

Broadband for all homes by 2012

What does this mean for Wireless?

Last week the government announced that every home in the UK is to have broadband Internet access by 2012. Lord Carter's Digital Britain report proposed to scrap BT's obligation to ensure every home has access to a telephone line and replace it with a requirement to provide broadband.

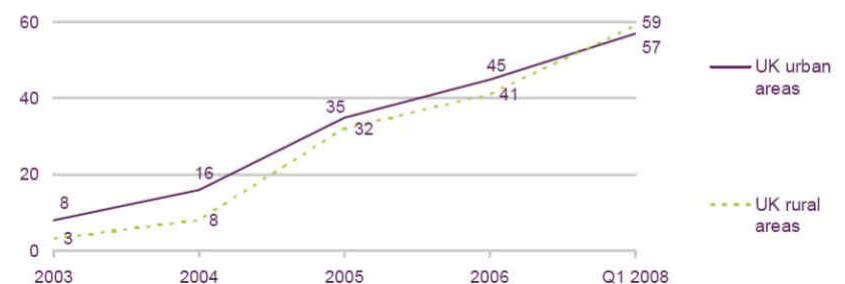
Today in the UK nearly sixty percent of adults have broadband, see chart below, however there are thousands of homes, mostly in rural areas that cannot get affordable broadband connections. This is largely due to their locations being too far away from the exchange, or the telephone line infrastructure being of insufficient quality. According to the EU, four percent of homes in rural areas of the UK are not within reach of broadband access, areas often referred to as 'not spots'.

Under the plans set out by Lord Carter, all Britons would be guaranteed a connection speed of up to 2Mbps. With many sub-urban homes and businesses on the edge of ADSL service currently, this presents a huge availability shortfall today in-order to achieve this target.

Nations and Regions CMR 2008
UK summary

Broadband take-up trend

% of adults that have broadband at home



Technologies Available

Many technologies are currently being considered, including Fibre To The Home (FTTH) where Fibre Optic cable is installed from the telephone exchange directly to the Home, allowing connection capabilities of 100Mbps to be possible. However with the costs and environmental disruption associated with laying new fibre, this technology is unlikely to be adopted in the sub-urban or rural areas, where the broadband connection problems already exist and where the business case to deploy fibre is even less attractive than in the urban areas.

Wireless is seen therefore to play a part in the next generation of broadband delivery, according to Lord Carter himself, these services would be "delivered by a mixture of fixed and mobile, wired and wireless means".

Wimax Technology



Wimax technology has been billed to provide a solution for wide area broadband, often portrayed as a long range WiFi system, the technology utilises the latest wireless technologies to deliver about 10Mbps of data, to locations several miles away, using low cost receivers. Certainly the major backers of this technology like Intel, portray the vision of a world with a Wimax chip in every laptop or handheld device, in the same way as WiFi has been adopted today.

However not everyone shares this view and the costs of rolling out new wireless infrastructures at a time when the 3G network hasn't yet paid for itself, is not a commercially attractive proposition for many. Mobile operators generally favour a technology known as LTE, which is much closer to the current 3G technology than Wimax and fits easier with their upgrade paths in the future.

Wimax solutions don't have to be country wide of course; specific towns or regions where connectivity is required can be deployed with Wimax micro base stations now commercially available for just a few thousand pounds, see picture opposite.

Indeed already today, there are numerous Wimax private and commercial networks rolling out in certain regions across the UK. These offer cost effective carrier grade connections as alternatives to SDSL type connections. However today there is limited spectrum available in the UK and the performance of these networks currently offer modest ranges, limited mobility and require in most cases, a line of sight connection.

New Frequency Bands

New frequency bands that offer good coverage and range, as well as mobility are being eagerly awaited in the UK. Suitable spectrum at 2 and 2.5GHz are set to be auctioned later this year by OFCOM. This process has been delayed somewhat with current legal challenges underway from T-Mobile and O2, however OFCOM is confident that the auction process will kick start once again in March 2009. Potential bidders of these bands capable of 4th Generation services, which may include Wimax, include Arqiva, BT, H3G, and T-Mobile.

Whatever the outcome of these auctions and whatever technology is adopted, Wimax or otherwise, it is likely that in today's competitive market, wireless will play a vital solution in striving to achieve the goal of Broadband for all homes by 2012.