Leveraging insight for effective Network Operations

Bringing power and control to the network edge

The MIx Director™ (formerly Grid Director) Intelligent Edge Analysis and Control application places all the power of MIx Director near the very edge of the network with embedded agents for distributed information transfer and control.

This application provides immediate intelligent analysis, correlation and control within substations, premises and field devices where appropriate, while at the same time passing information upstream when more complex analysis and management is required.

The agent technology is lightweight yet powerful enough to run the MIx Director core technology for expert-system rules and complex event processing, and is flexible enough to be adjusted ‘on the fly’ either manually or automatically in response to pre-set rules.

Distributed control functionality enables edge devices to be governed centrally or in a distributed manner. This flexibility empowers the central core to change expert rules dynamically, and leverage complex event processing at the edge agent for a truly dynamic system that adapts immediately to unpredictable events. The utility gains centralized management and control, with instant edge responsiveness.

Embedded edge intelligence will change the way the smart grid is monitored and controlled. With resident processing of expert rules taking place at the edge, asset security and control is improved dramatically, and the network is freed up for faster and much more flexible performance.

Highlights

› In field event analysis for immediate situational knowledge right when it is needed.
› Flexibility to adjust expert rules embedded at the edge as conditions change in the field.
› Network outages no longer isolate or impact edge devices.
› Tight integration with the MIx Director core provides maximum flexibility and control in mission critical asset management applications.

Benefits

› A 2 million meter environment will generate over 750 million meter events per day, most of it noise. Embedding technology at the edge filters and contextualizes data at the source to improve overall communications and make data much more manageable.
› MIx Director typically identifies outages 15 minutes ahead of a utility OMS system.
› Keen insight at the source reduces unnecessary truck rolls and overtime costs.
The Mix Director Intelligent Edge Analysis and Control application increases network efficiency by freeing up valuable bandwidth and other resources for actions and logic that are better and more efficiently managed at or very near their source.

At the same time, this topology increases reliability by making it much easier to isolate issues and transmit contextualized information rather than just raw data.

By empowering the edge device with the same powerful and flexible event processing technology that powers the Mix Director core, the entire system is more evenly distributed, with the right processing happening at different aggregation points, and the entire network freed up for data that actually has to be transmitted across it, and processed and stored centrally.

- Centralized and Distributed management of the edge agent logic allows for flexible and adaptable intelligence when and where it is most needed, with distributed expert rules handling logic that is relevant at their particular point in the system.

- Complex event analysis keeps information localized and informs nearby systems rather than requiring central processing in all cases.

- Active Scan Technology at the edge enables more granular analysis of edge devices without generating data traffic that may affect network operations.

- Small processing requirements enables advanced applications at the edge without sacrificing performance.

Key Features

- **Active Scan Technology**
  Actively monitoring signals at the edge identifies issues quickly, easily, and early.

- **Ultra-Efficient Design**
  A modest processing footprint ensures that additional features will not affect core functionality.

- **Complex Event Handling**
  Information is localized when most beneficial, and transmitted contextually to upstream systems when necessary.

- **Effective Integration**
  Using the same tools and technologies of the core system assures effective and meaningful integration.

- **Improved Reliability**
  Unexpected events at the edge are constantly monitored and processed, even when communication is limited.

- **Localized Prioritization**
  Flexible analysis puts the right expert rules in the right place since not all locations have the same priorities.

About Bit Stew Systems Inc.

Through data-driven automation, Bit Stew Systems removes the complexity of industrial operations and connected machines to give clarity and control back to the operator. Purpose-built for the Industrial Internet of Things, Bit Stew’s Mix Core™ platform automates data ingestion, applies machine intelligence to learn patterns in the data, allowing industrial companies to discover actionable insights that optimize operational performance. Mix Director™ (formerly Grid Director™) is powered by the Mix Core platform, and is the application industrial enterprises rely on for a contextual and real-time view of their operations, assets and customers. Incorporated in 2009, Bit Stew is a venture-backed private company that is headquartered in Canada with offices in the USA, Australia and Europe. Bit Stew was named on the Gartner Cool Vendors in Energy & Utilities list for 2014 and the Frost & Sullivan Entrepreneurial Company of the Year – North American Service Solutions for Utilities. Visit www.bitstew.com to learn more.