CONX

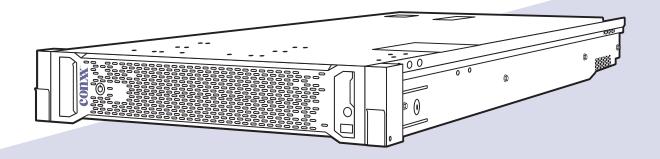
PATENT PENDING

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GRID OBSERVER®

GridObserver® is the most comprehensive Smart Grid network monitoring platform in the market – unmatched in its functionality and breadth 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.



KEY FEATURES

EXECUTIVE/SENIOR MANAGEMENT KPIS

The GridObserver™ platform continuously gathers network metrics that helps executives best apply funds to improve the network, then validates that those funds in fact made those improvements.

OPERATIONS

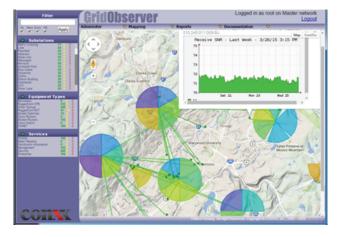
GridObserver™ is a full-service network management framework that works. It becomes your NOC staffing and monitors your network for anomalies. Alerting, callout, documentation, ticket management for network operations GridObserver has it all.

ENGINEERING

GridObserver™ presents detailed reports to Smart Grid Engineers empowering them to make better, more informed, decisions when adding or changing services. Service capacities and stability as well as recommendations are presented to engineering teams in clear on demand reports.

GRID OBSERVER®

SMART GRID MANAGER FOR THE 21ST CENTURY



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.

ТТТМ

LEADING INDICATOR TECHNOLOGY™

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.

ADVANTAGES AND FEATURES

SCALABLE

- On premise, dedicated private cloud, or both
- Designed for many operators, no per user fees
- Real-time and historical data collection
- Geocoding gives "god's eye" view of the topology

SERVICES METRICS

- Breaks out services metrics into customizable reports
- Programmable dashboards for operational groups (DA, SCADA, Enterprise)
- Specifically designed for Operations,
 Management, and Engineering

SECURITY

- Monitors at all layers
- MAC verification
- · Man-in-the-middle detection

REAL-TIME INVENTORY

- Location
- · Manufacturer, model, MAC, serial
- Service Contract monitoring
- Geocoding, line-of-site, path loss, path analysis

USABLE

- Clientless, browser based user interface
- Definitive access control
- Grant visibility to staff or clients
- Built for real network issues
- · NSAIDI, NSAIFI, NCAIDI metrics
- Metrics on many levels based on many domains including Location, Backhaul, Equipment Type

OPERATIONS

- Elegant and intuitive interface
- Fully web-enabled for monitoring anytime, anywhere
- Intelligent auto-notification and escalation
- "Quick Glance" summary for ALL network elements
- Trending alarms and prioritization

MONITORING

- Real-time monitoring of the entire network with one interface
- Radios, Power and facilities
- Switches, bridges, and routers
- Customers
- Locations
- All SNMP manageable equipment



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