



Case Study

“FME has enabled us to bring data from our region’s external datasets into a single, central database that users can easily access through our new GIS.”

– Patrick Daly,
Fingal County Council,
Resident Engineer for
the DRPO

WaterWeb

Dublin, Ireland



Key Facts:

Industry: Utilities

Problem: End user access to the region’s water network data is complicated and time-consuming.

Solutions: FME® Desktop

Results: Quick, efficient end user access to the water network data they require.

Summary

WaterWeb is a web-enabled GIS created by the Dublin Region Project Office (DRPO) for water engineers, technicians, operatives and managers to view the water network data they require to perform their duties. To make this GIS possible, the DRPO uses FME technology to routinely gather information from various databases and systems and centralize them in an Intergraph GeoMedia® SQL warehouse for quick access.

The Organization

The Dublin Region Project Office was established in 1997 to manage, maintain, and advance the Water & Drainage Management Systems (WADMANS) on behalf of the six participating local authorities in the region. Two of these authorities, Fingal County Council and Dublin City Council, joined forces to address the growing need to make water network data more accessible, and together created the WaterWeb GIS.

The Situation

The Dublin Region contains more than a third of Ireland’s population, 2,690 km² of land and 8,105 km of water pipes. The water network’s data is in a single system and single format but there are external datasets which add value and greater assimilation of water network information.

All of the region’s technical and administrative staff in design, projects, and operations require access to this data for routine duties and to determine location and key information on water plant assets.

Before WaterWeb was created, these data users had to be trained on the existing system and then each time they required access to the data, they had to:

- Physically visit one of the 30 desktop viewing stations
- Go through 20-30 mouse click actions to retrieve the desired information

In addition to being slow and interruptive, this process often caused delays at peak times when data users

had to occasionally wait for an available station. As demands increased, data users began to request the ability to access the data they need directly on their own machines. The current process would be too expensive to broaden onto each user’s computer, and because of the complex retrieval process, users were routinely requesting re-training which was costly in both time and resources.

The Challenge

The Dublin Region Project Office took up the task of answering the data users’ increasing data access needs. They decided to improve the existing time-consuming, complex data retrieval process by developing:

- A central database for the region’s water network data
- A web-based data access system for end users

To achieve a centralized database, their new system would need to be capable of translating and transforming the data stored by each of the data authoring systems into the database format, and then integrating the translated data into the central database. Additionally, this process would need to be routinely run to ensure that the data would continue to remain current.

For the data users, the system would need to provide a simple web-based user interface that could be accessed from each of their desktop computers, providing them with real-time access to the data they need, as they need it.

The Solution

The DRPO chose FME Desktop as the translation, transformation, and integration back-end which would bring all of the region's water data into centralized Intergraph GeoMedia SQL warehouses.

The frequency at which FME data conversion processes are run depends on the amount of change made on the various data authoring systems including the region's:

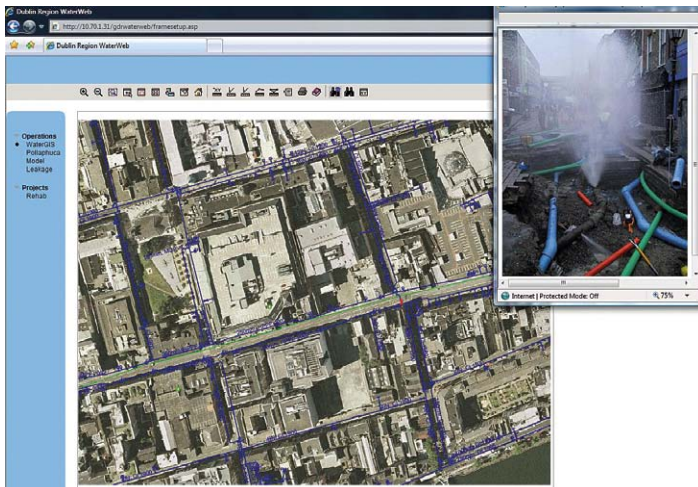
- Main water GIS
- GeoDirectory address database
- Water modeling software dataset
- Digital elevation information
- And other vector, raster, and orthography data

The FME data conversion processes extract copies of the datasets, convert them into the SQL database format and the Water Dublin team's chosen data model, and then load them into the centralized SQL database. This method ensures that the GIS does not impact existing infrastructure, but instead works alongside it.

Because the data is consolidated into a single database, data users can now use the GeoMedia WebMap and Microsoft® SharePoint interfaces they are already familiar with to access the data from all of the region's water network systems. The GIS enables users to view up-to-date simulations of water flow, pressure, and head or energy loss.

FME has enabled the DRPO to make all of their region's data accessible in GeoMedia WebMap. Data users are never more than two clicks away from viewing the detail they need, with little or no training.

Leakage teams can now immediately gain access to the information they need for effectively responding to pipeline ruptures such as the one pictured below.



The Benefits

High quality water network information is now delivered to end users clearly, quickly, and reliably. FME has enabled the DRPO to make all of their region's data accessible in GeoMedia WebMap which now ensures that users are never more than two clicks away from viewing the detail they need, with little or no training.

Used alongside engineering resources, the system aids on going leakage reduction by enabling leakage teams to immediately gain access to the information they need for effectively responding to pipeline ruptures. Users can quickly "print and go" as they head into the field for maintenance or to respond to an emergency.

The new system is also easy for the DRPO to manage as no development code is required. Whenever the GIS team identifies new user requirements, they can address them in-house using the pre-canned data conversion workspaces, also called visual data flows, directly in the FME Workbench authoring environment. For its original implementation, the team had already identified the top ten information requests and canned these calculations for data users to access.

What They're Saying

"When we started this project, we knew of FME's solid reputation and that we could count on Safe Software and their Irish reseller IMGSL to provide us any support we would need," says Patrick Daly, Fingal County Council, Resident Engineer for the DRPO.

Lar Spain, Senior Engineer with responsibility for the DRPO goes on to explain, "FME has made it possible for our engineers, technicians, and operatives out in the field to receive quick, easy and up-to-date access to the information on our water network."

Learn More

To find out more about how FME can help you integrate your spatial data, visit www.safe.com/fme.



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