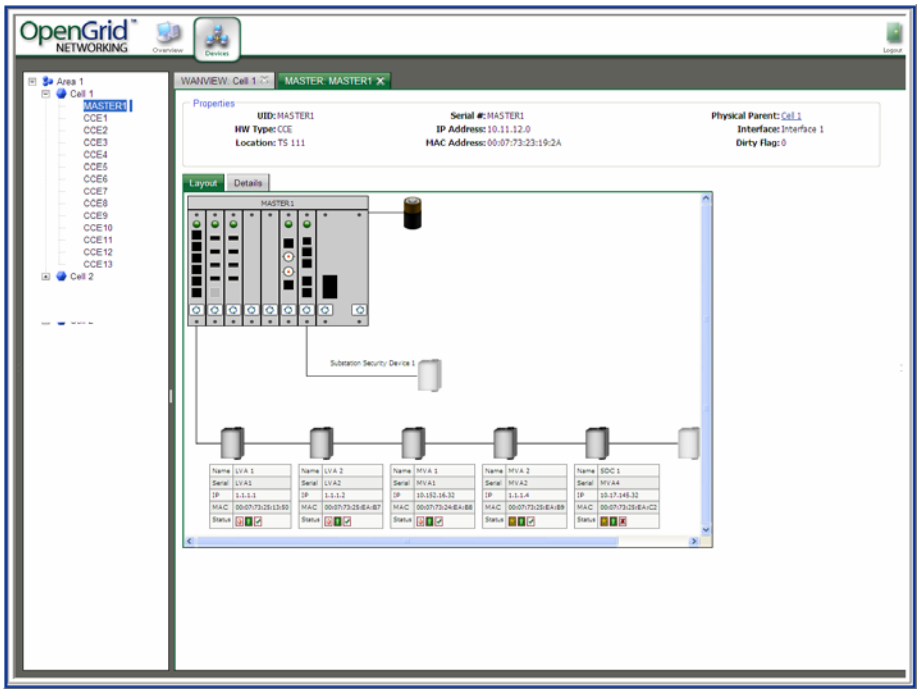
CURRENT® Smart Transformer Station (STS)
Infrastructure & Data Management

CURRENT *OpenGrid*™ is the software foundation to enable Smart Grid applications, including Smart Metering. The *OpenGrid* platform provides the network and data management system to integrate intelligent meters, sensors, MV switchgear, tap changers, RTUs and other utility devices with a variety of low-latency, Internet Protocol (IP)-based communications systems including fiber, 3G wireless, DSL, WiMax and medium voltage broadband over power line (MV BPL) to form a complete Smart Grid System.

This enterprise class platform is vendor and communications neutral and is easily integrated with existing utility systems such as the Outage Management System (OMS), Distribution Management System (DMS), Asset Management, Work Management, SCADA, Data Historian and Meter Data Management System (MDMS). *OpenGrid* is built using a modern Service Oriented Architecture (SOA) and W3C specifications that can be scaled to meet a utility's future needs. It also uses a modular architecture to allow for flexible deployment schemes and is easy to install, configure, manage and monitor.

The *CURRENT* STS Infrastructure & Data Management solution includes the following components that can be installed as either a complete, integrated solution or individually.

CURRENT *OpenGrid* Networking (OGN) is CURRENT's enterprise-class network management system that provides full communications management of the Smart Grid communications network, including Fault, Configuration, Accounting, Performance and Security (FCAPS) as well as device messaging and control. OGN enables asset management and discovery of deployed distribution transformer station equipment, such as station data concentrators and sensors. OGN ensures that large numbers of simultaneous notifications are communicated properly during T&D network events (QoS), enabling a priority-based communication scheme to ensure timely delivery of measurement data.

