e-terra\textsuperscript{TM} distribution
Network View
Network View forms the base of e-terra
distribution

Network View is the core of e-terra
distribution, Alstom Grid’s integrated distribution management system. This powerful modeling and display system combines the Distribution Network Operations Model and the Network Operations User Interface to provide the primary functionality for operation of the electric distribution network and is also the foundation for the additional functional modules that make up the complete e-terra
distribution suite of applications. Network View is the ideal tool for the integrated management of a Smart Grid.

Maintaining one graphical overview and model (geographical or schematic) is difficult enough with any application involving thousands or millions of points. With e-terra
distribution’s Network View, the overviews are bound to the system model real-time database and can be displayed simultaneously on workstations and large wallboards and shared with field crews and company managers. Field personnel and supervisors can perform and review all SCADA, DMS and OMS functions is a single user environment - it is not necessary to move to another system or display. More importantly, all tagging and other information entered by any operator in any display is available to all operators in all other displays regardless of their activity. With Network View, this important information is persistent and consistent throughout e-terra
distribution.

The additional applications that make up the complete Integrated Distribution Management System are:

- Network Outage Management
- Network Analysis
- Network Optimizer
- Network Switching Operations
- Network Simulator
- Network Operations Archive

Customer benefits

- A single unified operating environment that supports the full range of functions necessary for the efficient operation of the distribution network
- The operator always has a clear view of network operating conditions with network operations available on all types of display
- A single Network Operations Model supports the full range of functionality
- Operating configuration can be rapidly expanded in storm conditions with large numbers of concurrent users or consolidated at times of low activity
- A highly scalable modeling and operating environment that can support the largest or the smallest of utilities with equal efficiency
- Supports the CIM interface standard and can be readily integrated with other utility systems
- Transparent on-line model updates mean that there is no model maintenance downtime

Integrated graphics for integrated functions

Network operations user interface

The Network Operations User Interface is part of ALSTOM Grid’s unified operating environment e-terrabrowser. It provides seamless navigation between the distribution management functions and other AREVA applications such as SCADA. The User Interface supports a full range of tools to assist the operator to navigate and manage the network:

- Zoom, pan and re-center
- Picture-In-Picture
- Navigational overview
- Temporary network modifications
- Display of land-base information
- Automated generation of schematic displays for Underground Residential Distribution circuits
- Internal views of cabinets and vaults
- Operator annotations
- Tracing the network
- Topology processing to show real-time energization states
- Device and customer search
- Future construction display layer
- Tabular displays

Cuts and jumpers
Distribution network operations model

Alstom Grid has developed a high performance real-time Distribution Network Operations Model (DNOM) that forms the base for all the functions that comprise the e-terradistribution suite of applications. The DNOM is a full-phase model that is capable of modeling the entire network from the transmission grid down to individual customers. It is an accurate representation of the complete physical distribution network. The structure of the model allows it to support all types of distribution networks, whether balanced or unbalanced. In order to maintain an accurate representation of the distribution network, the DNOM also supports temporary network modifications such as cuts, temporary switches, jumpers, mobile substations and grounds.

Integration of e-terradistribution with SCADA provides real-time data updates into the DNOM. e-terra provides a range of tools for the creation and maintenance of the DNOM from either an external source, such as a GIS, or manual data entry. The update of the data models is performed transparently with no interruption to operational activities.

DMS, Outage Management, SCADA and Simulator supported by one network model

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

Advantage

- Alstom Grid Energy Management and SCADA Systems are used by electricity utilities throughout the world. Alstom Grid employs industry experts to meet customer requirements.
- e-terradistribution Network View has been specifically designed to meet the needs of all sizes of distribution utilities.
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