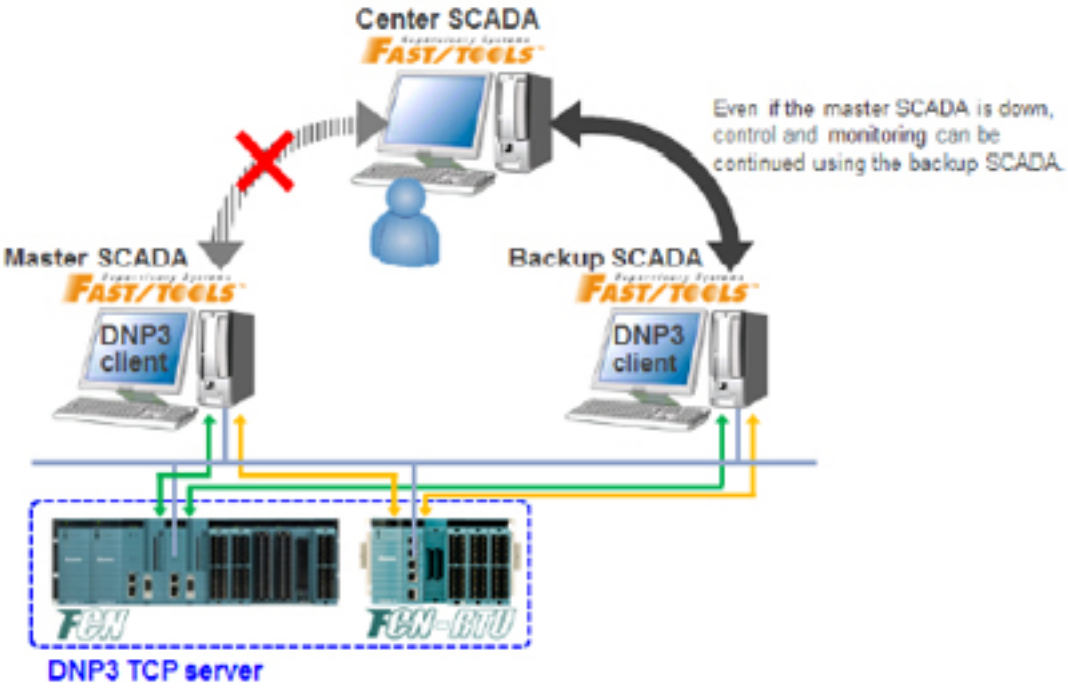
Network-based control system enables enhancement of DNP3 SCADA protocol functionality



Yokogawa Electric Corporation announces that it will release an enhanced version of the STARDOM network-based control system on February 28. With this release, the integrity of the data transferred between supervisory control and data acquisition (SCADA) systems and programmable logic controllers (PLCs) is ensured in challenging upstream oil & gas and other applications.

Development background
The FCN autonomous controller and the FCN-RTU low power controller are core components of the STARDOM network-based control system, which is widely used in applications involving the monitoring and control of oil & gas fields, water supply facilities, and other installations that are often hundreds of kilometers apart. In such applications, the controllers installed at each site send data via a narrowband communications link to the SCADA system at a central control facility. To ensure that no data is lost, such systems generally employ DNP3, an open distributed network communications protocol. The STARDOM system has been enhanced to make better use of the functions supported by the DNP3 protocol.

Product features
With this enhancement, the FCN and FCN-RTU controllers now support a dual connection to DNP3 clients, enabling the same data to be sent to master and

backup SCADA systems (the DNP3 clients) at the same time. When the same essential data is stored on master and backup SCADA servers in separate locations, the system can switch over to the backup SCADA server in the event of a disaster or some other eventuality that causes the master SCADA server to go offline. This disaster recovery system ensures the uninterrupted monitoring and control of oil & gas fields, water supply facilities, and other types of infrastructure.

Major target markets
• Widely distributed installations such as those used in oil & gas, water supply, and wastewater treatment applications
• Small- to medium-sized plants for the processing of oil, chemicals, iron & steel, nonferrous metals, pulp & paper, food, pharmaceuticals, etc.
• Small- to medium-sized power plants that employ wind, steam, or water turbines

Applications
Monitoring, operation, control, data collection, and data storage for geographically distributed facilities

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