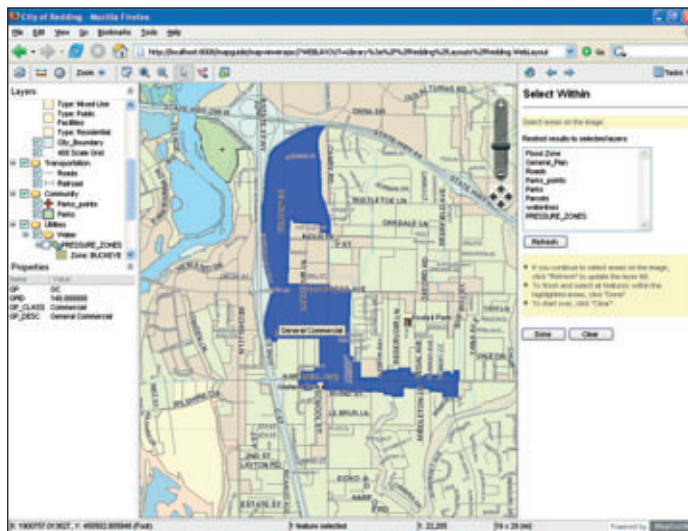


# Autodesk Goes Open Source

## Giving Way to Two-year-old 'Visionary View'

Over the past few months the author of this article got a bit confused by some of the announcements made by Autodesk. The release of the 2007 portfolio of products, nicely demonstrated by Marketing Manager Northern Europe Sjoerd Lazeroms at a press meeting in Rotterdam, the Netherlands, May 2nd, was quite straightforward. But what about the Open Source version of MapGuide? And where did MapServer Enterprise, MapServer Cheetah, and the MapServer Foundation go? Time for an overview.

By Sonja de Bruijn



The AJAX Viewer delivers raster based maps to almost any browser, including Safari. This viewing option ensures that any user on any platform can access designs and maps without requiring a specific browser.

### CAD Talk

Let's start with an overview of the 2007 products. Autodesk has retired the AutoCAD 2002-based family and it will not take long before exactly the same thing will happen to the AutoCAD 2004-based family of products. During the plenary session on March 2nd in Hotel New York, Rotterdam, Lazeroms first introduced Autodesk Inventor 11 as one of the new next generation products. This version is specifically meant for AutoCAD users wanting to move to 3D. True DWG compatibility, a complete 'concept to production' process via fully integrated 2D/3D design solutions and a dedication to 'functional design' are just a few phrases applicable to Autodesk Inventor 11.

Another newborn family member is AutoCAD 2007 ([www.autodesk.com/autocad](http://www.autodesk.com/autocad)): a version

based on an intuitive way of working and new visual styles/rendering tools to present concepts to non-technical audiences. Conceptual design and accessibility for both experienced users and beginners were key when developing this new version. When 2D drafting is concerned AutoCAD LT 2007 ([www.autodesk.com/autocadlt](http://www.autodesk.com/autocadlt)) can be used: software that features Dynamic Block Authoring and integrated Layer management tools.

### Two Sessions

So far the most relevant part for CAD users. The afternoon of the press meeting with the subtitle 'Accelerate Your Ideas' was split up into two sessions: Mechanical Solutions Division (MSD) and Infrastructure Solutions Division (ISD). The last one was led by

Director ISD Northern Europe Frank Ostyn, who talked about the success of Civil 3D as being 'one of the most rapidly adopted products in company history during 2005'. A remarkable fact since only now there seems to be hardware available which is capable of meeting the demands of this type of software. Civil3D can be an aid in automating workflow, and probably won't be a total stranger to AutoCAD users since it is based on this Autodesk product. Ostyn also introduced Autodesk MapGuide Enterprise, which will be discussed later on in this article.

### Autodesk Topobase

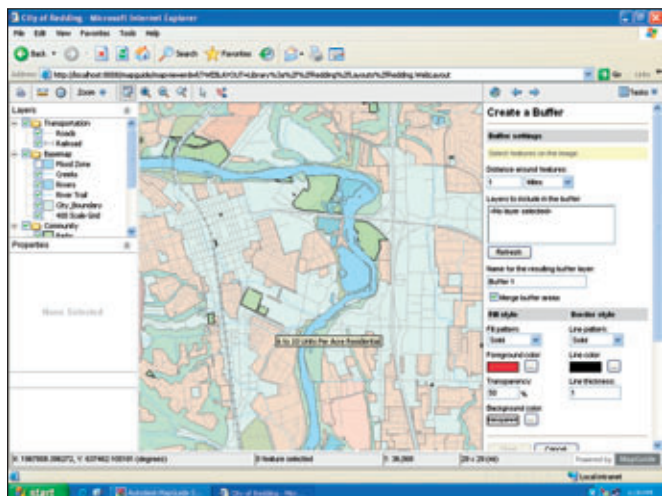
Since the acquisition of C-Plan Autodesk has been working hard on making Autodesk Topobase applicable to the vertical market. The main aim is not only to offer building stones but implementation as well. Ostyn explains that this software is the final step in the Autodesk GeoSpatial Growth path. According to Ostyn specific solutions for utilities will be released later this year.

