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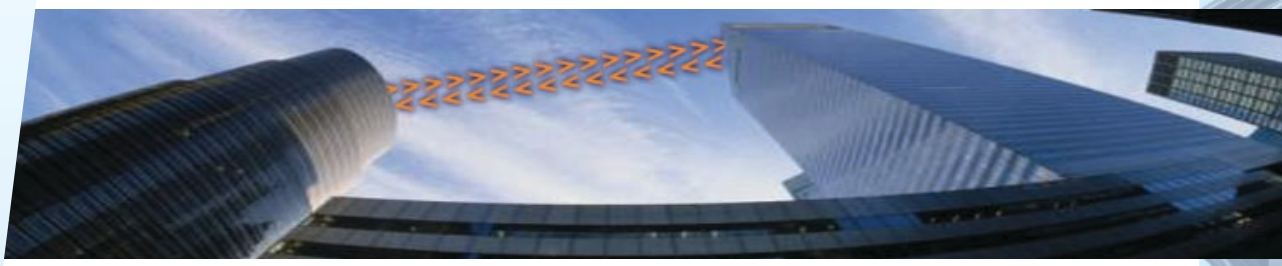
Case Study

Manchester Metronet



UK-Based Network Operator Manchester Metronet Accelerates Rollout of Public Safety CCTV Applications Using BridgeWave's High-Capacity Gigabit Wireless Links

Manchester Metronet is a broadband wireless network service provider that delivers industry-standard IP connectivity to enterprise and public sector customers in the city of Manchester, England. In 2003, Manchester Metronet acquired the local assets of Atlantic Telecom, which had spent in excess of $15 million on fiber-optic infrastructure. The network operator subsequently redesigned and added state-of-the-art equipment and facilities in a ring topology demarcated by the M60 roadway that encircles the city.

Manchester Metronet also has extended the reach of its metropolitan area network (MAN) by installing wireless radios on top of some of the highest buildings in the M60 region. These points of presence (PoPs), which are connected to the fiber-optic ring for full redundancy, expand network accessibility to 95 percent of the greater Manchester area, which measures approximately 360 square miles.

"As a trusted, responsive partner, BridgeWave plays a pivotal role in helping Manchester Metronet replicate a fiber infrastructure with best-in-class gigabit wireless technology. In doing so, we'll be able to move into other cities quickly and deploy the most powerful urban broadband wireless networks that meet all the requirements for current and evolving business and municipal communications."

Elliott Mueller
Chief Executive Officer
Manchester Metronet

According to Elliott Mueller, chief executive officer for Manchester Metronet, the company's high-speed wireless Internet services undercut the traditional offerings of legacy service providers, such as BT, by as much as 80 percent.

"We offer an independent, highly affordable alternative to SDSL and wire-based leased line services that deliver superior value without compromising quality of service," he says.

In addition to high-speed wireless Internet access, Manchester Metronet supports a host of compelling applications, including inter-office connectivity for converged IP voice, data and streaming video; business broadband backup circuits and disaster recovery; as well as real-time Closed Circuit TV (CCTV) surveillance.

THE CHALLENGE

For the Manchester City Council and the Greater Manchester Police, CCTV monitoring is a crucial element in a far-reaching security strategy. Initially, however, their connectivity options were limited to expensive fiber-optic connections with five-year leases, which meant cameras had to be fixed in one place. The expensive, long-term leases made "live" monitoring cost prohibitive while off-line CCTV camera recordings also proved impractical, requiring frequent trips to the site to download images.

