

# STARDOM Optimizes Oil Production for SPDC Nigeria

**Location:** Nigeria  
**Order Date:** July 2002  
**Industry:** Oil & Gas

The STARDOM™ network-based control system is composed of highly independent components that are based on the latest network technologies. STARDOM is well suited to the requirements of demanding field applications involving data acquisition, monitoring and control of geographically dispersed production sites. For the Shell Petroleum Development Company of Nigeria (SPDC), STARDOM is playing a significant role in optimizing their oil production system. SPDC is the most prominent leader in the Nigerian oil & gas industry and accounts for more than 50 percent of the country's oil and gas production.

SPDC turned to a STARDOM solution to achieve optimal efficiency in its oil and gas well production. A key consideration in their selection of STARDOM was its proven Open System Architecture, which incorporates FOUNDATION™ Fieldbus, Java technology and a Web-based operation interface. With its ability to be controlled from a remote location such as a PC on a corporate LAN, incorporation of the FOUNDATION fieldbus interface, and ability to notify operators of system status and other information by e-mail, STARDOM received a very positive evaluation by SPDC.



## Open System Architecture

STARDOM allows operators to manage plants and other facilities from any off-the-shelf personal computer running the Versatile Data Server (VDS) SCADA software. Field controllers located within 200 meters of field devices monitor the devices and transmit alarms to the VDS, giving operators real-time information on device status. From the SPDC office located 50km from the field site, operators are able by means of a Web browser interface to the VDS software to access data from the fieldbus devices, view charts, monitor alarms, and adjust the device settings. The Web-based HMI requires only Internet Explorer and a Java plug-in, which enable an operator to operate and monitor the field devices from any location worldwide.

## FOUNDATION fieldbus

FOUNDATION fieldbus function blocks residing in the FOUNDATION fieldbus devices perform a series of special calculations that optimize gas lift and oil production without requiring additional hardware. The STARDOM controller with the FOUNDATION fieldbus interface seamlessly interconnects with these devices and monitors data in real time.

## E-mail Notification

One other key feature of STARDOM, its ability to notify operators by email, especially caught SPDC's attention. STARDOM's use of Java enables its controllers to send e-mail messages as necessary to operators, and one particularly valuable application of this function is the notification of alert states. With STARDOM's advanced technologies, regular site visits are reduced and both operation and maintenance costs are reduced significantly.

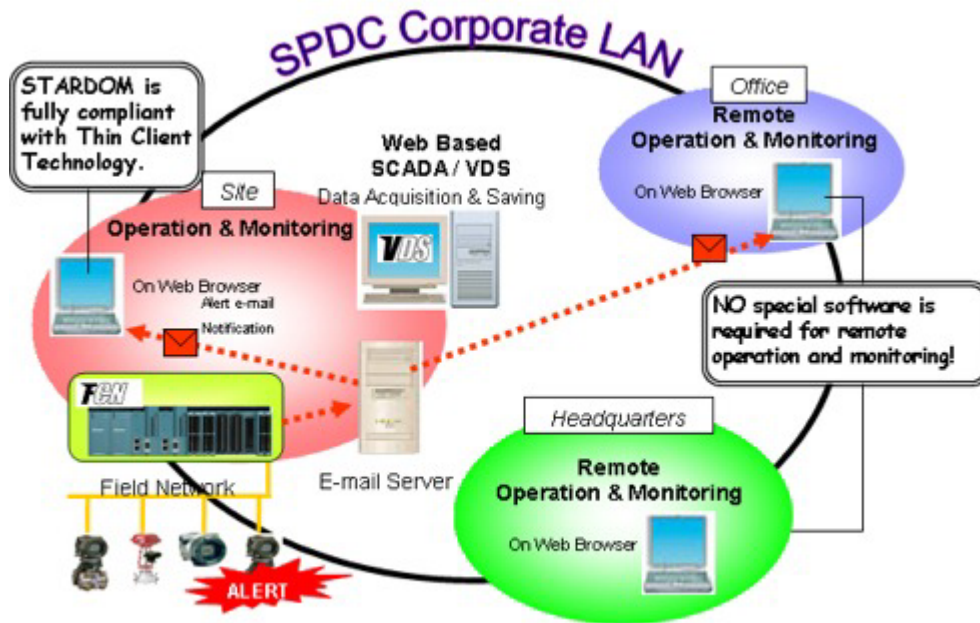
*"A process automation system provides operational flexibility, which also serves as an enabler for minimum intervention strategies, remote diagnostics capabilities, unmanned operations and a seamless integration with management information systems."* said Mr. Dick Wismeijer, Corp. Head Instrumentation/Control Shell Petroleum Development Co.

He added, *"The open technology allows SPDC to customize their process automation system without fearing integration problems and premature obsolescence, providing a scalable system to nurture the migration into an integrated oil/gas operation within SPDC. It is our firm belief that the systems architecture espoused is representative of best practices across the industry, taking into account enabling technologies using commodity type components in a world of competitive opportunities. Thus the benefits, attraction and appeal of applying open system architecture within SPDC are plainly evident and will result in the breakthrough performance standards we aspire to achieve."*



It has become imperative for companies everywhere to achieve leaner, more responsive organizations. For SPDC Nigeria, STARDOM's Open System Architecture and remote capabilities has proved to be a highly effective solution in streamlining their operations and increasing efficiency. Yokogawa is steadily focused on providing these solutions to industry.

### STARDOM Architecture Example



- Site: STARDOM installation site. If something requiring operator intervention occurs, an alert message is sent by email to the operator.
- Office: Has authority to remotely operate and monitor STARDOM. If something requiring operator intervention occurs, an alert message is sent by email to the operator.
- Headquarters: Has authority to operate and monitor STARDOM