

Can 4G challenge FTTH as a business alternative?

The gloves are off in the battle for network supremacy, as *Sooraj Shah* discovers

In the last few months there have been increased efforts in the UK to speed up the rollouts of 4G LTE technology and fibre-to-the-home (FTTH) broadband.

Mobile operator Everything Everywhere has long campaigned for the rollout of 4G as it says the technology is essential for UK competitiveness, while the not-for-profit organisation, the **FTTH Council** Europe, has vowed to speed up deployment of all fibre access networks.

But at present, the UK's high-speed credentials remain in dispute. Everything Everywhere's rivals – including Vodafone and O2, who in June announced the merger of their network infrastructures – have backed the need for 4G technology, but are against Everything Everywhere being allowed to roll it out first.

In terms of FTTH, meanwhile, BT has suggested that the slower fibre-to-the-cabinet (FTTC) approach, which relies on existing connections from the cabinet to the premises, is good enough for most of its customers.

That said, BT is launching its fibre-on-demand product, which upgrades FTTC connections to FTTH, in the spring of 2013, and Everything Everywhere is hoping to press ahead with its 4G launch before the end of this year.

Best of both worlds

Of course, in many cases businesses will use both mobile and fixed-line connections, but which technology offers the greatest advantage to business users – and to their customers?

In Everything Everywhere's most recent survey, it found that 86 per cent of business leaders believed that access to a 4G network would increase productivity.

Rupert Wood, lead analyst from market intelligence firm Analysys Mason, believes that 4G could rival FTTH in specific sectors.

"There's a significant threat to fixed broadband services in the broader sense from mobile wireless – that does not mean that LTE technology will be a direct competitor to next-generation fixed access," he said. "However, there is a significant and real threat of [broadband] operators losing fixed broadband business, especially from those that do not value high-speed as they could trade 'down' to mobile."

Wood said the problem with LTE networks is their ability to handle large amounts of data. However, he suggested



FTTH: could find itself under threat from 4G that the majority of businesses do not value high speed or the ability to handle copious amounts of data.

"Businesses consume far less on the whole than residential premises," he said. "Businesses require different things, but they don't require very high downstream bandwidths."

The **FTTH Council**'s president Karin Ahl disagrees with Wood and suggested that FTTH is the only technology that can provide the upload speeds necessary for services such as videoconferencing and educational visual desktop infrastructure, along with the cloud applications used in work environments.

"For example, in e-health, if an application is linking hospitals, they cannot afford for it to have a fault in the system, because if the system or image quality drops it may have an impact on a patient's health," she said.

Fujitsu's business consultant Bill McKenzie added that businesses could benefit from the introduction of FTTH to the UK, both in terms of its speed and cost.

"If a large retailer has many point of sale (POS) terminals, it could take weeks of guidance for the business to increment bandwidth into a store or into a distribution drive," he said. "There is a physical change that has to happen and there is a cost associated with that change. If the retailer had fibre it would only be a matter of changing the configuration around the application development, and the cost difference between the two is significant."

McKenzie cited the banking industry as another sector that could benefit from fibre because "latency and speed of transaction is everything".

He said that 4G should not be seen

as challenging FTTH. "I see them complementing one another," he said. "The advent of LTE will bring different conventions to what people can do with wireless. There will be grey areas, where there are small communities that take a different view on what they need."

A few years off

However, BT's managing director for next-generation access Mike Galvin thinks that 4G will not be an option until 2015-16, and that, when it is introduced, it will not be an option for businesses.

"If you look at the experiences of other countries, 4G is typically outperformed by fixed fibre by a factor of about 10 to one," he said. "4G can reach very high speeds when the user is close to the transmitter or if there is only one user using the transmitter connection, so it is similar to Wi-Fi in that respect."

"The download stream for 4G would be about 7-10Mbit/s as it's still a new technology that is growing, whereas with fibre services it is about 80Mbit/s. Most people would regard fibre solutions as more reliable and cost effective."

Galvin said that in other countries 4G is priced per Mbit/s, and so on that basis fibre would be cheaper and 4G users would be paying a high premium for mobility.

A spokesperson for Everything Everywhere told *Computing* that 4G has the potential to connect people and businesses in rural areas where traditional fixed-line broadband often cannot be placed.

Wood believes that a delayed rollout of FTTH will hand an advantage to 4G's proponents and allow mobile operators to poach potential FTTH customers.

"It's possible to roll out fast mobile networks much faster than it is to roll out FTTH networks," he said. "The danger with the FTTH rollout is that you get a small number of people getting FTTH and a larger number of people getting nothing better than ADSL, and those end users will be increasingly tempted to shift over to mobile. Fixed operators will then lose part of their customer base."

