

Microsoft in Power and Utilities

Telvent ArcFM

Microsoft and Telvent: Harnessing Enterprise GIS for the Smart Utility

Utilities rely on comprehensive and up-to-date geographic information system (GIS) for dispatching, trouble-shooting their grid, engineering analysis, planning, reporting, and customer service functions.

The challenges of maintaining and updating data with all the on-going changes throughout the course of the day have proven immense for utilities. Getting these data integrated into systems and delivering information to the right people at the right time has also proven to be challenging for utilities. To take it a step further, new assets associated with a more complex Smart Grid infrastructure development are being deployed in the field that will generate even larger amounts of data. Given the data challenge for utilities, Microsoft and Telvent have partnered to deliver a robust, secure, and reliable enterprise-ready GIS system for utilities worldwide.

The Power in Collaboration

To help utilities use GIS in a more comprehensive and reliable manner, Telvent and Microsoft are working together to provide utilities with cost-effective, scalable, performance-oriented solutions that leverage key aspects of Microsoft's platform technologies.

This collaboration will allow Telvent greater access to Microsoft technology and resources to address the most pressing demands of the smart grid, especially for keeping data in your system current with faster data flows, changes in the network, new construction in the field and reconfigurations.

Extending GIS across the Enterprise

Telvent's ArcFM Enterprise GIS Solution is a complete utility GIS solution based on the industry-leading ESRI ArcGIS® platform. ArcFM provides the tools needed to manage our utility infrastructure more efficiently and effectively.

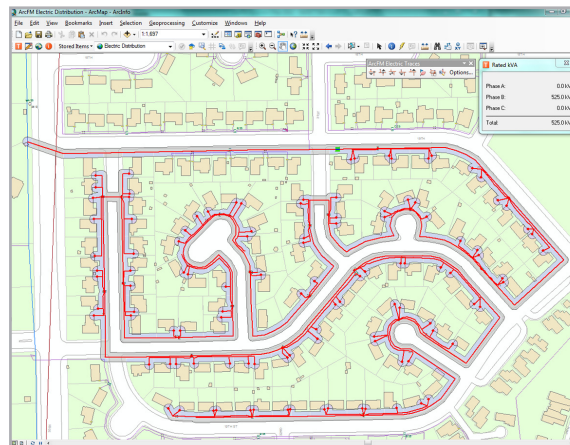
As an application suite, ArcFM provides a family of products and tools for editing, modeling, maintaining, and managing facility asset information – both on the desktop and in the field – for electric, gas, and water/waste-water utilities.

ArcFM products support mapping, mobile viewing and editing, staking, design, and network and outage management and have demonstrated their value in streamlining business processes throughout the utility.

Along with Telvent's strong network of business partners who offer services and products complementary to the ArcFM Solution, Telvent provides organizations with solutions to address industry-specific challenges.

Utilities use ArcFM™ GIS Solution with its Designer software for their electric, gas and water services. The configurable architecture of ArcFM and Designer allows customization for data import from and export to the ERP.

The single, integrated application enables utilities to track jobs through various design states. By using digital maps and documents, utilities reduce the number of jobs that are bogged down in the 'paper shuffle.' Utilities benefit from a solution that helps streamline data creation and editing and is easily customized to meet specific business needs.



Utilities use Telvent ArcFM to show downstream electric trace and transformer capacity.

A Firm Foundation on Microsoft Technologies

Telvent's ArcFM Enterprise GIS Solution is based on Microsoft technologies, and provides a cost-effective, functionally rich, secure, and reliable technology platform and computing experience.

The Telvent solution is built upon Microsoft SQL Server and Microsoft Windows 7 operating system, which helps create seamless interoperability at a lower total cost of ownership for mission critical applications. The solution uses the functionality of Microsoft SQL Server 2008

to provide the business intelligence necessary to optimize performance, scale-up individual servers and scale-out for very large databases. For example, SQL Server provides data warehouse scalability from tens to hundreds of terabytes through massively parallel processing and high-scale complex event processing.

Telvent also uses Microsoft SERA, a guiding industry framework developed specifically for utility companies, as the basis for the development of smarter grids and the integrated utility of the future.

