Proud Tradition of Fieldbus Commitment

As a world’s leading supplier of instruments and control systems for industrial process automation, Yokogawa has committed itself to the development of advanced solutions and products in three focused areas – measurement technologies, industrial automation and control, and information technologies.

In each of these three focused areas, digital fieldbus technology is key to enabling the flow of information from the field to the enterprise. Digital fieldbus technology combines innovative digital sensor technologies of Yokogawa field devices, such as its EJA pressure transmitters and Yewflo Vortex shedding flowmeters, diversified control systems technologies such as CENTUM CS and CS 1000/3000, plant information systems such as Yokogawa’s Exaquantum package, and Yokogawa’s Plant Resource Manager (PRM) software.

Fieldbus represents a new language for digital process control instrumentation and is a key leading edge process instrumentation technology for the future. Fieldbus is having a dramatic impact on every area of instrumentation. Fieldbus users are reducing installation costs, improving process control, and utilizing asset information to reduce costs through improved utilization and performing predictive maintenance.

Yokogawa has always been a forerunner of implementing digital technology. As early as 1987 Yokogawa’s own highly reliable and easy to use Brain Protocol was released into the automation market. Later, BRAIN and HART digital technologies became available and now, the latest digital communication, Foundation Fieldbus, is quickly being adapted as the digital technology of the future.
Yokogawa is one of the founders of the Fieldbus Foundation and was the first company to have successfully manufactured Fieldbus silicon chips based on current standards. Yokogawa has also actively participated in and promoted field trials throughout the world for early implementations of fieldbus technology.

Yokogawa continues to contribute at all levels of the Fieldbus Foundation, including the technical steering committee and specification development and maintenance teams. This proactive role reinforces Yokogawa’s commitment to provide its customers with the full benefits of digital communication and fieldbus.

**Fieldbus Redundancy**
In 2001, Yokogawa released the world’s first redundant H1 Foundation Fieldbus I/O card. Yokogawa’s ALF111 card provides a highly reliable, compact solution to interface up to four H1 Fieldbus segments. For highly critical applications such as those in the Oil & Gas, refining, petrochemical, chemical, and power generation industries, Yokogawa’s redundant fieldbus solution features process execution and control at both the application layer and physical layer to provide ongoing operations in the event of any single component failure. Yokogawa’s redundant solution reduces costs and significantly simplifies system configuration.

**Interoperability**
Yokogawa fieldbus instruments all comply with the ITK 4.0 certification. This makes Yokogawa fieldbus instruments fully interoperable with certified hosts.

In late 2000, Fieldbus Foundation launched its Host System Interoperability Test kit. The purpose of this kit was to improve interoperability between Foundation Fieldbus instruments and Host systems. Recognizing the importance of this testing, Yokogawa offered its CENTUM CS / CS1000 / CS3000 systems for testing.

Under the supervision of Foundation Fieldbus officials, Yokogawa successfully passed the interoperability test points and was the first vendor to successfully register a Foundation Fieldbus certified Host system.
Yokogawa products fully support the Fieldbus Foundation’s goal of providing full vendor interoperability. Yokogawa invests heavily in testing and development to make sure users can enjoy the full benefits of selecting today’s, or tomorrow’s, Best-in-Class Fieldbus technology.

Asset Intelligence
In February 2002, Yokogawa announced its latest software solution for field device management – Plant Resource Manager (PRM). PRM is an integrated software solution that unifies the monitored data from intelligent and non-intelligent field devices allowing the management and maintenance of these devices. The PRM software solution operates within the CENTUM CS3000 R3 control system or as a stand-alone solution. The key benefit of PRM is that it provides easy access to automatically collected data and allows integration, management and maintenance of intelligent and non-intelligent field devices using a common database.

The results – integrated plant and device performance data, maintenance records, audit trails, device configuration with auto-device detection, historic data management, parameter comparison, advanced device diagnostics information and access to on-line documentation such as device drawings, parts list and manuals.
Yokogawa Fieldbus First
Yokogawa, as an innovator in the development of Foundation fieldbus technology, has provided many inaugural activities in support of fieldbus. They include:
- CENTUM System first to pass Foundation Fieldbus Host Interoperability Test.
- Yokogawa first with fieldbus redundancy providing continuous operation.
- World’s first registered data acquisition paperless recorder.
- Yokogawa devices first to pass ITK 4.0 server interoperability test procedures.
- World’s first Windows 2000-based Total Production Control System with Foundation Fieldbus support.

Yokogawa is committed to providing reliable, advanced technology solutions, to providing benefits to the process control industry.