

# Bentley Web Mapping all About Speed

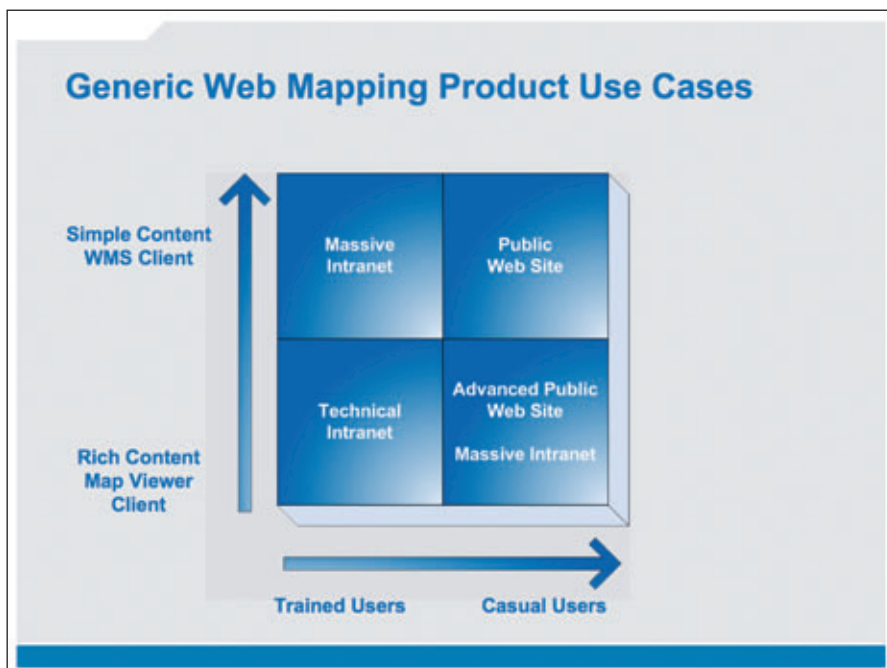
## Providing Information Based on Predictions

Bentley's Geospatial focus has always been and still is: creating, managing and sharing of geospatial data as efficient and quickly as possible. Web mapping, or publishing, is a logical step in this respect. Viewing, redlining, printing and plotting via the web are all possibilities, except for editing. Director Geospatial Center of Excellence **Matty Lakerveld** explains why.

By Sonja de Bruijn



*Matty Lakerveld, Director Geospatial Center of Excellence Bentley Benelux.*



### Intranet Webmapping

Web publishing is not new or 'hot' to Bentley: ISIS, a Dutch company that was incorporated by Bentley two years ago, started developing this technology six years ago. At that time the application was called Flexiweb. This was an environment for the management and publication of all kinds of geographic information within an organisation, making use of Internet technology. Speed was essential: being able to use, view, analyse, print and plot hi-resolution vector and raster data, images, multi-media and multiple databases as fast as possible in one integrated environment, key issue with Bentley. Database information, documents, geospatial information, all of these data are

configurable from the server. Instead of having to implement technology, all data are directly accessible from a configurable database. In a very short time the user has a complete GIS environment on the web available. This is the main difference with other web mapping products in the market.

### Four Types

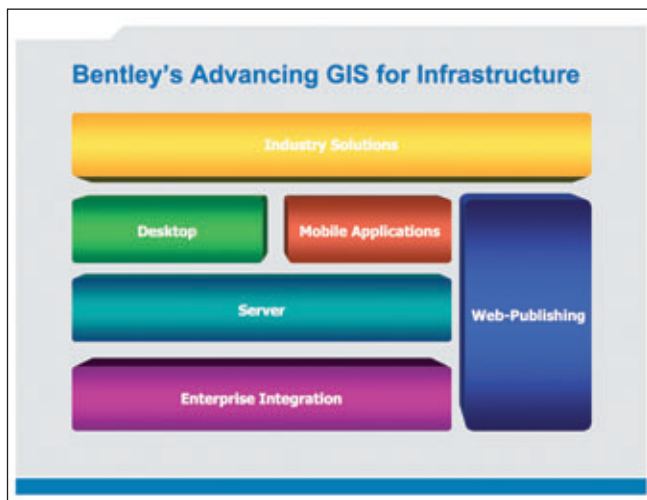
Bentley offers four options in the field of web mapping. One of them is making all information available via web technology (intranet), the second being the integration of geospatial data in an enterprise system. Making data available via the Internet for several purposes is the third option within Bentley's web map-

ping technology. Tuning maps according to what the end user wants is the fourth option, and can be combined with the third possibility. According to Lakerveld there are essentially two types of web mapping: embedded web mapping and an application specifically meant for the end user. The Director of the Geospatial Center of Excellence explains what he means by the latest: "I am talking about providing information based on predictions on what the end user wants to know. Accordingly only the requested information is offered which is retrieved from a content management system. Offering information this way implies not only content managers working behind the screens, but also a communications specialist."

### Making Predictions

He continues: "Many organisations think offering a huge amount of information is priority. Bentley's opinion is that it is much better to first think about what a user wants to know before putting all the information on a portal for example. A visitor should be able to find, retrieve and make use of the information he is looking for in a very short time, without having to search or being bothered by GIS technology."

