

## FSO in Enterprise Networks

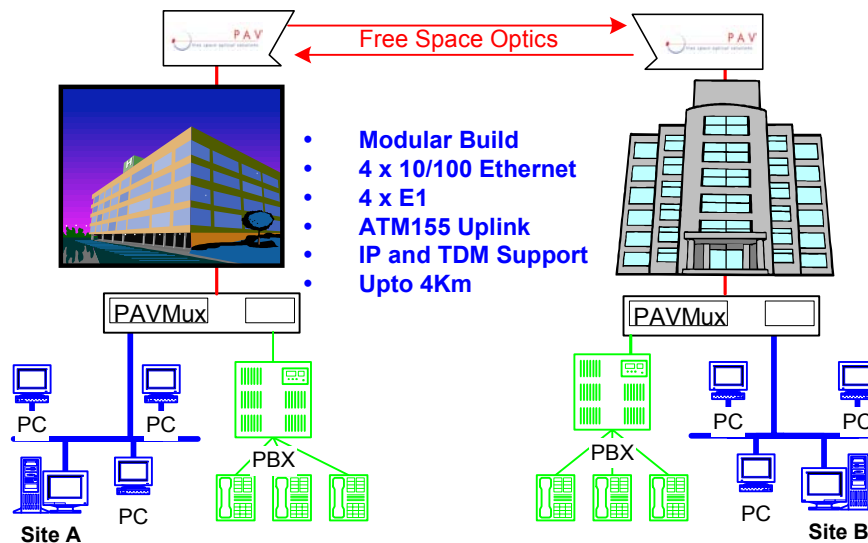
The quest to deliver bandwidth in Enterprise network solutions has never been so great, as businesses demand fully integrated communication solutions connecting sites to support Data Voice and Video applications. The quantity of IP based data traffic transmitted across corporate data networks is continuing to increase exponentially. Increased use of the Internet, email, access to core company data and Voice and Video over IP are typical applications all driving businesses to provide bandwidth to users. Developments in the security industry also include CCTV systems that utilize IP as the communications protocol allowing integration into the corporate information network. All of these drivers have created huge demand for high bandwidth communication links to act as main bearer circuits, redundant paths or for access to disaster recovery sites.

## PAV – FSO Applications

Every enterprise aspires to understand its customers at PAV, we aspire to more. We give our customers the communication networks, connectivity and services they need to transform their businesses. With the most comprehensive FSO product range available, Enterprise FSO solutions are available for many interface types over a wide range of bandwidths including 10/100 Ethernet, Gigabit Ethernet, ATM155, ATM622, E1 and n x E1. Data, voice and video can be fully integrated over a single link offering broadband solutions at true wireline speeds. PAV have the complete product suite to meet the ever-increasing demands of the Enterprise.

Traditionally FSO has been deployed in point to point solutions, however, more and more organisations are taking advantage of the flexibility and reliability of the technology to create more complex network architectures. Through the creation of an resilient FSO ring servicing star topology access networks then high bandwidth solutions can be delivered through to remote users easily and quickly.

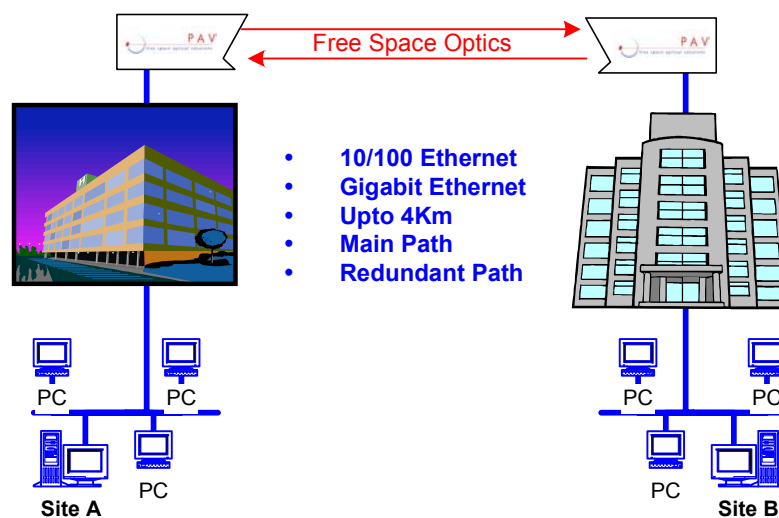
## Integrated Voice, Data and Video



The challenge of providing a truly integrated communications network is a goal that many businesses are striving to achieve. With PAV technology then providing 4 x 100Mbps and

