Case Study

Stadt Augsburg

Germany

Key Facts:

Industry: Government

Problem: On-demand manual transformation and distribution of customized 3D city model data to a large number of users is time-consuming and difficult with large data volumes.

Solutions: FME® Server

Results: Organization-wide, self-serve access to informative 3D data for better decision making, while maximizing the productivity of the Stadt Augsburg Geospatial Database Office.

The Organization

Located in Germany, the City of Augsburg (Stadt Augsburg) is one of the country's three oldest cities having 2,000 years of history. With a population of 270,000 it is the third largest city in Bavaria.

Summary

Stadt Augsburg wished to provide its entire organization access to highly informative 3D city model data that is stored in an Esri® Geodatabase. As the majority of the people had no access to or experience using Esri ArcGIS®, conversion to 3D PDF - a more universally accessible format - was necessary. However, repetitively transforming sections of the city model data into 3D PDF's upon request would certainly tax the GIS team's time. With the help of con terra, FME Server was integrated as a download service into the existing web mapping platform of the City of Augsburg. It allowed the members of the organization to access 3D data stored in an Esri Geodatabase and have it automatically transformed and delivered as a 3D PDF in an easy self-serve process. This solution enabled Stadt Augsburg to improve decision-making throughout its organization without a massive expenditure of time or money. FME Server's automation was beneficial to the productivity of the GIS team as their time is now free for tasks that are a better use of their skills.

The Situation

The Stadt Augsburg Geospatial Database Office maintains a repository of the city's important geospatial information including 2D and 3D data for 130,000 buildings, 100,000 land parcels, 500,000 topographic parcels, 48,000 addresses, 52 million DEM points, historic maps and a host of spatial data from other city government departments. This wealth of information had great potential to be integrated and used for 3D visualization in city planning projects. Having used FME Desktop for several years to overcome a variety of data interoperability challenges the GIS team at Stadt Augsburg were able to easily develop FME workflows to integrate the disparate 2D and 3D data into an informative 3D city model mashup that could be stored in Esri Geodatabase. They now wished to establish a geoportal system where its employees could efficiently access and use this 3D data without having to install new applications or software.

The Challenge

Stadt Augsburg's GIS team's challenge was how to make this very useful information available to all of the organization's stakeholders, the majority of whom had no experience using ArcGIS or access to the program. Transformation to 3D PDF - a more universally accessible format - was an attractive solution, and a task that could be easily accomplished using FME Desktop; however, data distribution would still be an issue. Because of the massive volume of the entire dataset, requests for data would only be for a small section of the city, and would be different each time. Meeting recurrent requests for subsets of the data in 3D PDF would be time-consuming and not an optimal use of a GIS professional's time.

The Solution

With FME's broad range of supported formats it was a simple enough task to create a Geodatabase to 3D PDF transformation workflow in FME Desktop. But how could this workflow be used to meet repeated data requests for the entire organization without exhausting GIS resources? Together with con terra, the GIS team turned to FME Server - a solution that would enable them to efficiently provide the entire organization with access to the specific 3D city model data they needed in the form of a 3D PDF. con terra showed the City of Augsburg how to integrate FME Server into their ArcGIS Server web mapping platform for self-serve data download via the web.

FME Server's enterprise level access to FME transformation workflows enabled Stadt Augsburg to provide the non-GIS people in the organization with access to the city model data as a 3D PDF through an easy self-service process implemented into their ArcGIS Server web mapping platform. With FME's spatial extract, transform and load (spatial ETL) capabilities at its core, they configured FME Server to operate as a geoportal through which users could request the data they need. The user would generate a polygon of the area they were interested in with ArcGIS Server, then FME Server would query the Geodatabase and automatically transform and deliver the data to the user as a 3D PDF. All of this was accomplished without the installation of special software on the client's desktop or experience with either FME or ArcGIS.

FME Server enables employees of Stadt Augsburg to download informative 3D models of the city as a 3D PDF in a self-service format.
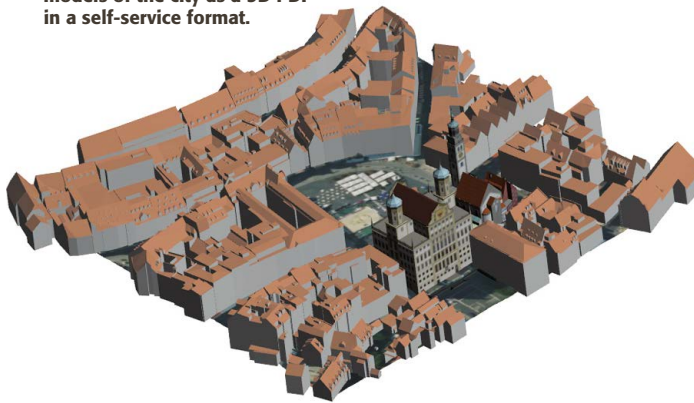
Additionally, FME Server's scalable platform and built-in load balancing capabilities ensured that the transformation of high volumes of data - such as those involved in this project - wouldn't tax the organization's systems, and that as the size of the Geodatabase and number of users grew, FME could grow right along with them.

Benefits

Before FME, 3D visualization of city models was only possible for the GIS team which had access to the appropriate software. The majority of the organization had to go without the use of this valuable information. By enabling easy transformation of Geodatabase data into 3D PDF format, the use of FME has improved decision-making at Stadt Augsburg by allowing everyone to use this powerful 3D data.

FME Server's automation and self-serve data transformation capabilities improved productivity for the GIS team by providing an efficient, low-maintenance method of distributing the city model data as 3D PDFs throughout the organization. By not having to spend time on repeated data transformation requests, they could devote their attention to tasks that were a better use of their time.

What They're Saying

"The GIS team at Stadt Augsburg had so much city data at their disposal to create realistic and informative 3D city models - which they accomplished using FME Desktop," says Benjamin Quest, Technical Sales at con terra. *"But without the use of FME Server it would not have been possible to efficiently distribute this highly useful information throughout the organization and extract its full potential."*

Learn More

To find out how FME technology can help you address your data interoperability and distribution challenges, or to download a free evaluation copy of FME, visit **www.safe.com**.