SAFE SOFTWARE

MapGuide 6.5 and the FME Provider for MapGuide 6.5

Autodesk MapGuide 6.5 can read data directly from several sources, including SDF, IGDS Design, ESRI Shape, and Oracle Spatial. Despite this, many users frequently encounter the need to access an even wider variety of databases and file formats such as Intergraph GeoMedia, PostGIS, DB2 Spatial, ESRI ArcSDE, GML, MapInfo TAB, Microsoft SQL Server Spatial, and many others. Safe Software offers two different but complementary solutions to provide the benefits of FME technology to MapGuide 6.5 installations.

Requirements

Many customers require that MapGuide 6.5 be able to directly access the many formats that are supported by the FME Universal Spatial Data Translator. The FME Provider for MapGuide, Safe Software's OpenGIS-based OLE DB provider, provides an integrated solution for these customers. The FME Provider for MapGuide complements OpenGIS OLEDB -implementing applications such as Autodesk's MapGuide by enabling them to serve data from many of the formats supported by FME without the need for translation. Once installed, the FME Provider for MapGuide is available in the same menus and server configuration interfaces as any other data server. The MapGuide authoring process can use the FME Provider for MapGuide as a data source, which can then be published through the MapGuide server to the extended user community.

In addition to direct integration between FME and MapGuide, many MapGuide users also employ FME to perform mass migrations of data between SDF and SDL files and other formats. Similarly, many MapGuide installations have used FME to prepare and load data into Oracle Spatial for later use by MapGuide. The FME data transformation and translation suite provides a very productive set of tools for both easily configuring complex data translations and transformations, as well as running them over large amounts of input data. The FME support for reading and writing SDF, SDL, and Oracle Spatial provides a powerful and convenient mechanism that speeds the data preparation phase for MapGuide projects. The result is that all of the FME transformation suite capabilities – including translation into and out of a wide variety of formats, geometric and attribute manipulations, coordinate conversion systems, and even visualization with the FME Universal Viewer – are available to assist in preparing data for publishing by MapGuide.

MapGuide Meets FME Objects

Starting with MapGuide Release 5.0, Autodesk introduced support for the OpenGIS Simple Features Specifications for OLE/COM (SFCOM). SFCOM extends Microsoft's OLE DB provider architecture by defining a standard interface for e**xchanging geographic data.**

Safe Software took advantage of the MapGuide's SFCOM support to create the FME Provider for MapGuide, which provides direct access to many of the formats and systems from which FME reads. The FME Provider for MapGuide was created using the FME component library called FME Objects. FME Objects provides programmatic access to the FME readers, writers, and processing facilities. FME Objects presents a common data model, independent of format, to its clients. This characteristic allowed a Safe Software to create a single data server that **allows access to many formats.**

FME Objects can be used through a variety of interfaces, including C, C++, .NET, Java, COM, and Delphi. The FME Provider for MapGuide was created using the C++ interface.

FME Meets SDF

The SDF reader and writer modules in FME allow FME tools such as the graphical FME Workbench transformation editor and the batch-mode command-line FME translator to be applied to SDF files. The SDF file format is a very efficient data format, and a requirement of the FME SDF reader/writer was that the performance capabilities remain undiminished. For this reason, the FME readers and writers were built using the Autodesk MapGuide Component Toolkit (SDFComTk). For the FME SDF reader/writer to function, version 5.0 (or newer) of the toolkit has to be installed using the installer supplied by Autodesk.

Conclusion

Extending MapGuide with FME Objects technology provides MapGuide 6.5 installations with direct access to a multitude of additional data formats. For many workflows, this ability to access the data without performing a translation is v**ery convenient and time saving.**

For a variety of other workflows, FME's ability to read and write SDF files and Oracle Spatial can provide substantial productivity gains as well as unparalleled interoperability.

These two different but complementary integrations of FME and MapGuide provide MapGuide users with great power. The remaining barriers to certain types of data integration with MapGuide have been overcome!