



# Case Study

## Ethernet over SDH

Interoute, UK



## RAD'S Ethernet NTU's Provide Interoute with End-to-End Customer Visibility

### ETX E-NTU yields significant cost savings

Interoute owns and operates Europe's largest Next Generation network. Its 57,000 km of lit fiber optic connects 85 cities in 22 countries, and has the capacity to transport a petabit (a billion megabits per second) of traffic.

Interoute's customers are a "Who's who" of some of the world's most impressive brands – BMW, Proctor and Gamble, the BBC, Hilton Hotels, Sony BMG, Warner, and Nintendo, to name just a few. And it also is the choice of its peers in the industry. Every European incumbent is a customer, as are major US carriers such as AT&T, Sprint and Level 3.

Interoute's next generation network is an example of how advanced infrastructure is fundamental to driving convergence in the market. With more than 12,000 customers, Interoute has to be able to rely upon the equipment at the heart of its network. Interoute provides customers with true world-class levels of end-to-end support, visibility of performance as well as future-proof products such as Interoute Media Services, Interoute One, which is Europe's most advanced Voice over IP telephony service, and Arena, which is the world's first commission free voice exchange.

Many overseas telecommunications operators do not have a Next Generation network (NGN), so, frequently, Ethernet services need to be delivered over SDH. Given that customers also require managed services with challenging end-to-end service level agreements (SLAs) even if the network spans several providers, Interoute looked for a solution that could meet this demand.

### Application

Ethernet over SDH

### Challenge

Deliver managed Ethernet services with challenging end-to-end SLAs over a network that spans several providers

### Solution

RAD's ETX-202 Ethernet Network Termination Unit monitors service end-to-end

### Benefits

- End-to-end visibility
- Performance statistics
- Media conversion
- Cost-effective

“The ETX gives Interoute the ability to monitor our service to our customers on an end-to-end basis.”

Gordon MacMillan, Director of IP, Hosting and Network Management Systems, Interoute



data communications

Facing this challenge was Gordon MacMillan, Director of IP, Hosting and Network Management Systems. "We offer a broad product set, from services as basic as providing dark fiber within our network to private line services over DWDM and SDH, Internet access, VPN services, Voice over IP telephony – a major expansion area – streaming media, and content hosting," he explained.

Interoute's Ethernet Flex and Ethernet Clear offer customers private connections between sites, and it is here where RAD's ETX-202 Ethernet network termination unit (E-NTU) plays a crucial part. Ethernet Flex is aimed at customers who need flexible bandwidth and architectural options, while Ethernet Clear provides the benefits of an SDH/wavelength-based service at fixed capacity levels. The versatility of the ETX-202 allows it to function as a demarc device for both SDH and native Ethernet networks.

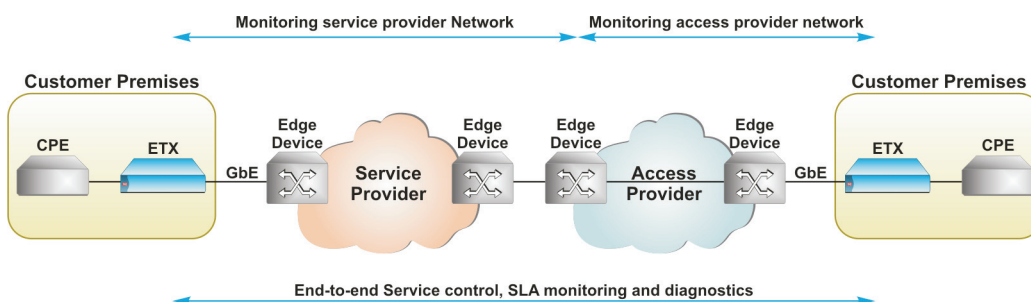
"The ETX gives Interoute the ability to monitor our service to our customers on an end-to-end basis – even over a third party tail – and this enables our network management to have a greater reach, well beyond our normal point of presence," MacMillan said. "The customer wants end-to-end visibility and the ETX-202 not only does this, but also gives us performance statistics, such as end-to-end round trip delay, to allow us to show customers not just whether their equipment is working, but how well it is working."

RAD's solution also comes at a price that is highly attractive to Interoute, being much more cost efficient than competing solutions.

"The ETX is, without doubt, a cost-effective solution for providing us with three things: end-to-end visibility, performance statistics and media conversion," MacMillan commented. "The latter gives customers the ability to connect using standard interfaces – put simply, to plug in a device and know that it works, eliminating the need to deploy special media converters. RAD's ETX is the only cost-effective solution we found for providing Interoute with these three critical advantages."

The performance statistics capability also gives Interoute an edge in its own customer service levels because the data is made available to them via a customer web portal, which they can access 24 hours a day to monitor their own levels of service.

In addition to the ETX, Interoute is also using RAD's RIC family of network termination units (NTUs) to deploy Ethernet private wire services across leased lines – enabling Interoute to provide service over a third party E1 circuit and multiple E1s or other SDH-based tail circuits.



“The ETX is, without doubt, a cost-effective solution for providing us with three things: end-to-end visibility, performance statistics and media conversion.”

Gordon MacMillan, Director of IP, Hosting and Network Management Systems, Interoute

**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](http://www.rad.com)



data communications