ALSTOM Grid’s integrated solution for real-time management of distribution networks

A smarter way of keeping the lights on

In today’s competitive environment, distribution businesses must reduce costs through more efficient processes, systems and organization. Existing assets must be used more effectively to utilize the full capacity of the system and defer capital expenditure where possible. At the same time outages must be reduced and customer service levels increased.

The implementation of a flexible, scalable, network management system is a key part of achieving these performance improvements. The effective implementation of Smart Grid requires a fully integrated control environment that provides the visualization tools and functionality necessary to fully exploit the capabilities of the network and the advanced automation devices.

e-terra distribution is a suite of applications that has been developed to meet the operational needs of electric distribution utilities of all sizes. These applications provide a full range of high quality operational tools that can be configured to suit any distribution utility.

Benefits to improve network performance and your bottom line:

- **e-terra distribution** allows you to configure a system that meets your current needs with the flexibility to expand the scope and functionality in the future
- The Distribution Network Operations Model may be built directly from your Asset Management System (AMS) – usually a Geographic Information System – leveraging the initial investment in data capture and ensuring data consistency across your business
- Interfaces to all types of external systems are based upon a secure SOA-based architecture for efficient, vendor-neutral data interchange
- A scalable architecture and operating environment that can support the largest and the smallest utilities with equal efficiency
- **e-terra distribution** can reduce your total cost of ownership by helping to lower network operating and maintenance costs as well as improving your asset utilization and service performance
- Maximize access to information via the full-featured, web-enabled user interface providing all users with a range of views of the distribution network status
- Designed to cope with large-scale outage conditions

**Customer Benefits**

- Lower losses & peak demand
- Fewer control centres
- Improved crew management & safety
- Reduced outage time
- Improved customer satisfaction
- Storm-proven ready
Enhancing the efficiency and reliability of your distribution system

The e-terra distribution suite of applications combined with SCADA provide network management functionality to give dispatchers and network operators the tools they need to make the most effective use of network capabilities.

The base application for all the e-terra distribution solutions is Network View, a unified operating environment that displays the status of the electrical network in both geographic and schematic formats, using a real-time network operations model created directly from the Asset Management System (GIS). The other applications in the e-terra distribution suite can be seamlessly integrated with the base application to complete solutions that meet your evolving needs.

The additional applications that can be included in an e-terra distribution solution are:

- **Network Outage Management** – analyze, visualize, track and coordinate all outages
- **Network Analysis** – unbalanced distribution power flow, protection validation and fault location
- **Network Optimizer** – feeder reconfiguration, system restoration and Volt/Var optimization tools
- **Network Switching Operations** – creation of Switching Orders and Safety Documents for planned and unplanned outages
- **Network Simulator** – operator/dispatcher training and performance testing
- **Network Operations Archive** – historical data recording

**Improving your network performance with an effective control environment**
e-terra distribution is an Integrated Distribution Management System (IDMS) that has been designed to bring together all of the control room tools necessary for real-time operations in one user interface. The user has seamless navigation between applications and single entry of operational actions like tags.

The challenges of maintaining synchronization between network connectivity models of disparate applications, such as Outage Management and real-time power flow, are removed. An interface architecture utilizing secure SOA facilitates integration with other systems across the enterprise independent of the vendor or internal product structure.

A scalable and configurable distribution management solution for any size utility
e-terradistribution™

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