Lakerveld sees Web Mapping as the first modest step for organisations to a Service Oriented Architecture (SOA). Web Mapping is not a purpose in itself.

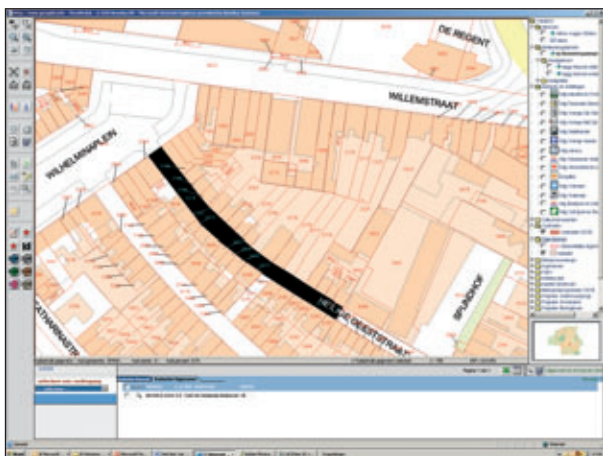


He regards web mapping as part of an integrated system. "This so-called system integration started about six years ago and I am convinced it is still strongly evolving. Just look at Oracle with their SOA implementation, which facilitates the development of modular business services that can be integrated and reused, for an adaptable IT infrastructure. He regards web mapping takes place outside the traditional boundaries of the CAD and GIS environment and with that makes geospatial content available for multiple purposes in numerous workprocesses."

### Source Information

Intranet and Internet Bentley web applications work with different databases. Source information can be retrieved on-the-fly. In order to maintain security there is a second database behind the firewall. Several systems and data stores are compatible with the Bentley web mapping solutions. Lakerveld: "With Bentley's Web Publishing technology it is possible to publish Oracle Spatial live, as well as DGN in native form.

The same goes for WMS, both server and client. I think it is quite remarkable that also SAP and ESRI data can be fully integrated. For instance, Bentley Geospatial Enterprise server



Intranet GIS on the Internet, Municipality of Eindhoven, the Netherlands.

supports user-initiated or event-driven interoperability with the ESRI ArcSDE Geodatabase. The Connector for ArcGIS supports an intelligent extract and post paradigm. Bentley users can retrieve Geodatabase data for use in AEC and mapping workflows, and later post the appropriate information for use by ESRI users."

### Customers

(Local) authorities are the main customers in the field

of web mapping, but telecoms and water are emerging markets. Lakerveld: "Amongst other things pipeline networks, but also electric, coax, copper and fiber networks, can be published and managed with our software. " Bentley just delivered a huge implementation at the Dutch Ministry of Finance, where Flash based Web Mapping technology is applied to integrate geospatial data (both raster and Vector) related to 2 € million parcels inside the SAP environment.

Another customer is the Municipality of Eindhoven, who in the year 2000 did research to determine the need for geo-related information for all workstation seats. This study, performed by ISIS, now Bentley Benelux, showed that there was a tremendous interest amongst the employees. However the average user was not always able to get the right information easily. Therefore the Municipality of Eindhoven decided to focus not only on core technology, but also to develop an interface that could 'seduce' its users. This means: raise interest and let the user himself determine how to reach his goals with professional support.

### Compiling Information

Rob Tros works as an information manager with the Municipality of Eindhoven. He says:

"The Intranet Webmapping environment that was created has been specifically developed for our own professionals. They are very capable of finding and compiling the information for their own needs, and find it very useful. This is why we also want to present it to our customers, other governmental bodies, or interested outsiders". He continues: "In 2004 we felt the need to provide information on the Internet to every end user in a simple, fast and safe way. No off-the-shelf products

were available with the quality level we were used to. Therefore we worked together with Bentley to define a presentation tool with interactive functionality".

Within three months this service became operational. According to Tros it is greatly valued by customers and now operational in public issues regarding 'zoning maps, 'sense of the city', and the public relations project 'city of light'.

The web product shows information that is retrieved from the professional data generated in the back-office. However the Internet audience only needs a small subset of this operational data. Bentley's Web-publishing solution retrieves this subset from the Oracle Spatial database –which means no conversions and no additional technical requirements.

Here seduction works too: for the first time the professional receives compliments for the work he performs and is encouraged to deliver even more quality. Tros comments: "Our municipality is currently positioning this tool as a very important means of communication with the inhabitants and interest groups in our city. We are convinced we can achieve this by having faith in our own quality and stimulating the use of our information."

### No Web Editing

Essentially web mapping is meant to provide information that is as unambiguous as possible. As for the Bentley web mapping software, viewing, redlining, making descriptions, printing and plotting are all applicable, in contrary to editing. Surely editing and more interaction are already possible, and Lakerveld is convinced several applications in this area will become available in near future. But Bentley is not going to follow this path, because it is not advisable from an organizational point of view. Lakerveld: "Geospatial data has to be created and managed as a service to other users of that data in several work processes (create once, use many). To be able to implement web editing, you have to implement a secure, multi-user transaction based environment. The browser is simply not suitable to support this completely. High resolution editing therefore should take place on the desktop, making maximum use of the rich functionality and dedicated access to Internet Services. like WMS and WFS servers."

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