Automsoft®

Understand information - Predict outcomes...

Process Data Historian & Optimization Solutions

Smart Grid

UTILITIES I BUILDING MANAGERS I MAINTENANCE CONTRACTORS I SMART ENERGY

As the demand for cleaner, cheaper and more competitive energy supply increases so too has the growth of smart grid or cleantech technologies, which are transforming how energy is produced and in turn how consumers utilize it.

Smart grids are changing traditional energy supply by enabling advanced two-way distribution and consumption management. Not only do digital grids facilitate more efficient delivery of electricity from power plant to transmission and distribution networks before reaching the consumer (home or business), they also transmit real-time consumption data back to the utility via the Advanced Metering Infrastructure (AMI). Detailed interval meter data readings are retrieved from smart meter devices within Neighborhood and Home Area Networks (NAN/HAN). This advanced meter data combined with real-time supply intelligence enables utility providers to achieve more sustainable, reliable and cost-effective supply.

Automsoft's Smart Grid Solutions

Automsoft, one of the world's premier providers of advanced data historian and process optimization solutions, provides the market's most advanced smart grid optimization technology. Automsoft technology enables utility companies to benefit from cleantech advances within the energy and utility sector that include:

- Distribution Automation (DA)
- Demand Response (DR)
- Smart appliances
- Smart Meter device integration
- Advanced Metering Infrastructure (AMI)
- Building Energy Management Systems (e.g. BAS)

rapidPower™ rapidPower from Automsoft is a robust and powerful distributed data historian capable of high-speed smart grid data capture, analysis and process optimization. rapidPower seamlessly connects utilities with distribution control systems along the grid and consumer data via the AMI. Key rapidPower features include

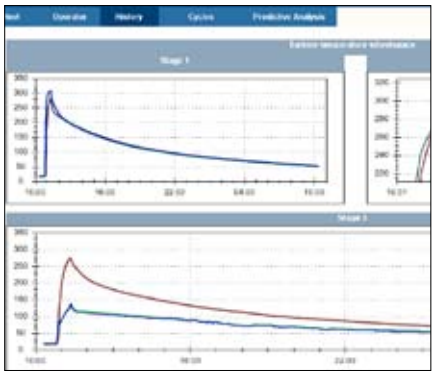
• Open data compatibility: rapidPower's open data compatibility ensures complete information retrieval from utility plant, grid network, AMI and control systems. rapidPower also simplifies the onward distribution of such data to other internal business applications

• Smart grid visibility & supply management: By integrating rapidPower throughout the grid network utilities achieve a complete dashboard view of utility generation, transmission, distribution and demand. Engineers can quickly view real-time grid performance, isolate distribution issues and re-route power ensuring service uptime is retained.

• Meter Data Management (MDM): rapidPower's MDM system enables utilities to take strategic advantage of the AMI. Features include:

> AMI data integration & storage: rapidPower's data historian can retrieve, store and distribute vast quantities of meter data from the AMI back to a utility or third party. rapidPower has the capacity to handle millions of individual meter readings, independent of read frequency, providing utilities with an extensible response to such immense data handling challenges.

> Distribution management: Utilities can minimize service downtime and avoid expensive production costs by utilizing rapidPower's data intelligences to achieve more effective load analysis and forecasting, execute more effective asset management by interfacing with dispersed control systems, and apply alarm and event constraints that activate when load parameters are breached.



> Demand Response (DR) & Dynamic Pricing Programs: rapidPower helps utility companies to define energy efficient DR strategies that drive price-responsive load balancing and peak-load reduction. Utilities can bolster customer relationships by empowering users to control consumption and take advantage of on-peak, mid-peak and off-peak tariffs.

> Validation, Editing and Estimation (VEE): rapidPower integrates with VEE systems that approve meter data accuracy before meter data readings are integrated into enterprise business systems.

> Centralized Reporting: rapidPower's advanced data traceability and reporting tools enable service providers to review, analyze and report on historic meter performance or utility consumption data in order to support future decision-making or operational strategy setting.