4 x E1 circuits across a single link is a typical example of an achievable solution today. With Voice over IP now proving to be a strategic way forward for many companies the demands for bandwidth on Corporate networks grows. The economic pressures to centralise voice and data resources whilst continuing to deliver all the features and benefits to remote users provide an ideal application of PAV's FSO product suite.

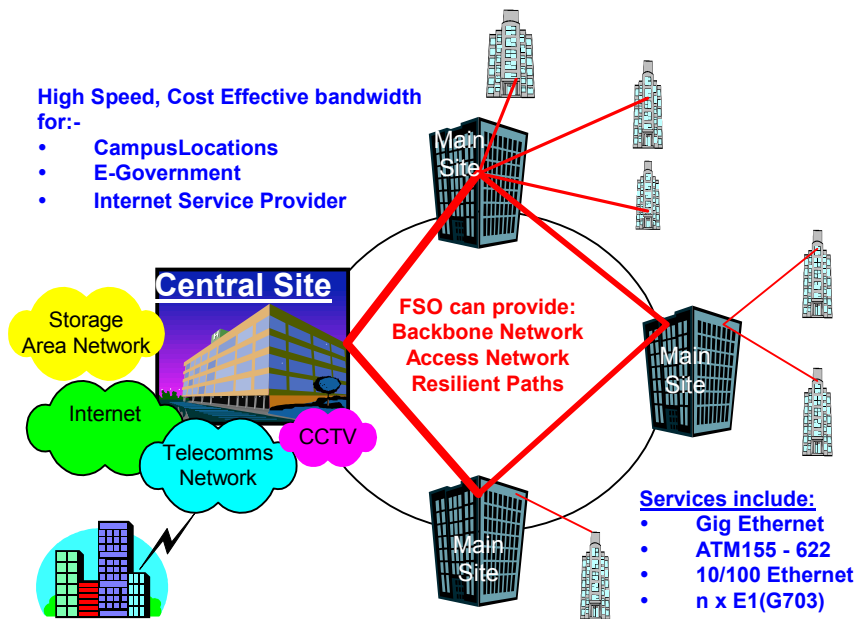
## LAN to LAN Communication



Full duplex connectivity and wireline speeds are achieved providing the infrastructure for LAN to LAN connectivity. With speeds of up to Gigabit Ethernet then businesses are able to provide access to bandwidth hungry applications from remote sites at the same time as retaining the security and integrity of the data inherent within the Corporate LAN. Through the utilisation of lasers as a transmission medium then the security issues and network breaches facing unlicensed radio and microwave are overcome using PAV's FSO technology.

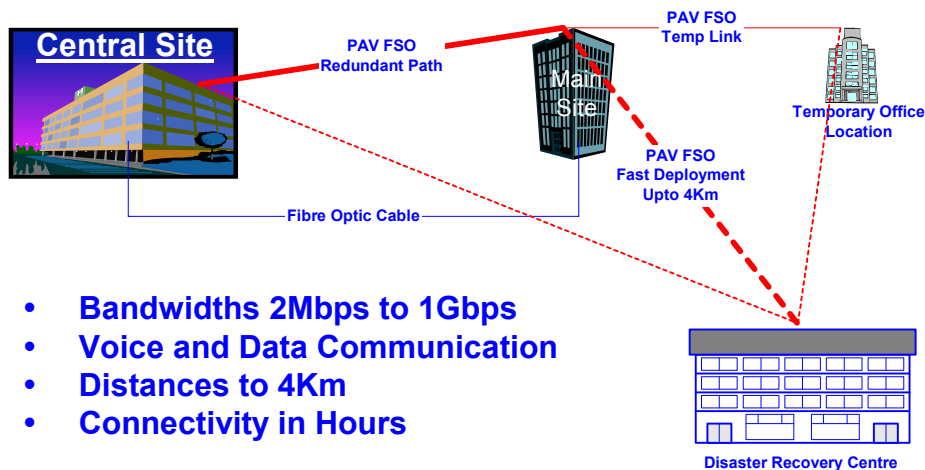
Typically many of these bandwidth requirements are for circuits that can operate across relatively short distances. Typical environments include office-to-office connections in the urban environment, campus locations and factory locations where a line of site is usually achievable. Traditional connectivity solutions have included expensive leased circuits from the Telco operators, installation of time consuming and costly fixed cabling or wireless solutions such as licensed microwave or IEEE 802.11b radio which are now suffering from spectrum availability and security issues. Within the wireless arena, Free Space Optics (FSO) has emerged as an ideal technology to provide cost effective, license free, high bandwidth solutions to the bandwidth bottleneck encountered in the enterprise market place.

