



M A R L A B S *innovation*
Customer Success = (excelling employees)

GridInsight

Take Control of Smart Grid Data



Deployment of smart meters and digital sensors/controls is leading to a 1000-fold increase in the volume of grid and metering data flowing into a utility's IT infrastructure. GridInsight helps you get a handle on this flood of data.

Raw data, originating from diverse grid devices, securely converges in this platform where it is processed and converted into information that can facilitate timely tactical actions or strategic decisions. From data acquisition and data transformation through information integration, GridInsight serves as a key backbone for end-to-end smart grid data management. A broad inventory of use-case scenarios makes for a complete solution.

At the heart of the suite is Grid Data Manager which provides a secure and robust foundation for observing grid information in a geospatial context: via the Grid Monitor and Grid Analyzer modules.

Keeps track of the data

Grid Monitor receives data in real time and compares against past trends to detect any significant variances. Through in-built connectivity models of complex grid relationships – meters to transformer, transformers to feeder, and feeders to utility – Grid Monitor pinpoints data received to a specific area/asset/zone. To view trends in more detail, the software enables easy drill down. Something that shows up as a relatively minor blip at the overall system level could represent a significant event at the feeder or transformer level. Workflow processes seamlessly route event information and alerts for rapid follow-on actions. Communicating with external SCADA/DR/OMS systems, Grid Monitor can automatically trigger suitable system response.

Unlocks value from the data

Grid Analyzer closes the loop with a rich analytics catalog delivered through executive KPIs and dashboards combined with considerable ad-hoc reporting capabilities. Across areas such as fault current pattern analysis, asset health scoring, grid reliability calculations, actual energy theft/ loss calculation, load flow calculation, and smart grid aggregator geo-optimization, a vast array of complex reports and analytics can be generated in real-time. Graphic representations of analytical results ensure that they can be easily understood and acted upon.

Application areas include:

- ✓ Customer power outage
- ✓ Localized demand response
- ✓ Preventative asset management
- ✓ Unusual energy loss
- ✓ Complex self healing
- ✓ Load profiling
- ✓ Security and data integrity

Fits different systems landscapes

Be it a utility with a mature application environment or one with a more minimal application environment, GridInsight has a matching solution. In utilities that have invested in several large systems, deployment of GridInsight makes it possible for these applications to focus on their core functions (for instance: the MDM no longer needs to maintain history, OMS does the actual outage notification). GridInsight unifies the end-to-end process by managing the “heavy data lifting.” When it comes to utilities that have not invested in large systems such as OMS or MDM, GridInsight takes advantage of its extensive configuration capabilities to bridge some of the possible functionality gaps.

Brings grid data to life

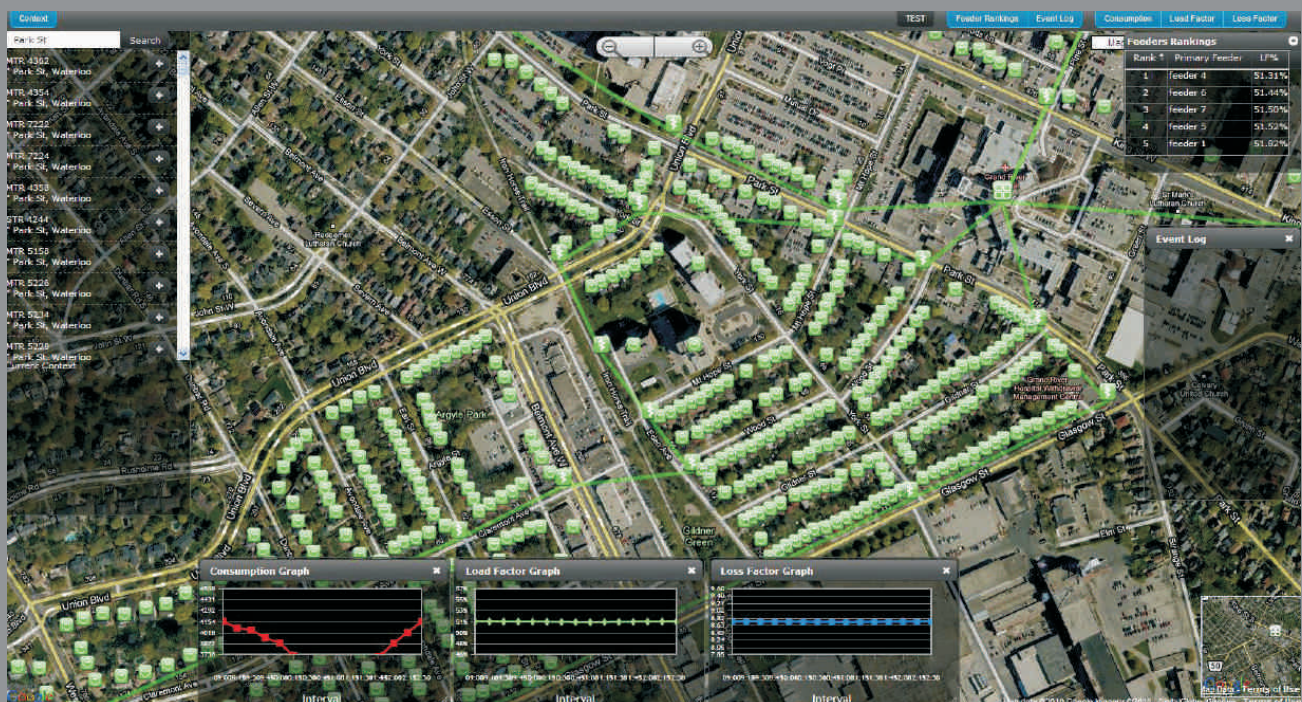
Graphical Display - Updating automatically as analysis context is modified, the graphical display allows for close monitoring.

Event Log - The event log is a real-time list of active events in the system. Correlated events are organized through a folder structure that allows you to conveniently drill-down for more granular details.

Feeder Rankings - Feeder Rankings lists provide a snapshot of feeder health based on selected measures (such as load factor, kVAR, kWh). While analyzing a particular context, the list allows you to keep track of other areas of the grid.

Icons and Feeder Status - Events are correlated to assets on the grid using a combination of status icons. Deviation from target measures set by the utility is highlighted by feeder status lines.

Map Features - Showcasing interactive map features, GridInsight utilizes multiple zoom options to drill-down from substation to transformer to meter detail.



Lifts business agility and performance

- Transforms forecasting, analysis, and decision making.
- Raises network reliability levels.
- Augments asset life-cycle management.
- Increases regulatory compliance.
- Accelerates integration of renewables/distributed generation.
- Creates new insights into consumer behavior.
- Realizes more automated and adaptive smart grid.

Marlabs Inc. One Corporate Place South, Piscataway NJ 08854
Voice: 732.287.7800 Fax: 732.465.0100
Email: info@marlabs.com