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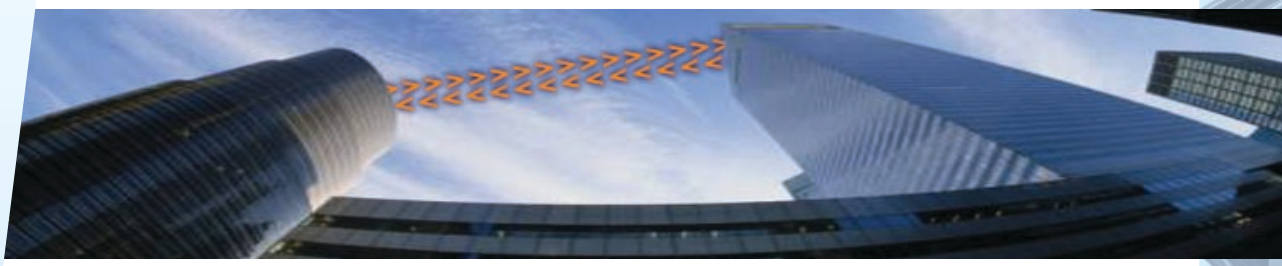

In 2005, Manchester Metronet rolled out a series of 5.8 GHz point-to-point radios throughout its network to connect the city council's CCTV cameras wirelessly. The radios were mounted alongside the cameras on utility poles and lampposts throughout the city. Data then was backhauled to the fiber-optic backbone for transporting real-time video to the council's control center.

As more cameras were added to the network, the council began experiencing network congestion at one of its main control centers.

"We'd been supporting about 20 cameras over a 100Mbps wireless backhaul link, when it became oversaturated with video traffic," Mueller recalls. "It was time to step up to Gigabit bandwidth, which would give us ample capacity to scale the network to support hundreds of cameras."

At the time, the council still favored a fiber-optic link but upon learning that fiber wasn't readily available, Manchester Metronet started a review of gigabit wireless options as a high-speed link to the fiber ring.

THE SOLUTION

Manchester Metronet evaluated different gigabit wireless products before determining that BridgeWave's GigE wireless links delivered superior performance and reliability. In January 2007, Manchester Metronet implemented its first BridgeWave GE80 radio, which operates in the 80 GHz frequency spectrum. The gigabit wireless link was installed on the rooftop of a city building, which was connected to the fiber ring and had line-of-sight to the council's control center located less than two miles away.

The gigabit product provided sufficient bandwidth to meet the council's immediate requirements while also offering the capacity to support more than 200 CCTV cameras on the same link. Furthermore, BridgeWave's ultra-low latency backhaul technology facilitated real-time pan, tilt and zoom of remote cameras without any time delays or reduction in image quality.

"BridgeWave's GigE technology immediately reinforced the power of our urban broadband wireless network, giving the Manchester City Council a solution that would enable a rapid expansion in CCTV camera deployments."

As a result, Manchester Metronet soon found other opportunities to deploy BridgeWave's high-capacity wireless links for the Manchester City Council as well as the Greater Manchester Police. The network operator has installed a second GE80 link along with four BridgeWave gigabit-upgradeable, FE80XU, 100 Mbps wireless bridges to support a range of applications, including high-speed data, bandwidth-intensive applications and remote CCTV monitoring.

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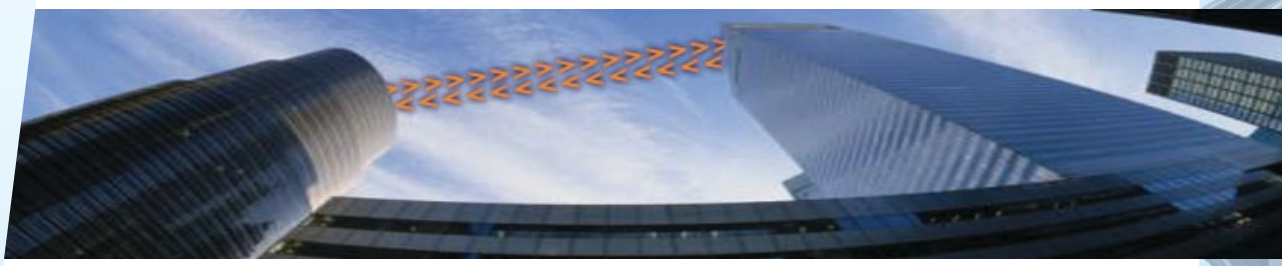

THE BENEFITS

"BridgeWave's gigabit links provide maximum bandwidth in high-volume areas while the gigabit-upgradeable products provide a 'future proof' backhaul technology that will scale easily to gigabit speeds as our network traffic grows," says Mueller.