"Raster data are getting more and more popular", said Ostyn. "Either paper drawings or maps are digitized or satellite images and aerial photos fit in. This is why Autodesk Raster Design is quite popular. Version 2007 offers interoperability with Autodesk Map 3D 2007 and Autodesk Civil 3D 2007's DEM support. The software is also compatible with AutoCAD Electrical and supports ESRI GRID files. There is a new JPEG2000 library and Autodesk Raster Design 2007 reads support for DTED format elevation data from the national Imaging and Mapping Agency, or NIMA."

### Open Source

Open source was another hot topic this afternoon. However Autodesk felt the need to elaborate on this one month later in Hotel Chez Gerard, London. At least this helped to clear up obscurities around new or replaced product names and the name change from the MapServer Foundation to the Open Source Geospatial Foundation ([www.OSGeo.org](http://www.OSGeo.org)).

Officially the move towards Open Source started November last year when Autodesk released the code for MapServer Enterprise as open source software. Three months later, to be more precise on February 4th, the



The DWF Viewer uses an ActiveX control to display vector-based maps on Microsoft Windows systems running Internet Explorer or Firefox for viewing of maps, designs, and related data. Use of DWF technology provides printing and plotting, as well as support for a "disconnected mode" for taking spatial data into the field.

Open Source Geospatial Foundation (OSGeo), at that time called the MapServer Foundation, held its first meeting in Chicago. A board of Directors was formed which represented organisations like Mapbender (Germany), GeoServer/GeoTools (The Open Planning Project, USA), and MapGuide (Autodesk, USA).

On March 06 the open source geospatial community officially announced the formation of the Open Source Geospatial Foundation. As the official press release states the mission of this not-for-profit organization is: 'support (financially, organizationally and legally) and promote the collaborative development of open geospatial technologies and data.'... 'It will also serve as an independent legal entity to which community members can contribute code, funding and other resources, secure in the knowledge that their contributions will be maintained for public benefit'.

### MapGuide Open Source

Roughly six months after the release of the code for MapServer Enterprise we now have MapGuide Open Source: free web mapping software composed of a Linux/Windows server, web extensions (for application development), Studio (for map authoring), viewers (both raster and vector) and a site administrator. The product is licensed under the GNU Lesser General Public License (LGPL). This enables users to develop and distribute spatial and design data over the web and can reduce total cost of ownership for a web mapping solution.

The software provides the option to auto-install and configure the Apache HTTP server, the PHP scripting language, and Tomcat, the Apache servlet engine. It works with the lat-

est PHP, .NET, and Java tools. Furthermore the user will find Feature Data Objects (FDO) providers for SDF and SHP in MapGuide Open Source. FDO Providers for ODBC, ArcSDE, MySQL, GDAL Raster, WMS, and WFS will become available mid 2006. All this is or will be open sourced. "In contrary to AutoCAD or AutoCAD-related products!", stressed Van der Pol at the meeting on April 5. MapGuide Open Source 1.0 (preview version, as well as documentation and FAQ) can

be downloaded via <https://mapguide.osgeo.org>, and is in fact called 'an Open Source Geospatial Foundation project'.

### Autodesk MapGuide Enterprise

Then there is the commercial version of Open Source MapGuide: Autodesk MapGuide Enterprise. At the moment a beta version is being tested but the actual product will be put into the market mid 2006. Van der Pol: "Autodesk MapGuide Enterprise will be available in several languages localized by Autodesk. Whether the open source version will be available in other languages depends on the open source community. The product will contain everything available in the Open Source version, plus additional FDO functionality (Oracle, SQL Server) and commercial-grade projection support from Mentor." In contrary to MapGuide Open Source, this version will be thoroughly tested and certified. Currently available as a preview (via [www.autodesk.com/mapguidestudio](http://www.autodesk.com/mapguidestudio)) is Autodesk MapGuide Studio, a commercial authoring tool which can be used both with MapGuide Open Source and Autodesk MapGuide Enterprise. Besides a developer-friendly authoring environment (modelled on popular web development tools) the product offers streamlined authoring. Users can define rules for importing and converting data. Other features are thematic map-

ping definition, previewing the layout and stylization and managing data access. Users can also integrate business logic written in PHP, ASP.NET or Java directly into the application and preview it within Studio.

