

## **The drivers behind Ethernet adoption**

**By Mark Bennett**

Since Ethernet products were first introduced in 1981, following the invention of the standard in 1973 it has established itself as the primary connection to the LAN, MAN and the Internet for most businesses and its longevity is rare in the technology space. The secret to its success has been its simplicity and flexibility along with attractive pricing and high performance. Its ease of use and appeal is even greater now that Ethernet is ubiquitous.

Ethernet has moved beyond the LAN and MAN to bring high quality, high capacity and low cost bandwidth to long haul services. This is enabling the delivery of new services and helping companies achieve new business efficiencies. The demand for Ethernet is growing fast and the drivers for this are telling.

Organisations are looking to Ethernet to meet growing bandwidth requirements from a direct market that includes a wide range of organisations, from utilities to finance, public sector to small and medium sized businesses (SMBs). A key market is DIY enterprises; organisations that have IT managers, but want to retain management of their IP networks typically in utilities, finance and media sectors. The public sector also fits in the DIY mould, and there are high levels of demand from local and central government, as well as education. But it is not just these areas that can benefit from Ethernet solutions; the indirect market of mobile, national and international carriers, and IT services, is also growing fast.

Ethernet, easy to deploy and attractively priced, is ideal to meet new business-critical requirements. Large organisations are using this technology for fast, cost effective links and inter-site connectivity, enabling voice and data convergence and handling increasing levels of Internet traffic. In addition, it caters for increased bandwidth needed for the growing content rich, and centralised, e-business applications and services.

Although Ethernet has typically been associated with larger enterprises, demand from SMBs is also growing. This sector is looking for increased bandwidth for the deployment next-generation services and finds Ethernet appealing because of its simplicity and familiarity from its use in the LAN. Ethernet is enabling SMBs to roll out the advanced applications that help them compete with bigger players; VoIP, distributed WANs and IP-based video conferencing. In addition, they are turning to Ethernet for security and quality of service guaranteed on a private network - not currently available on DSL services

The indirect market, consisting of service providers investing in Ethernet to deliver advanced services to customers or to extend their networks, is also growing quickly. International and national carriers, mobile operators and business ISPs and IT services companies are all using

Ethernet to enhance the services they deliver, both for high speed Internet access and to provide hosting and connectivity.

For mobile operators, Ethernet can be a solution to reduce operating costs within the access network and provide the higher levels of bandwidth required as Mobile Data penetration increases. The technology is increasingly being used to support new, revenue-generating services for mobile operators such as mobile Internet and TV, without allowing backhaul costs to spiral, maintaining mobile operators' profitability.

While Ethernet is attractive on for different businesses, it is also a prevalent technology in the carrier sector; national operators (alt nets) are experiencing increased bandwidth demands from their customers and are looking to deliver innovative new services. In the UK, the use of Ethernet backhaul from altnets is a popular option to reduce costs, especially where this is more cost effective than relying on BT Ethernet products to extend network coverage.

Ethernet is helping to drive the business case for centralising IT assets by offering more bandwidth at a lower price per megabit than the technologies traditionally deployed. Ethernet hub and spoke as well as point to point connectivity services, together with MPLC IPVPNs are ideal for connecting remote sites to central locations with Gigabit Ethernet. Additionally, the costs saved can be diverted into other applications that fit with Ethernet, enabling companies to layer multiple services and applications onto the same network.

Ethernet continues to evolve; the drivers for Ethernet are powerful and fuel growing levels of demand for this technology. It is a buoyant market where high quality, innovative services are enabling a wide array of new communications technologies. Ethernet continues to evolve as it gains an increasingly central role in the networks that enable new ways of working for a wide range of organisations.