Also, the compact, portable radios make it easy to install links with cameras or relocate them to meet evolving or temporary monitoring demands. Instead of dealing with a fiber-optic link that requires a long-term contractual commitment, Manchester Metronet can re-deploy the wireless link to another point-of-presence easily and cost-effectively.

"By leveraging BridgeWave's high-capacity backhaul technology, Manchester's city council and police department now have the flexibility to place cameras and radios wherever they need them to enhance their apprehension and crime-prevention efforts," adds Mueller. "We can get a new location up and running in less than five days. This is a huge improvement over fiber, which can take months to deploy and in one case still isn't available a year later."

The cost savings and time-to-market advantages of BridgeWave's high-capacity wireless backhaul technology have helped Manchester Metronet expand rapidly into the Liverpool market.

"Gigabit wireless offers a 50-percent or more cost savings over building out a network with a fiber-optic infrastructure," explains Mueller. "We can deploy BridgeWave's gigabit wireless technology in a fraction of the time and expense it would take to deploy a traditional fiber optic network."

Manchester Metronet already is preparing to support new CCTV remote monitoring projects in Liverpool, while also working with private corporations to accommodate high-speed data access, IPTV and VoIP applications.

The Liverpool network will include a combination of 5.8 GHz radios at customers' sites with BridgeWave gigabit products providing backhaul capacity. Ultimately, the network operator expects to serve 20 to 30 customers from each point of presence along the wireless network ring.

"BridgeWave's gigabit wireless technology gives us a distinct competitive edge over legacy service providers, with offerings priced up to 40 percent below the incumbent's fees for similar services," says Mueller.

Superior flexibility is another plus, including the ability to let customers take links to new locations when they move and then simply connect to a different point of presence on the network.

Manchester Metronet projects a six-month ROI on its existing BridgeWave radios and expects to add more gigabit links to the Manchester network to keep pace with rapid growth as well as support market momentum in Liverpool.

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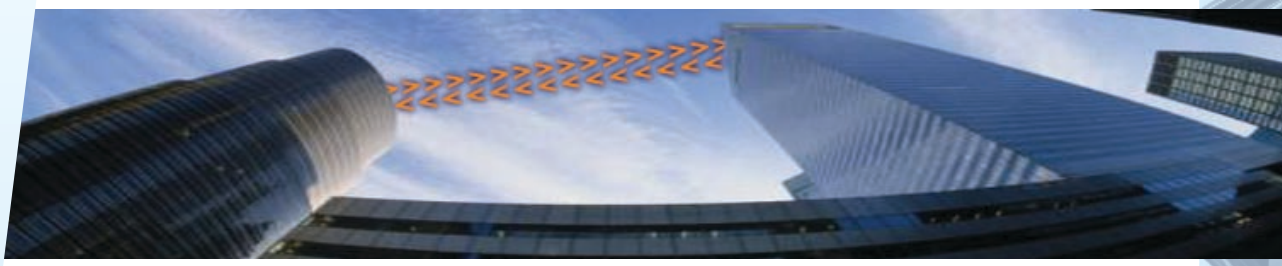

"As a trusted, responsive partner, BridgeWave plays a pivotal role in helping Manchester Metronet replicate a fiber infrastructure with best-in-class gigabit wireless technology," concludes Mueller. "In doing so, we'll move into other cities quickly and deploy the most powerful urban broadband wireless networks that meet all the requirements for current and evolving business and municipal communications."

CUSTOMER: Manchester Metronet, a network operator based in Manchester, UK
www.manchestermetronet.com

INDUSTRY: Telecommunications

CHALLENGES:

- Expanding CCTV monitoring application had exceeded bandwidth capabilities of 100 Mbps backhaul capacity.
- Fiber remained unavailable or price prohibitive in areas.
- Expensive, long-term fiber leases made live CCTV remote monitoring cost prohibitive.

SOLUTION: Two BridgeWave GE80 and four FE80XU wireless links.

BENEFITS:

- None of the costs, hassles and lag time associated with fiber deployments.
- Scalable capacity to meet current and future networking requirements.
- The ability to move into new markets on a minimum investment.
- ROI in less than six months.

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