

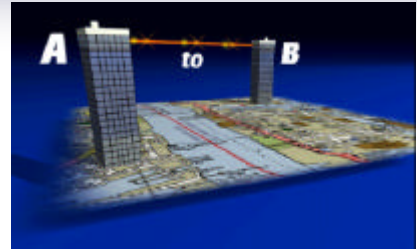
Cablefree Solutions Limited

Leaders in Free Space Optics

CableFree House, 1 St Clare Business Park,
Holly Road, Hampton Hill, Middlesex TW12 1PZ

Tel: +44 (020) 8941 7975 Fax: +44 (020) 8941 2410

Info@cablefreesolutions.com www.cablefreesolutions.com



Application Note No. 11

Cablefree connectivity in the Finance Sector

The Demand for Secure, Resilient connections

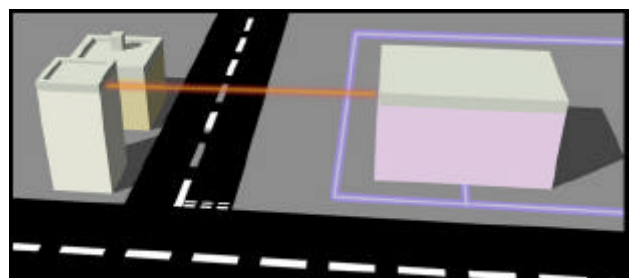
Inter-building connectivity is nowhere more critical than for companies operating in the Financial Industry. Downtime of networks even for minutes, let alone hours, may put at risk literally millions for city trading firms. Even in the personal finance sector, loss of connectivity to a call centre or on-line banking server will cause chaos, and lose customers in an increasingly competitive industry. And in today's climate of IT security scares, customers will want to know that their data is safe and secure.

Traditional solutions for inter-building connectivity between buildings in a campus-type or dense metropolitan environment are leased-line or wireless microwave links. Although offering excellent service, like any technology, these have weaknesses.

For leased-lines, inadvertent cable breakage caused by contractors is a prime example – and power or system failures in an operator's network will cause additional risk of downtime. Microwave links, by comparison, can suffer either with line-of-sight blockage, interference from other sources, and of course rain fade.

As with all Mission-Critical applications, these links therefore require backup. How do you backup a leased line? The obvious answer: with another, from a different operator. The hidden catch here is the ducts. In dense urban areas, with London, UK as a prime example, telecom operators are forced to share ducts in order to build out their networks. In certain areas, streets are even deemed 'full', where there are literally no spaces for new ducts and cables to be laid. So even by going to multiple providers for the leased line services, total outage can be caused by damage to the duct, severing all of the fragile copper and fibre cables. The typical time to repair – typically 8 hours.

The above scenario is not just hypothetical. In the US, figures for major urban areas indicated a serious fibre 'cut' (breakage) on average every 10 days. These are multi-core fibres carrying 24, 48 or more cores, each carrying traffic. And although the ring infrastructure around the city is resilient, the end-connections to the customer buildings are usually not.



The Solution

So what is the ideal way to backup leased lines? Simple – use a different technology, such as wireless. Use of a complementary technology ensures that even if all the ducts are severed, communication is not affected. With wireless, you own the infrastructure, so there is no worry of outages through other factors on an operator's network.

Unlike Microwave, **Cablefree's** optical technology offers significant advantages:

- No site or frequency licenses incurring cost and delays
- No risk of interference, signal reflections or airport radar systems
- No limitation on bandwidth – up to 1500Mbps with current technology
- No Rain-Fade. Proven reliability even in the worst rain storms
- Narrow beams make interception or tapping virtually impossible
- Quick to install – 1 day typically
- Plug straight into network switches – no routers or 'WAN bottleneck'
- On-site upgrades ensure 'future-proof' network provision
- Cost-effective solution

Major City Trading Firm, London, UK - 1998

Cablefree Solutions was approached to provide a backup communications link for a major finance house in the City of London.

The customer, located in two major high-rise buildings, already had two high-capacity leased fibre circuits in place to provide connectivity, with an ATM network running at 622Mbps. However, fears concerning cable breakage or other sources of outage caused them to look for further resilience – in this ultra-mission-critical environment, loss of connectivity would be totally unacceptable.

Cablefree was the ideal choice - a **Cablefree** system configured with 622Mbps ATM interfaces for communication at was installed spanning 350m of free space between the main two buildings. Roof-top installation at the lower end was simple, with the high end, 36 stories up, was positioned inside the building, transmitting through glass to avoid an otherwise impossible roof-top mounting.

Cablefree gave the client dependable backup of the existing communications infrastructure, at the fraction of the price of another leased circuit.

Systems & Interfaces:

Cablefree 622 for voice & data connectivity up to 622Mbps, range up to 2km

Cablefree Access for network connectivity up to 155Mbps, range up to 4km

Cablefree Gigabit for Gigabit Ethernet and Fibre Channel up to 1000m

E1/G703 2.048Mbps • E2 8.448Mbps • E3 34.368Mbps • STM-1 & STM-4 •
Ethernet 10, 100 & 1000Mbps • ATM-155 & 622Mbps • Token Ring • FDDI •
Fibre Channel • Broadcast Video and CCTV •
Multiplexed 10+2, 100+2 & custom solutions available

For more information, please contact CableFree:

CableFree House, 1 St Clare Business Park,
Holly Road, Hampton Hill, Middlesex TW12 1PZ
Tel: +44 (020) 8941 7975 Fax: +44 (020) 8941 2410
Info@cablefreesolutions.com www.cablefreesolutions.com