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Technology Highlights

> Smart meter & AMI integration

> VEE Validation

> ASHRE, ANSI & ISO compliant

> Interfaces with ZigBee Gateway, BACnet, LonNet servers

> High-speed data compression & storage

> Application & data independent

> DDE/Net DDE Support

> Web services/SOA

> OPC Compliant (HDA, DA, UA, A&E)

> Multiple data source compatibility (ODBC, OPC, OLE/DB, ADO.NET, SQLServer, Oracle and web services)

> Centralized data management & visibility

> Complex data interrogation – Calculation Engine, Excel add-in

> Extensible information model

> Alarm & event management

> Extensive visualization tools – graphics & animated instrumentation

> Integrated security, & user authentication & audit traceability

> Server & network high availability

> Comprehensive backup, OPC caching & redundancy

> Anytime, anywhere access

About Automsoft

Automsoft is one of the world's premier providers of advanced data historian and process optimization solutions. Automsoft's rapidHistorian™ and nuaViews™ product suite enables powerful and secure high-speed data retrieval, vast storage capacity, complex analysis and sophisticated visualization. Founded in 1997, Automsoft has a global customer base of thousands of installations across diverse industrial sectors including Power & Utilities, Renewable Energy, Maritime, Manufacturing, Life Sciences and Oil & Gas.

Today, Automsoft is at the cutting-edge of cleantech solution development enabling advanced meter data aggregation, smart grid integration and smart building management.

Automsoft has international offices in the US, Europe, Middle East & Asia. For more information, please visit http://www.automsoft.com.

nuaViews™

nuaViews, Automsoft's groundbreaking rich Internet application (RIA), is an advanced web-based process management and visualization technology. nuaViews delivers powerful smart grid data aggregation, analysis and process control capabilities to:

- Utilities (traditional & renewable)
- Smart Energy OEMs
- Smart Energy & Building Automation Systems (BAS for hotels, office networks, private homes)

UTILITIES

- Plant and grid-wide process monitoring & control: nuaViews' intuitive web dashboard provides secure, centralized and real-time views of plant processes, grid performance and endpoint meter data from the AMI. Users can query data sources and perform advanced analysis and process modeling.
- Smart Grid & AMI data visualization: nuaViews transforms numeric grid asset or AMI data into dynamic and colorful visual aids. Engineers can view grid network or individual asset performance, perform root cause analysis and maintenance which extend asset longevity and retain service stability.
- Web services data exchange: nuaViews employs web services to interface with network (generation, transmission and distribution) control systems and inbound AMI data for a centralized database of both supply and demand outputs.

Smart Energy Management System: nuaViews provides building managers with a complete web-based dashboard of utility usage and associated costs by interfacing with appliances and utility control systems. nuaViews enables building managers to achieve:

- Real-time occupancy and consumption level views
- Utility (electricity, gas, water) use-monitoring
- Smart appliance automation management
- Smart device data monitoring and analysis
- Consumption and cost predictions
- Building comparison analysis
- Local microgeneration analysis

Benefits to Utilities

- Fast smart grid data aggregation & visibility using Automsoft's open data interfacing standards and vast data capacity.
- Reduce costs through more efficient energy production and distribution process management.
- Manage load & prevent outages through effective load monitoring, real-time decision-making and preventative maintenance.
- Minimize risk through safer energy generation and distribution, asset monitoring and secure user authentication and audit traceability.
- Implement dynamic pricing & demand response programs that retain customers, improve profitability and reduce costs.
- Enhance customer experience through improved service delivery, meter reading transparency and price incentives.
- Optimize assets through advanced process monitoring, maintenance scheduling and capacity management.

Benefits to Facilities & Building Management

- Reduce costs through centralized utility use monitoring, off-peak tariff optimization and appliance management.
- Reduce consumption using nuaViews' facilities dashboard to manage smart appliances and control utility usage within targeted parameters.
- Educate building occupants in relation to energy consumption, costs, tariffs and conservation measures.

Benefits to Energy OEMs

- Eliminate costly & time consuming software development.
- Safeguard competitiveness by increasing product development and achieve faster time to market.
- Provide end-user advantages including;
  - > High-impact visualization and control.
  - > Powerful process data storage, analysis and predictive modeling.
  - > Open data and application interfacing standards.

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