## Broadband Infrastructure



In many campus organizations then the ability to link remote sites to the central site for access to the corporate resources means FSO can deliver broadband access at realistic and accessible speeds. Whether as a redundant path in supporting the current infrastructure or as the main bearer then FSO is a technology to deliver true broadband access. With an impressive client base in the government and public sector then PAV is providing many organisations with the E- Government infrastructure to deliver applications to end users.

## Disaster Recovery and Temporary Deployment



Business Continuity is a key and now standard element of all companies IT strategies. The ability to quickly and easily recover from all types of disaster is key to the short term and long term survival of the business. With comprehensive studies demonstrating that seamless and speedy recovery to any disruption in service is the number one factor in surviving a disaster then FSO technology is ideally suited in providing businesses with an instant infrastructure. Licence free and with simple installation procedures PAV's FSO products allow

businesses to have connectivity restored in hours. The robustness and reliability of the PAV technology often mean that businesses that have installed FSO as a temporary link, retain the FSO as a back up or redundant link. In an ever-changing world the capability of companies to quickly recover from any type of disaster will ensure the survival of the fittest.

## PAV

With offices around the world, including the United Kingdom, UAE, Africa, Asia, and India, PAV are now poised as a major global provider of FSO technology solutions.

PAV are continuing a tradition of FSO innovation dating back to the origins of the technology within military and defence applications. Using our unrivalled experience and expertise, we have developed PAV's products, ensuring recent advances in FSO and laser technology are incorporated into the products world-class design.

PAV technology offers the most comprehensive set of FSO solutions available, providing: -

- **Lower Start-up Costs**
- **Speed and ease of deployment**
- **Highly modular and scalable architecture**
- **High quality and reliable services**
- **Highly cost-efficient and economic**
- **Expandable transmission capacity**

With PAV's complete product suite, Enterprise customers can rapidly satisfy their users demand for the bandwidth required to provide a fully integrated communications network.

The emergence of Free Space Optics (FSO), coupled with lower equipment costs, has positioned FSO as a technology of choice for many businesses. FSO solutions are more cost effective to deploy and maintain than wireline solutions with their high cable-laying costs and the possibility of cable damage..

PAV with FSO technology have been supplying high bandwidth/short distance solutions within the Enterprise market to large corporations, SME business, governments, education and industry for over fourteen years.;

Boeing.  
Total Elf Fina  
Motorola.  
Fox Broadcasting.  
Bahrain Government  
Kuwait Airways.  
Aga Khan University & Hospital.  
Chevron Texaco.  
Renault

French Telecom  
Nortel Networks  
Nuclear Electric .  
Saudi National Guard  
King AbdulAziz Airport.  
Dubai Municipality  
Toyota.  
Emirates Airlines  
Oracle

are just examples of major businesses deploying FSO today. With over 6,000 systems installed world wide PAV are helping businesses lead the revolutionary change in communications. We come to the playing field equipped with experience, expertise and proven technology. We prides ourselves on a proven record of innovation and technological breakthroughs maintaining PAV's FSO technology at the forefront of the FSO industry.