

# JumboSwitch<sup>®</sup> News

## JumboSwitch Chosen for Fiber Communications Network Backbone In Saudi Arabia's Shuqaiq Water Transmission System

TC's JumboSwitch<sup>®</sup> has been chosen as the main communications network backbone and Industrial Ethernet Switch for the Phase II project of the Shuqaiq Water Transmission System in the Kingdom of Saudi Arabia.

The contract calls for more than 110 JumboSwitches for 6 pipeline systems to provide Ethernet connectivity for servers, printers, workstations, displays, PLCs or RTUs, VoIP, radio base-stations and office WAN traffic.

The Shuqaiq Water Transmission System will supply drinking water from the Shuqaiq desalination plant on Saudi Arabia's south west coast to cities in the western region. The



pipeline system is scheduled to start operating in early 2010.

The JumboSwitch was chosen by Siemens, the Phase II subcontractor for electrical power distribution, control automation systems and fiber-optic cable communication networks between

pumping stations.

"The JumboSwitch's architecture, features and capabilities are a perfect fit for the Shuqaiq Water Transmission Project," said Victor Liang, V.P. of Sales & Marketing for TC Communications.

"With the migration from TDM to Ethernet technology accelerating, the JumboSwitch meets or exceeds virtually every requirement the customer and consultants desired for this project, including rigorous industrial grade requirements and ubiquitous IP environments."

## JumboSwitch Supports Real-Time Ethernet

You can take full confidence that the JumboSwitch is ready for real-time Ethernet applications, including Teleprotection.

The JumboSwitch addresses common concerns over real-time, deterministic and data reliability issues associated with normal Ethernet technology. For example, it effectively eliminates risks and impacts on real time performances of mission-critical traffic by less-critical data.

Until recently, SONET/SDH was the backbone network system of choice for most Utilities because of

perceived advantages over IP-based systems. Legacy systems like SONET/SDH, although reliable and well understood, are voice-centric, less flexible, difficult to scale, and most of all, are not optimized for packet data transmission.

The reality is that JumboSwitch is a better and cheaper alternative to SONET/SDH for Utility/SCADA automation & control applications.

Read more at [www.jumboswitch.com/pdf/Real-Time\\_Responsive\\_whitepaper.pdf](http://www.jumboswitch.com/pdf/Real-Time_Responsive_whitepaper.pdf)

## Get a free JumboSwitch Hat at the TC Booth (#1043)

To celebrate the first anniversary of its JumboSwitch product introduction, TC will give away Baseball Hats and Tote Bags with



JumboSwitch logos at its booth at Distributech (while supplies last). Stop by booth #1043 as soon as possible to see the latest JumboSwitch innovations and pick up your hat and tote bag.



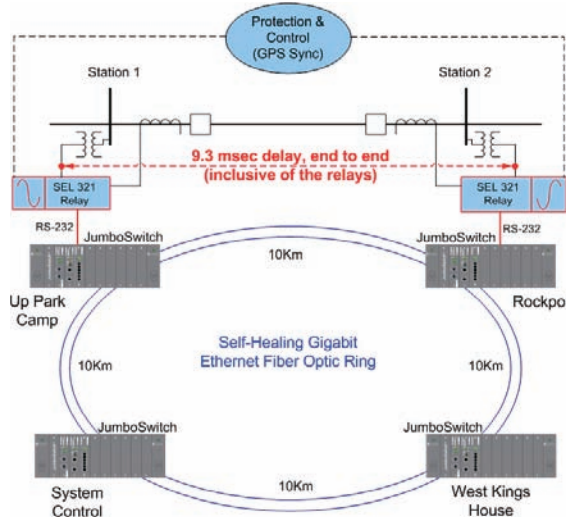
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## JumboSwitch Supports Teleprotection Relays

The JumboSwitch is currently the only proven Industrial Ethernet Modular Switch that supports Teleprotection.

Its Turbo Serial Interface card is specially designed for real time critical communications between protective relays and is about four times faster than standard serial-over-IP devices.

Because Teleprotection-over-IP is a relatively new concept, some Utility communication engineers and managers have a fuzzy perception



JPS tests confirmed a maximum signal latency of less than 10 msec.

of real-time Ethernet.

Such was the case with the network technicians and engineers at Jamaica Public Service before they implemented the JumboSwitch into their SCADA network. JPS conducted a series of latency tests (first bit out to first bit in) using the JumboSwitch's special Turbo Serial Interface Card.

Extensive testing confirmed that the JumboSwitch consistently performed less than 2.5 msec end-to-end. After adding the internal relay processing time, the total delay averaged 9.8 msec.

Read more at [http://www.jumboswitch.com/pdf/JPS\\_ProRelay\\_install.pdf](http://www.jumboswitch.com/pdf/JPS_ProRelay_install.pdf)

## Jamaica "Hurricane Proofs" SCADA Network

Jamaica has been hit hard by hurricanes in recent years.

To "hurricane proof" its network, Jamaica Public Service Co. (JPS) wanted a 'multiple fault protection' network that would maximize its chances to survive hurricanes, including worst case access to substations and remote RTUs.

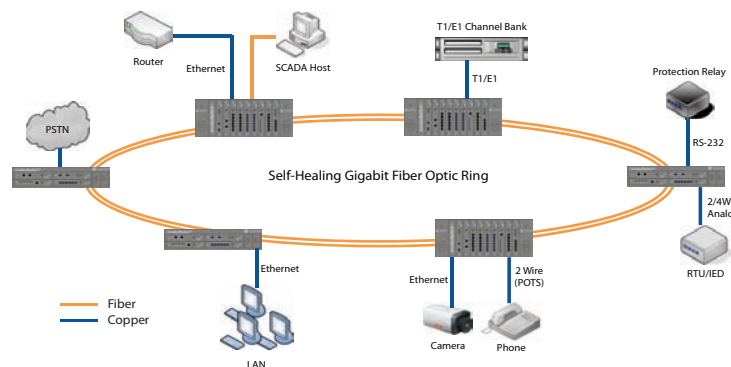
It installed a JumboSwitch network to provide multiple levels of redundancy on its island-wide fiber

optic network in addition to its existing microwave network.



JumboSwitch also gave JPS a backbone solution that would support T1, Ethernet, RS-232 and Voice for a variety of applications including SCADA, Teleprotection, Substation Telephones, Revenue Metering and Distribution Automation.

Read more at <http://www.jumboswitch.com/pdf/JPS.pdf>



The JumboSwitch seamlessly integrates Voice, Video & Data over Ethernet, including TDM-over-IP (see diagram).