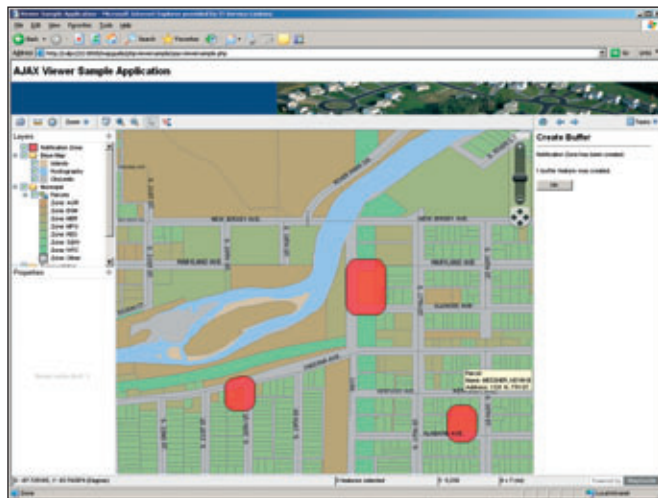
### AJAX Viewer

And there is even more news: besides the DWF viewer an AJAX viewer is also available. Van der Pol told the select group of journalists present in London on April 5 that this is also a free viewer that offers the same functionality as the DWF viewer (dynamic pan/zoom, scale-dependent detail etc). The difference is that the AJAX viewer is raster based and panning and zooming happen a lot more smoothly. "Another advantage of the AJAX viewer is that it works both with Internet Explorer and Mozilla Firefox. Development is simple: all you have to do is writing your application logic within your server environment and it works with either viewer on any client."

There is one more new product to cover before lunch: the commercial CAD/GIS tool Autodesk Map3D 2007, available since the second week of April and equipped with functionality to publish data & stylization to the MapGuide Server. This product is built on AutoCAD 2007 and developed for users wanting to integrate CAD and GIS data throughout an organization. New in this version is the ability to directly access spatial data like SDF, ESRI Shape, Oracle Spatial, ESRI ArcSDE, SQL Server, MySQL, OGC WMS, OGC WFS, DTED, ESRI GRID and GeoTIFF. It is



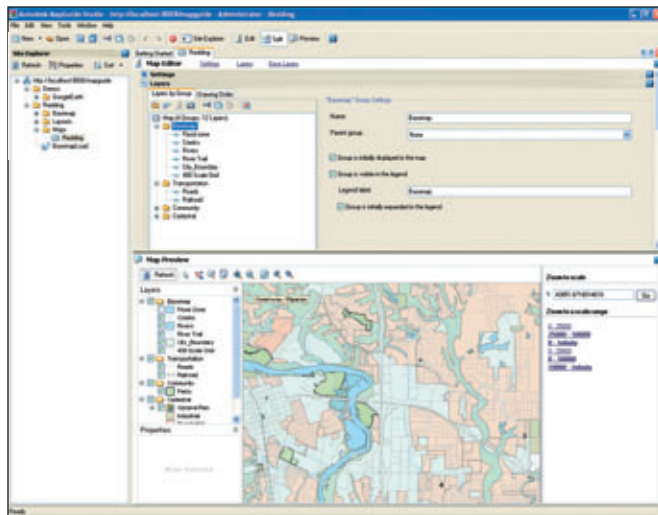
Director ISD Northern Europe Frank Ostyn: "Instead of being a user the customer is turning into a developer. This is why open source is becoming increasingly important."



Autodesk MapGuide Studio can be used to produce attractive thematic maps and provide spatial analysis and reporting functions – here, creating buffer zones around selected parcels.

also possible to import Civil 3D design data and new vector, raster and 3D surface engines are provided as well. According to Van der Pol it will offer enhanced stylization and advanced labelling: “just tell the software and labelling around the corner will be done automatically for example.”

exactly similar to Autodesk), ‘improving the visibility of Autodesk in the market’ and ‘the ability to have quicker software releases’ (twice instead of once a year). Autodesk already started building the new MapGuide architecture two years ago. The discussion and decision to go open source



Autodesk MapGuide Studio puts data and resources close at hand and is meant at making it easier to organize and manage maps and geospatial data. The ability to preview maps provides immediate feedback when authoring and streamlines application development.

### Why Open Source?

Putting 60 man years of development into the open is something we can at least call ‘quite remarkable’. So what made Autodesk decide to take this major step? During the press meeting on March 2nd in Rotterdam Ostyn talked about ‘a shift from companies

selling a product to buying a model of a product and finetuning it in-house’ and ‘instead of being a user the customer is turning into a developer. This is why open source is becoming increasingly important: companies want to exchange and use codes from other companies.’ On April 5th in London Ostyn’s colleague Van der Pol highlighted aspects like ‘following a trend set by companies like Sun, IBM and Redhead’ (though these organisations are not exactly similar to Autodesk), ‘improving the visibility of Autodesk in the market’ and ‘the ability to have quicker software releases’ (twice instead of once a year). Autodesk already started building the new MapGuide architecture two years ago. The discussion and decision to go open source was made halfway 2005. Van der Pol admits it is still ‘a big experiment’. “What we do know is that for example in France and Germany there is a need for open source software. We also notice that there were 1368 Windows Open Source downloads and 1984 total Source Code downloads between Linux and Windows within 18 days from www.OSGeo.org last month. New developers are approaching Autodesk and are starting to build new applications on our products. We also believe that open source can be beneficial to education and (local) government by offering less expensive alternatives. However only future can tell whether we made the right move.”

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