Case Study

Grafton Technologies

Newburyport, Massachusetts, USA

Grafton Technologies

Key Facts

Industry: Aviation

Problem: Developing, analyzing and visualizing the growing amount of complex and ever changing spatial data that airports and civil aviation organizations must manage can be difficult and time consuming.

Solution: FME® Cloud

Results: Easily and intuitevely perform complex calculations and provide meaningful, graphical results without major investments in IT or training.

The Organization

Grafton Technologies, Inc. (GraftonTech) provides innovative information systems solutions to the aviation industry. One of its primary capabilities is the implementation of Geographic Information Systems (GIS) and Computer Automated Design (CAD) solutions for airports and civil aviation organizations.

Summary

Realizing that FME technology could help solve many of the data management challenges of its clients in the aviation industry; GraftonTech developed a solution that employed its capabilities without requiring clients to invest in software, hardware and training.

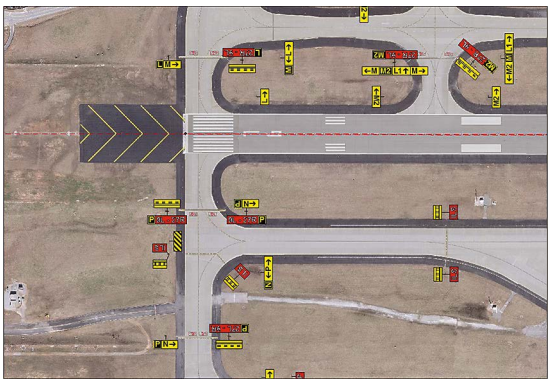
FME Cloud allows GraftonTech to integrate FME workflows designed to meet airport-specific needs into client work processes easily and cost-effectively. GraftonTech has used FME to:

- develop and maintain intuitive airfield signage and marking plans;
- identify and mitigate the effects of tall manmade or natural objects on safe approach and departure procedures;
- ensure airport CAD and GIS users all have access to the same, high quality and up-to-date data; and
- manage the mundane tasks of maintaining and checking the quality of data.

Tasks that once took hours or days are now completed in minutes, allowing airports to allocate resources to more critical activities.

The Situation

The Federal Aviation Administration (FAA) works with commercial airports to reduce delays, continuously improve safety, save fuel and decrease aircraft emissions. To support these and other objectives, airports are required to submit data to the FAA on a regular basis. Over the last several years, the FAA has been phasing in a new GIS program that will allow stakeholders to do more with this data. This new technology is an important step in enabling the next generation of air transportation called NextGen, an initiative to improve operational efficiencies by moving air traffic control from a ground-based to a satellite system. A result of this initiative is that more data, much of it spatial, will be required in a standardized format.



Examples of spatial data outputs required by airports that have been developed and maintained with the help of FME technology: airfield signage (top) and marking plans (bottom).

The Challenge

Developing, analyzing, visualizing and maintaining this growing amount of data can be costly, time consuming, and may tax older data management systems. Furthermore, validation steps are necessary to ensure that this new data is of the quality required to support critical decisions. The challenge is executing these complex tasks in a manner that is efficient and precise, and that produces meaningful results for the end-user.

Building workflows that execute these conversions, calculations and validation tasks with different data sources and output requirements is accomplished relatively easily using the data transformation capabilities of FME technology. For the past several years, Grafton Technologies has been using FME technology in developing its clients' solutions. In many cases, these workflows are very complex and, if not automated, can take considerable time. Automation, with appropriate data validation checks and visuals that support quality control, also help reduce errors that can result from manual processes. The challenge for GraftonTech was how to extend these workflows to clients without requiring them to make significant investments in technology or training.

The Solution

For GraftonTech, the answer lay in FME Cloud's data integration platform. Using this cloud-based deployment of FME Server's automation and FME's broad support for different formats, applications and protocols, GraftonTech can more easily deploy workflows to clients in the most cost effective manner. FME connects to commonly used web-based mapping services including ArcGIS Online, Google Maps Engine, OGC Web Feature Service, and others. This allows the results of these computations to be easily conveyed to end-users at all technical levels in a way that is most useful to them.

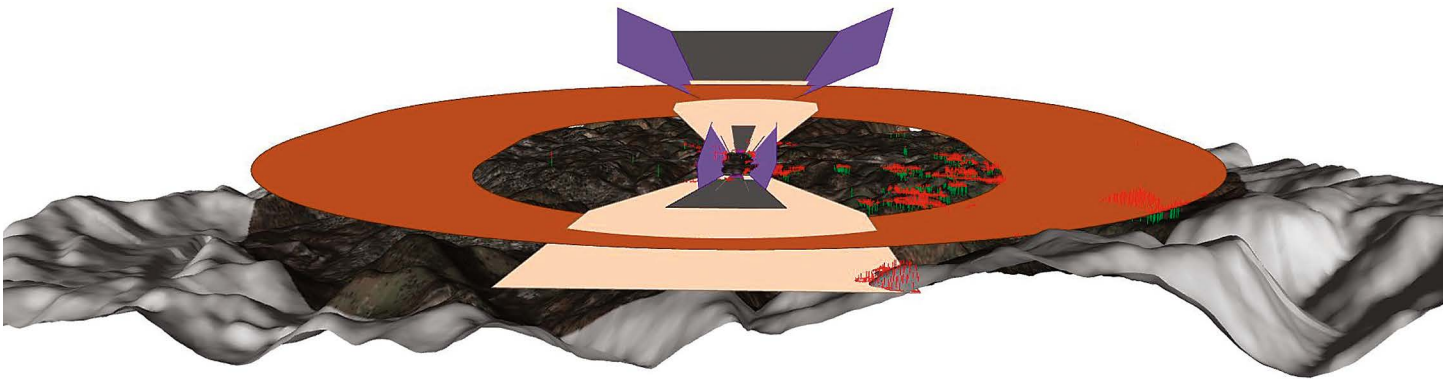
Benefits

FME Cloud's data integration platform can save a significant amount of time and resources for airports. For example, in the case of airfield airspace analysis, complex analyses are completed in minutes as opposed to several hours or even days. And often this type of analysis would require the help of consultants trained on special software. With FME Cloud, the calculations, translations, and the validation run seamlessly behind the scenes – no manual intervention required, and no specialized training. More attention can now be given to performing what-if analyses, assessing potential airport configuration changes, and selecting the safest and most effective option.

The result for clients is a data management solution that is not only faster and less expensive, but one that allows them to be more productive. "FME cloud makes it easy for us to complete complex analyses and render beautiful results for clients without the cost, time, software, or hardware required of traditional means," says Randy Murphy, Founder of GraftonTech.

Learn More

To learn more about FME Cloud visit **www.safe.com/fmecloud.**



With the assistance of FME Cloud, GraftonTech's clients' data management systems can deliver accurate airspace renderings for visualization and analysis – like what is shown here.

SAFE SOFTWARE