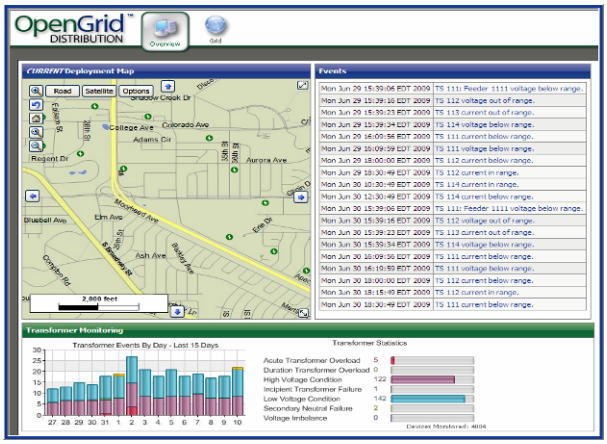


OpenGrid Networking Inter/Intraconnect Screen

Key Features and Benefits

- ***Actionable Intelligence*™.**
  Provides the utility specific information to both prevent outages and restore service faster, thereby reducing customer outage frequency and duration**.**
- **Robust network management.**
  Increases system availability and provides savings in all areas with a full feature set including turn-key provisioning, real time monitoring and troubleshooting tools.
- **Meter Data Collection (MDC).**
  Provides a full set of services, required to implement an AMI system, including scheduled collection, on-demand readings, remote meter configuration, and control of remote service disconnect.
- **Flexible enterprise interfaces.**
  Ensures that *OpenGrid* ™ can be easily integrated with other utility systems using standard protocols such as Web Services/SOAP.
- **Highly scalable.**
  Maintains performance levels for the largest utility-side deployments for both network management and meter data collection.
- **Supports multi-vendor, open, standard protocols.**
  The utility can manage and collect data from multiple vendors' equipment using a common software platform.
- **Remote software upgrade.**
  This fully automated process reduces operational costs and increases reliability by ensuring that all devices are running the correct firmware.
- **Device discovery and asset management.**
  Reduces installation time and expenses while eliminating errors in collecting as-built information. Having accurate as-built records is critical in managing a Smart Grid.

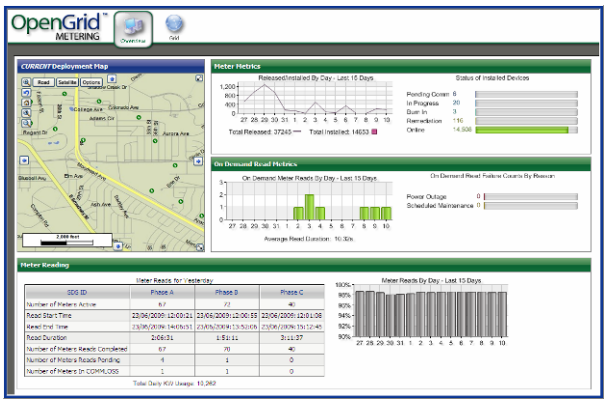
CURRENT *OpenGrid* Distribution (OGD) is the enterprise software platform that enables the collection, visualization and analysis of sensor data, creating *Actionable Intelligence*™ — the identification of specific and definable actions that respond to live problems, improve operating efficiency, help mitigate aging workforce issues, lower energy losses, and avoid failures before they occur. *Actionable Intelligence* defines the time, place, and specific action that should occur, allowing either automated responses or the dispatch of crews directly to specific problems without a lengthy search, and ensuring a speedy response directed at the problem. This approach can even identify problems before a customer may notice any change in their service.



OpenGrid Distribution Overview Screen

OpenGrid Distribution incorporates remote configuration of CURRENT sensing and analytics devices to set threshold detection, alarming, and data variance detection. It also integrates with other utility databases to provide normalized access to data to facilitate the development of advanced analytics. This analytics platform provides linkages to every other system within the utility through application programming interfaces (APIs) and with information flow that ensures that existing systems benefit from the enhanced view of the state of the network.

***OpenGrid* Metering (OGM)** is a vendor-neutral Station Data Concentrator (SDC), enterprise class AMI data collection, management and Smart Grid analysis solution. OGM, which scales to support the largest utility-wide deployments, collects aggregated meter data from each SDC and forwards the data using standard interfaces (e.g., SOAP/XML) to other utility enterprise systems, such as a Meter Data Management System (MDMS) or Customer Information System (CIS). OGM provides a centralized management solution for monitoring the AMI collection process, including at-a-glance dashboard views and reports so the utility can quickly assess the health of the meter collection system. Finally, OGM provides advanced analytics capabilities based on meter data, including meter-to-phase mapping and energy theft detection.



OpenGrid Metering Overview Screen