INTERGRAPH®/SIEMENS SMART GRID COMMAND-AND-CONTROL SOLUTIONS:
ADVANCED DISTRIBUTION MANAGEMENT SYSTEM (DMS) FOR SMART GRID

Consolidating the Control Room and Controlling the Grid

As utilities modernize with smart grid technologies, Intergraph® and Siemens provide a comprehensive solution for implementing and managing the smart grid, featuring a complete command-and-control environment for electric distribution grid operators. Intergraph’s Smart Grid Operations Command-and-Control Center integrates with Siemens’ Supervisory Control and Data Acquisition (SCADA) and Distribution Network Analysis (DNA) systems to create an advanced Distribution Management System (DMS) for Smart Grid. Our DMS transcends traditional outage management systems (OMS) by delivering outage analysis, integrated workforce management, advanced visualization, and real-time monitoring, control, and analysis to put you in command of your smart grid operations center.

COMMON OPERATING PICTURE

Smart grid adds automation, as well as sophistication and complexity, to grid operations. The fundamental benefit of our DMS is the integration of several operational tools into one common operating picture. An integrated single-user interface displays real-time network data geographically and schematically. The interface combines with powerful analytical tools to improve system operations and control from the command center.

Intergraph’s solution translates and displays input from network devices, smart meters, and other sensors. You can control and operate these network devices through our command-and-control center to switch, re-route power, manage voltage levels, and reconfigure the network to support restoration activities. Additionally, the center displays alarms on the system monitor to show overloads and other network problems.

INTERGRAPH’S SMART GRID OPERATIONS COMMAND-AND-CONTROL CENTER

Intergraph’s Smart Grid Operations Command-and-Control Center is the single operations console that manages the entire distribution network. An operator is no longer required to monitor the network in a SCADA system, make changes in an OMS, use automated vehicle location (AVL) to find a field resource, and call the resource to assign a work order. Our solution allows you to access all of this information through one interface.
SIEMENS SCADA
The command-and-control center incorporates Siemens’ full-featured SCADA solution for network operations above the substation breaker. It also interfaces with the Siemens DNA application to support fault location. The DNA application quickly determines the most probable location of electrical faults in the distribution network. It evaluates real-time data received from the feeder breakers, reclosers, protection relays, fault indicators, automated switches, and related advanced metering infrastructure (AMI) information. The DNA application transmits the fault location data to Intergraph’s Command-and-Control Center, which displays it graphically on a map.

SIEMENS DNA
The Siemens DNA application provides fault isolation and service restoration (FISR) functionality. FISR defines switching actions to enable the operator to efficiently isolate faulted areas of the network and restore service to customers on unfaulted feeder sections – even before repair work begins.

INTERGRAPH MOBILE APPLICATIONS
The Intergraph/Siemens solution offers a fully integrated mobile workforce management system. The system enables full appointment management, automatic assignment, scheduling, and crew monitoring. You can improve productivity when personnel with the right skills are dispatched to the right place at the right time to efficiently address customer service issues. The command-and-control center also brings together a complete mobile application for crews to receive job assignments, see real-time job assignment information displayed geographically on a mobile map, and update and close jobs in real time. In emergency situations, the ability to share a common map between the field crew and the dispatcher improves communication and safety when it counts the most. During times when clear communication is vital, dispatchers and field crews can share the same picture to communicate clearly and unambiguously.

ABOUT INTERGRAPH
Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph’s industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph’s software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

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