The map is no longer a spatial representation of related data for map-based reporting but is becoming a highly accurate context for infrastructure in 3D. Accuracy, both positional and geometric, is crucial here. Neglected data maintenance is a fundamental threat to use of data across disciplines. Inaccurate or outdated data can seriously reduce the usefulness of data. A philosophical shift is needed towards the idea of a data-maintenance lifecycle and integration of the many disciplines contributing infrastructure. Seven speakers addressed these aspects. Mauro Salvemini (Roma University) elaborated upon historical developments in GIS. His message was â€œletâ€™s do something with the data we already haveâ€, giving examples from the INSPIRE initiative. Lars Bodum (Aalborg University) told the meeting that present data precision was acceptable but accuracy could be better, especially with respect to the third dimension: If we can agree on a common ontology in 3D city modelling, it would help us to increase the accuracy of dataâ€.
Werner Kuhn (Munster University) discussed interoperability, concluding that the most complex spatial schemas were not always the best ones. Ed Thorpe (Chris Britton Consultancy Ltd) presented an initiative on maintenance of information for transportation, a serious attempt at standardising all road-building processes. Sisi Zlatanova (Delft Univerity of technology) discussed management of data within a â€˜projectâ€™. Rene Marey (urban planner in Beelding) shared his experience of using GIS in land and urban planning. Styli Camateros (Bentley) focused on various Bentley solutions for â€˜life-cycleâ€™ management.

The seminar closed with a visit to the offices of Czech Cadastre and Land Surveying.