

## Introducing GridObserver® from CONXX

GridObserver® is the most comprehensive Smart Grid network monitoring platform in the market – unmatched in its functionality and breath of observable data. GridObserver provides the complete visibility of smart grid data at all levels of the network. It can simplify network administration costs and reduce network unscheduled downtime with the Grid Observer® Leading Indicator Technology™ module. It also provides metrics from concise executive level KPIs, to detailed metrics required by engineering and operations teams for next level tracking and predictive event correlation.

GridObserver's genesis began two years before the internet's commercial operation. With no viable options other than to build their own, CONXX built their first Network Monitoring System to monitor their first countywide network they developed and maintained. Each sequential network they developed was more complex as the technology improved. In correlation, their network monitoring requirements became more sophisticated and ultimately evolved into the GridObserver platform.

At the core of the GridObserver platform is the Leading Indicator Technology™ (LIT) Management Module for the GridObserver®. The GridObserver LIT module is a new patent pending technology that improves network availability through predictive error detection.

Unlike traditional network monitoring systems that only provide lagging indicators after the error or the outage event, GridObserver's LIT provides you the ability to be proactive before the damage is done. LIT analyzes the network elements and tracks the information while the network elements are reporting small, seemingly unimportant, network changes. The LIT algorithm correlates these changes, often too small to be called "events", and correlates them to profile a clearer picture of expected future events. The GridObserver® LIT module delivers a scheduled or on-demand report with upcoming issues, allowing for proactive intervention and resolution.

The CONXX GridObserver® becomes your single pane of glass to monitor your entire smart grid network with its multiple nodes simultaneously in complete security. GridObserver® is a full-service network management framework that works by looking widely (across many vendors WiMAX, Microwave, Switches, Routers, etc.) and deeply (into the MPLS/ATM/SONET/ Routing/DWDM) layers of the network. This Manager of Managers (MOM) performs advanced level tracking and predictive event correlation.

GridObserver is fully web-enabled for monitoring anytime, anywhere. It has intelligent auto-notification for real-time escalation. It provides management, operations and engineering "Quick Glance" summary for all network elements. GridObserver utilizes trending alarms and prioritization. Its geocoding provides a topologic view to perform path analysis and to detect path loss.

Unique to the industry, CONXX has developed the ability to detect and map virtual connections with GridObserver. By monitoring both physical and virtual devices at all levels of the network, the missing gaps can now be seen. Perhaps more important is the ability to see if devices are connected to something else. This "Man-in-the-Middle" detection is incredibly essential for security and situational awareness to know if someone has hijacked a device on the smart grid. This innovation can possibly save the smart grid from attacks and protect the company's irreplaceable assets.

***Quote from large US electric utility operations manager...***

***“Wilco (SONET RING) is finally fixed thanks to GO!  
We found two major issues that could have caused a complete outage.”***

With the traditional network monitoring approach, optimization and error remediation begins after error or outage events, commonly known as lagging indicators. While remediation after the network outage is critical to ongoing network availability and has always been the standard network process, CONXX believes there is a better solution.

At the core of GridObserver is an extensible network modeling architecture, which models network objects and events at an atomic level. This concept of atomic platform architecture makes correlations with network objects naturally interrelated. Defining these interrelationships is easily accomplished within GridObserver and the advanced network introspection occurs automatically.

Because GridObserver geocodes both the physical/virtual objects and events in real time, both fault isolation and performance analysis is Geocoded. All of this can be viewed in geographic area reports.

Reporting in GridObserver is unrivaled with the network modeling features of the platform. GridObserver provides the ultimate in network reporting with real-time geocoded model of your network environment. Key metrics can be generated on any element or element inter-relationship in the geospatial environment. Executives, engineering or operations can readily generate key metrics for a defined geospatial area.

The strength of GridObserver’s Key Performance Indicators (KPIs) tells executives where to invest in the network to get the most benefit from dollars spent. Metrics are then tracked to assure the investment has indeed paid off. Yes, GridObserver can tell you where to improve your poorest performing network segments, and how many customers will benefit from the improvement.

With GridObserver, network device upgrades do not take place prematurely. Dollars can be allocated based on need, not guesses. GridObserver allows our customers to maximize their investment in their network. The precision of GridObserver reporting allows for monitored hardware to be used to its maximum life and still be replaced before it fails.

Have you ever been asked a question like, “How much in terms of network investment is going to video security?” GridObserver can answer this and many more questions because it tracks the individual virtual service metrics on the networks, so operators, engineers, and executive know how much of their network monetary expenditures are supporting which network application. GridObserver reporting ties real dollar figures to the bits and bytes traveling across the network.

Configuration Assurance and Compliance can be accomplished because GridObserver looks deeply at the equipment. Standard and adhoc reports can verify configurations were implemented and had the desired results across the environment.

CONXX GridObserver is your complete smart grid network monitoring platform for today and the future.

***“You cannot manage what you cannot see.”***