Using Microsoft and Telvent technologies, utilities will be able to benefit from the collaboration and commitment both companies have to deliver leading solutions for the worldwide utility industry. Our clients will find that the power of collaboration comes to life in the solutions provided by Microsoft and Telvent.

Benefits of Telvent ArcFM Enterprise GIS

- Fits easily into overall IT strategy for utility adopting smart grid elements
- Single enterprise geodatabase creates one version of truth
- Single point of entry for all view, query, plot, analyze, trace, design, build and manage workflow
- Multiple departments can plug in for dispatch, engineering, customer service, even media relations during outages
- Easily linked to CIS and ERP systems, like Microsoft Dynamics AX
- Provides advanced network infrastructure for gas, water, electricity and communications businesses

Microsoft and Telvent

- **LOWER TCO** Leveraging SQL Server
- **INTEROPERABLE**
IT, Engineering, Operations
- **FULLY INTEGRATED MICROSOFT BI PLATFORM** Information Where Needed
- **SCALABLE** Enabling Smart Grid Scale
- **SECURE** Encrypted, Auditable, Centralized
- **LEADERSHIP SUPPORT**
Low Risk Industry Leaders
- **ENTERPRISE AND REAL-TIME INFRASTRUCTURE**

ArcFM is part of Telvent Smart Grid Solution Suite which includes products for Smart Operations, Smart Networks, and Smart Metering.



Key Features of Telvent ArcFM Enterprise GIS

- Uses open databases, industry-standard programming environments, and component object model architecture
- Graphical, data-rich environment aids reliability and efficiency missions of utility
- Highly configurable and easily adapted for multiple uses
- Scalable for use in single or multi-department enterprise
- Optional plug-in modules allow use in the field on mobile devices
- Map centric, intuitive constructs for modeling, designing, maintaining and managing facilities

About Telvent

Telvent (NASDAQ: TLVT) is a global IT solutions and business information services provider dedicated to helping improve efficiency, safety and security for the world's leading companies. Telvent serves markets that are critical to the sustainability of the planet, including the energy, transportation, agricultural and environmental sectors. Telvent has developed and deployed advanced information management systems for the energy industry for nearly 50 years. Today, more than 500 utilities worldwide rely on Telvent GIS, OMS, DMS, SCADA and AMI technology and solutions.

About the Microsoft Worldwide Power and Utilities Group

The Microsoft Worldwide Power and Utilities Group offers platform and partner solutions that empower utilities to thrive in today's market-driven environment by optimizing their business operations in customer care, generation, trading and risk management, transmission and distribution, regulatory compliance and enterprise services. For more information, contact your local Microsoft sales representative or visit www.microsoft.com/utilities.



SQL Server for Utilities with Telvent and Microsoft

Microsoft and Telvent offer utilities the technology options they need by using Microsoft SQL Server 2008 R2 as the solution platform. Utilities benefit from SQL Server's ability to offer better security, developer productivity, and business intelligence tools at a lower total-cost-of-ownership and with greater interoperability that is essential for today's mission critical applications in the energy industry.

Lower Total Cost of Ownership

Microsoft SQL Server 2008 represents a high-value enterprise data platform that delivers mission-critical functionality at a fraction of the cost of competing solutions. SQL Server 2008 enables companies to build dynamic new solutions and to extend existing systems in ways that helps them take immediate advantage of new business opportunities, while simultaneously reducing costs and maximizing efficiencies across the organization.

Scalability and Performance

SQL Server 2008 R2 can offer customers scalability to meet the demands of growing data warehouses. Its' Parallel Data Warehouse is a highly scalable appliance for enterprise data warehousing that uses massively parallel processing (MPP) to deliver the high performance and scalability on SQL Server 2008, Windows Server 2008, and industry-standard hardware. The MPP architecture helps enable better scalability, more predictable performance, reduced risk, and a lower cost per terabyte than other data warehouse solutions. Microsoft SQL Server Business Intelligence solutions protect the high quality of your data with secure integration and tight interoperability across multiple data sources. You can rely on high-quality data that is accurate, timely, meaningful and complete. Microsoft BI solutions integrate with utilities' existing technology and operational environment for transmission and distribution (its management, design and repair) taking advantage of existing IT assets and reducing the need for big new expenditures.

www.telvent.com/smartgrid
www.microsoft.com/telvent
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