3D Cadaster[1]

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SUMMARY

With more than 50% of the world's population living in cities, and the proportion of the world's population living in cities growing to an astonishing 70% by 2050, cities and city infrastructure become an even bigger factor in the quality of life. These numbers reflect the growth of urban areas by 2.5 billion people in the next 40 years which requires extensive development of infrastructure to accommodate this growth. A Cadaster and Land registration is the basis for sustainable development and economic growth. With a rapid increasing population in urban areas, 2D cadaster systems have shown limitations, especially when describing complex situations to various stakeholders.

3D information models for cadaster are now increasingly implemented to overcome these restrictions. However, 3D systems are not without their challenges and problems to be avoided. The challenges include: guaranteeing topological consistency when building 3D volumes, detecting overlap in 3D, simplifying the BIM model for the 3D property registration process, acquiring the 3D property data in a cost-effective manner, and associating 3D geometries with properties in a 3D GIS efficiently.

This presentation focuses on how a 3D Cadaster plays a vital role in better and more efficiently plan, design, construct, and operate city infrastructure, to be better prepared for the future.

This session will discuss technologies for 3D Cadaster and infrastructure modeling and present case studies illustrating its benefits across several infrastructure disciplines. The presentation also covers the creation, management and applications for 3D Cadasters and the benefits for users in transforming their traditional 2D GIS systems into powerful 3D Cadaster models. The presentation will focus on why 3D Cadasters are valuable and how they can be created by extending existing GIS systems, not replacing them.

[1] Abstract of presentation in Industry Session

BIOGRAPHICAL NOTES

Ton de Vries joined Bentley in 2004 and has served as Bentley's Solution Executive for Government since April 2008. Ton has over 20 year experience in the Federal, Municipal, Utility, and Communications markets across Europe and the United States, holding several management and consultancy positions. He was responsible for Bentley's Geospatial sales in The Netherlands, Germany, Switzerland, Austria and Eastern Europe from 2004 till 2008. Prior to joining Bentley, Ton held several consulting and management positions at Intergraph and ISIS, and was founder of a Bentley reseller in the Netherlands.
Ton holds a bachelor degree from the HAN University of Applied Sciences. Ton works out of the Bentley Headquarters in Exton, PA.

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