Case Study

RAD's Pseudowire Gateways Reduce Communications Costs

Yorkshire Water, UK

YorkshireWater

Application
TDM over IP and MPLS

Challenge
Reduce leased line costs while retaining proven voice switches by carrying voice traffic over a packet-switched core network.

Solution
RAD's TDMoIP pseudowire gateways, which convert synchronous TDM voice and signalling traffic into packets for transmission over IP or any other packet switched infrastructure.

Benefits
- Expensive leased lines eliminated
- Systems convergence
- Echo canceller enhances voice quality
- Improved management visibility

TDMoIP transports voice traffic over MPLS WANs while ensuring QoS

Yorkshire Water has won many awards for customer service and holds the British government's Charter Mark for Service Excellence. In 2006, they were voted utility company of the year for an unprecedented third consecutive year, finishing ahead of all other water, gas, electricity, and telecoms companies in the United Kingdom.

Pursuing further efficiencies, Yorkshire Water looked for a way to retain their proven voice switches and reduce leased line costs. The first steps in 2003 involved the elimination of a number of costly 2 Mbps lines by carrying voice traffic over their own packet-switched core network.

Two PABXs were connected to RAD Data Communications' IPmux-1 TDM over IP (TDMoIP®) pseudowire gateways, which convert synchronous TDM voice and signalling traffic into packets for transmission over IP or any other packet-switched infrastructure. To facilitate this transmission, Yorkshire Water commissioned RAD distribution partner Open Networks Engineering to provide the expertise on how to carry voice traffic over an IP network. "This working relationship with Open Networks has supported our systems convergence transformation," said Steve Groves, Senior Network Analyst at YW. "The business case to eliminate our expensive leased lines, which we used to carry voice, and migrate traffic to our existing IP data network, was compelling," added Matthew Rowe, Senior Network Analyst at YW.

> "The business case to eliminate our expensive leased lines, which we used to carry voice, and migrate traffic to our existing IP data network, was compelling."
>
> Matthew Rowe, Senior Network Analyst, Yorkshire Water

RAD data communications

Migrating to an MPLS Network

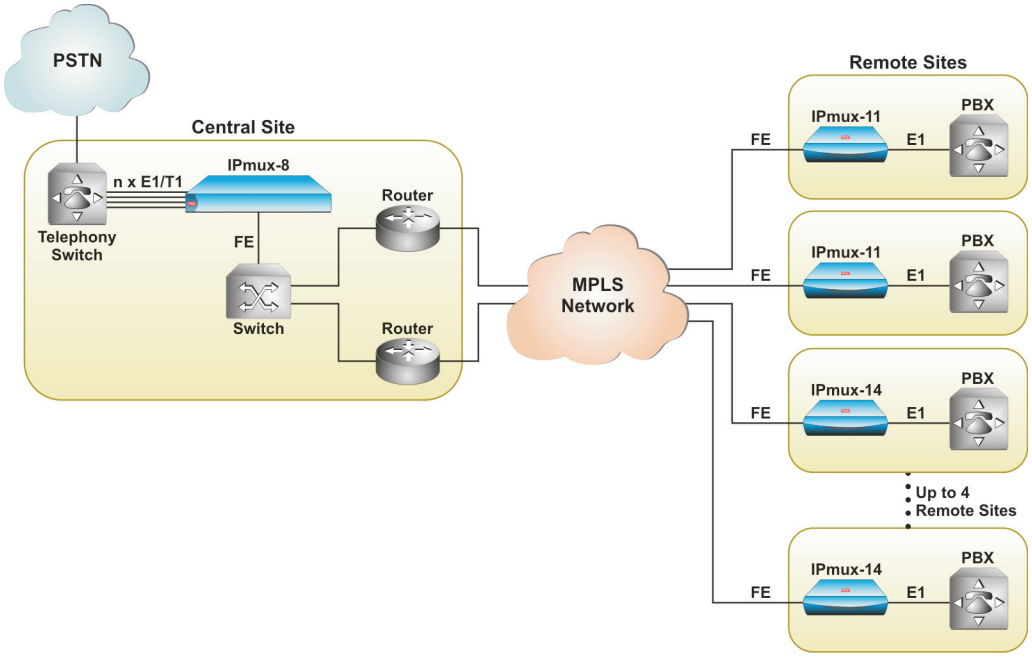
Later in 2006, when YW migrated to an MPLS network, there was a need to carry voice from their remote WANs, and the original single-port IPmux units at the central office were redeployed at these remote sites. Once again, Open Networks enabled YW to carry voice traffic over the WAN while ensuring Quality of Service (QoS). To accommodate all of the new outstations, an eight-port IPmux-8 central site aggregation solution was installed to transport traffic from multiple E1 trunks over the packet-based network. Open Networks helped again by introducing an echo canceller to further enhance voice quality in all inbound and outbound calls throughout the system.

"Open Networks have supported us all the way with this project and now supply our group with engineering support both during and after regular business hours," noted Mathew Rowe. "They have aided YW in developing redundant back-up paths and an improved management visibility of sequence errors and jitter on the network," he continued. "This is a great improvement over the old TDM multiplexers and assists with all troubleshooting situations."

"By employing RAD's TDMoIP gateways, we have fulfilled the brief to improve Yorkshire Water's cost and performance efficiency whilst extending the life of their existing assets," concluded J.P. Steward, General Manager of Open Networks Engineering Ltd. "It also means that YW have a strong network and are ready to move to new VoIP soft switch PBXs when their investment cycle dictates and the technology matures."

"By employing RAD's TDMoIP gateways, we have fulfilled the brief to improve Yorkshire Water's cost and performance efficiency whilst extending the life of their existing assets."

J.P. Steward, General Manager, Open Networks Engineering Ltd.



Corporate Headquarters
RAD Data Communications Ltd.
24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel: 972-3-6458181
Fax: 972-3-6498250
email: market@rad.com

US Headquarters
RAD Data Communications Inc.
900 Corporate Drive
Mahwah, NJ 07430, USA
Tel: (201) 529-1100
Toll free: (800) 444-7234
Fax: (201) 529-5777
email: market@radusa.com

www.rad.com