

Loughborough University chooses infra-red

Skynet Ethernet System chosen

With budgets getting tighter and the impact of technology in education rising, it is becoming increasingly difficult for schools and colleges to manage their budgets while giving students access to all the latest technology. The Internet is now a vital part of education and giving students access to the web is an ongoing battle. Chris Emerson, Director of 'last mile' networking experts PAV Data Systems, explains how infra red is the solution to the problem for Loughborough College.

The Internet is an extremely powerful teaching tool and it is vital that every student has access to a computer. In most cases there isn't the budget available to supply every student with their own computer, so schools and colleges have to use alternative methods as well as rely on government and private initiatives. These range from combining the resources of several institutions in the area to fundraising in the local community.

Loughborough College in Leicestershire planned to use their Cyber Café, in the town centre, as an extra computer centre to provide more Internet courses in the town. This would provide the students with extra facilities and also a link to the college's Superjanet network (Joint Academic Net) with free email accounts and Internet access. The original leased line from the Cyber Café to the College, hired from BT, was proving too slow to run the courses so an alternative was needed. The problem was how to connect these two disparate networks with high-speed access at a reasonable price?

One alternative is fibre optic cable. This tends to multiply the strengths and weaknesses of leased lines, being restricted to whether the cable is already laid or not. Moreover, fibre optic lines, at the moment at least, are expensive to install and tend to be deployed in the backbone network rather than as a 'last mile' network link making it a rather limited option.

Microwave is a proven technology with a long track record of successful implementations for the transmission of telephone, fax, video and data. However, this technology gets expensive when used over short distances, 2Km and below and is also restricted by licensing laws making installation an extremely slow process.

PAV Data Systems was able to provide the link between the cyber café and college, without having to resort to any of the above. PAV installed an infrared broadband link using a simple line-of-sight optical wireless system. The link allows a 10 Mb/s Ethernet solution providing enough bandwidth for all the computers in the café to run at their optimum speed. There are no licenses that need to be granted so the installation can take place within a day and once it is installed there are no other fees to be paid. In fact at Loughborough College the system will pay for itself within 2 years and also provides a better, faster service than the old system.



PAV Skynet 10Mbps

Once installed correctly, the system delivers 99.99% reliability - performance statistics that are the equal of leased line or microwave technology. The students now have access to the Internet and email accounts in several places across the campus and town.

The connection is so successful that Loughborough College is planning to install a second system and more are planned for the future. The college is building a new hall of residence, to cope with the expanding population of students. The same problem of Internet connection occurs with the new building, so the infrared solution was the obvious one. Another 10 Mb/s Ethernet system will be installed creating an additional connection to the main college network.

Infra red technology is often overlooked but Loughborough College proves it is an extremely viable option that allows the quick installation of a broadband link with high capacity in an area where its competitors fall short. Loughborough College has now got a system installed that allows its students extra access to a vital teaching aid that is inexpensive, simple to install and reliable.

PAV has installed many such high-speed links for schools, colleges and universities in the UK and overseas. These are often used to link Local Area Networks (LAN's) between buildings at speeds of up to 155 Mb/s and over distances of up to 2Km.