

## A quick guide to mobile broadband

### What, why, who, how explained

by Rob Kerr published on 5 January 2009

#### What is it?

Mobile broadband is a generic term used to describe fast internet access for devices such as a laptop, whilst on the move or just away from a fixed location. All the major networks: Vodafone, Orange, T-Mobile, 3 and O2 offer this as a service and various contracts to suit all tastes, whilst also providing their own equipment at the same time.

The equipment is commonly described as a mobile broadband "dongle", which looks more or less like a USB flash drive to the untrained eye. These are for all intents and purposes a portable modem that works much the same way a mobile phone does in providing internet access. Only it's tailored to provide just data access, rather than voice services on a mobile device.

The speeds and familiar terms are the same as associated with a mobile for internet access, with the likes of GPRS, EDGE, 3G, HSDPA and HSUPA all used. You won't achieve download speeds along the lines of ADSL access at home, so it could be a bit misleading to call it "broadband" but it's the best there is around. The ceiling of which is more likely to be 3.6Mbps, coming up from the lowest on 32kbps on the very basic GSM.

#### What are the variations of the technology?

What network the dongle is on and what coverage the area has, all depends on what signal your device obtains. Think of a line drawn from the very basic GSM, to the highest of the high at HSDPA. All depending on your signal strength and closeness to those cell towers geared towards that better faster service, all depends on your download speeds.

On networks with today's coverage, GPRS, EDGE and 3G are all available to most in more places than not. These are fast enough for email



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sending/receiving and surfing the web but anything else such as downloading large files could take some time.

Not really falling under the "variations of technology" category, but are two other areas to be covered - contracts and also embedded mobile broadband functionality. Both of which are unrelated, but are worth noting.

Contracts vary from operator to operator, and all of them revolve around the amount of data being used over a month. This means the megabytes of data pulled down over the connection, over that very period of time. These can range from 500MB upwards to 10GB per month as an allowance, with Pay As You Go contracts also available.

The other is "embedded functionality", this is where laptops or similar devices already have mobile broadband built in and just require a SIM card and contract. The likes of Orange are giving away a free netbook with this technology onboard, as long as you sign up to a contract.

Why should I care?

Internet access for a mobile phone is limited to just that, a mobile phone. Having net access on the move, for your netbook, laptop or other portable devices just opens up the usability and usage of that product.

From business to just personal needs, having access to everything you can whilst at home or in the office is just as essential to most people these days as knowing the time of day.

The speeds that can be obtained won't be as good as Wi-Fi, but whilst out and about with a portable device without mobile broadband, you're confined to shared Wi-Fi where the laptop has to be physically located near a place serving Wi-Fi, or what's commonly known as a hotspot.

With a hotspot, you're never guaranteed a good

connection or fast speeds, whereas both of these are near enough guaranteed with mobile broadband.

What's a good example in practice?

As an example of the practicality and speeds you can obtain whilst using mobile broadband, it's best to think of what the service will be used for.

Over 3G, viewing a web page or a plain text email would take less than 2 seconds. On HSDPA, it's around 1 second as a comparison.

Downloading a 4MB music file for an example would take around 1 and a half minutes on 3G. Whilst taking just under 9 seconds on HSPDA.

Stepping this up to a higher file size, a 700MB BBC iPlayer TV episode would take 26minutes on HSDPA or over 4 hours on 3G.

With these examples you can see it's not really home broadband like speeds, but you understand the limits of the service now and can see how useful it is outside of the home and office.

Is there a competing technology that I should be aware of?

The only competition to mobile broadband is Wi-Fi access from hotspots. Already outlaid is the downside to this, with the upsides only being possible faster speeds.

As an example, that same music file could take around 4 seconds to download and that iPlayer episode just 13 minutes.

This all depends though on how fast the Wi-Fi speed offered up is and how close you are to the wireless router, along with how many people are sharing the service.

It's perhaps unfair to really call this a competing technology, as the costs are different in terms of what you can download in most cases, and it's a different service altogether.

What is in store for the future?

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On the horizon are one or two avenues of interest for the mobile broadband. The first being faster downloading speeds to match those of the home or office. The other being more devices, with laptops, netbooks or such like with mobile broadband embedded.

3 is on schedule with T-mobile to produce a faster HSDPA variant, seen in 14Mbps. They're hoping to jointly cover a fairly large area of the UK with possible connectivity by 2010.

Also being developed is 4G technology, with WiMAX being the next evolution of mobile broadband. No need to worry about this yet, as it's sometime away from being seen in common use.

This could offer speeds of 10Mbps to 70, depending how far you are away from the cell towers and signal strength. It's a step in the right direction and is much closer to home broadband speeds, and will eventually be the successor to what's around today.