



Super-fast Fibre Access

The future starts here

Information for Communications Providers



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Great news for you, even better news for your customers

Super-fast Fibre Access is going to provide a technology platform that will empower you to innovate and differentiate yourself in the marketplace. For example, you'll be able to sell bundled services, including telephony, TV and the internet, along with a growing range of hosted applications.

For your customers, Super-fast Fibre Access is going to deliver download speeds of up to 100Mb and upload speeds of up to 10Mb. But it isn't just about speed. It's also about:

- Everyone in the house or office doing their thing online – all at the same time!
- Saving money on software and more money on upgrades, by renting the latest versions of software online instead
- Saving money on equipment. Computer processing and data storage will become online activities, negating the need for expensive, hi-spec kit.

What's coming down the track?

Super-fast Fibre Access has been designed to be an attractive proposition for the widest possible customer base. It's being delivered in two ways, over a:

- Part fibre, part copper infrastructure (Fibre to the Cabinet) capable of delivering download speeds of up to 40Mb and upload speeds of up to 10Mb
- Pure fibre infrastructure (Fibre to the Premises) capable of delivering download speeds of up to 100Mb and upload speeds of up to 10Mb.

What is Fibre to the Cabinet and how does it work?

We're overlaying a huge swathe of our copper network with fibre – the section that runs from local exchanges to Openreach street cabinets.

The network that delivers today's broadband over an all-copper infrastructure is powered by electronics at the exchange. The further from the exchange, the slower the broadband speed.

That's because of the nature of copper. It was designed to carry the human voice – not big chunks of data.

Fibre, on the other hand, is a quite different animal. A fibre pair is capable of carrying a great deal more information than a copper pair, and doing so in a far shorter space of time.

Even though the final link with Fibre to the Cabinet is still copper (ie from the street cabinet to your customers' premises), the distance is comparatively short; typically no more than two or three hundred metres, and often much less.

And the electronics at the exchange are being replaced with miniaturised cards located within our street cabinets. Putting it another way, we're moving the exchange much closer to your customers' doorsteps!



What is Fibre to the Premises and how does it work?

Unpowered optical splitters enable a single fibre pair to serve up to 32 homes and businesses. Buried underground fairly close to the premises being served, optical splitters are equivalent to Openreach street cabinets. We call them T-nodes.

While there's still an element of dedicated fibre with Fibre to the Premises (ie from the splitter to the premises being served), the fibre connection back to the electronic card at the exchange is effectively shared.

This enables us to substantially reduce deployment costs compared to having individual fibres running all the way back from customer premises to exchanges; meaning that we will be able to price this access competitively, as will you.

From the communications perspective, fibre means that you don't get the distance-related degradation of service associated with copper. Fibre splitters can be buried up to 20km from the exchange. There are no active components, either. So, in the normal course of events, nothing should go wrong.

What will your customers be able to do and achieve?

Super-fast Fibre Access is about everything that everyone will need and want to do online in the future. In fact, it is the future...

Families

One person could be watching an HD movie or HD TV programme, while another is engrossed in a sporting event, again in HD, and yet another is watching live streaming video without irritating pauses.

Householders can look forward to the prospect of being able to download individual music tracks in two seconds, entire albums in 30 seconds, HD TV programmes in five minutes and feature length HD movies in less than 10 minutes!

Similarly, uploading will be many times faster than with today's broadband. The same individuals will be able to post videos to social networking sites in an instant, immerse themselves in the reality of HD videoconferencing with friends and family and enjoy interactive HD gaming to the full.

People who run businesses from home

If small business owners want to grow and prosper in the months and years ahead, they will need to be ultra-competitive and look and act as professionally as their larger rivals.

Collaborative working with clients in the form of online file sharing and realistic HD videoconferencing will be important mainstays. Plus more and more applications – such as word processing, spreadsheets and accountancy packages – will be available online, as hosted options. The same applies to data storage.

As small business owners start taking advantage of these applications, they will be able to save money by not having to purchase software and software upgrades, instead paying a nominal monthly rental per user.

Moreover, as these same business owners will be doing most of their computer processing online, they won't need such hi-spec equipment, resulting in even more substantial savings.

People working from home

Working from home makes good sense for all sorts of reasons. Businesses, for example, can reduce the need for office space and associated costs, while retaining valued staff who prefer to be home-based.

Working from home is also good for the environment and the bottom line: less travel equates to lower CO₂ emissions and lower expenses.

Home workers will be able to access exactly the same information and applications as they do at the office. And they will be able to do so just as quickly.

They will also be able to work collaboratively; sharing files online, for example, and taking advantage of HD videoconferencing for totally realistic and therefore even more effective interaction with colleagues, customers and suppliers.

Small to medium-sized enterprises

Imagine a super-fast communications environment. Imagine a communications environment where your customers can do everything they do today, but faster and even more effectively and efficiently. Plus much else besides.

Consider, for example, the added reality, vitality and faster decision making enabled by HD videoconferencing. There will also be far less need to travel, with all the associated benefits in terms of reduced stress, costs and CO₂ emissions.

Shared online workspaces and online file sharing will bring new meaning to the term collaborative working.

Your customers will be able to take advantage of a growing raft of hosted applications – from Customer Relationship Management and transaction processing to sales force, HR, expenses, website and inventory management. In these and many other ways, they will be able to enhance the buying and selling experience, optimise their administrative processes and save money.

Taking things one step further, those same customers could create a truly innovative communications environment, one that would enable them to proactively deliver relevant information to their people, as it's created, from inside and outside the organisation.

For example, they might decide to capture information from several sources – such as voice, email and Instant Messenger – analyse it and automatically send individuals and teams information they know will be of value.

By ensuring that the right information finds the right people in near real time, your customers will finally be able to fully exploit the value of knowledge.



Rollouts

Fibre to the Cabinet

The speed of rollout of Fibre to the Cabinet (40% of UK homes and businesses should have access by 2012) is due to the fact that there's no need to replace the copper pairs running from customer premises to Openreach street cabinets.

It was piloted at Whitchurch near Cardiff and in Muswell Hill, North London, where we have already passed 30,000 homes.

We're in the process of enabling a further 29 exchanges, covering 500,000 homes all over the country. They should come online by January 2010. We're currently consulting with industry on another 500,000 homes. We anticipate that they should be connected by March 2010.

It is from these building blocks that Fibre to the Cabinet is being rolled out across the country. To view a list of the latest enabled exchanges, please visit www.openreach.co.uk/exchange_plan

You should also know that we're doing our bit to support you on the marketing front. We've produced promotional collateral for consumers in Whitchurch and Muswell Hill. Leaflets have been distributed to households and we've taken advertorials in local papers in both areas.

We intend to repeat this exercise around the country as the rollout gathers pace.

Fibre to the Premises

Deployment of Fibre to the Premises in brownfield areas is going to be expensive, as it involves replacing the copper pairs running from customer premises. Availability will therefore depend on demand.

For rollout at greenfield* sites, there's no need to replace copper running from customer premises, as none existed in the first place! Deployment will therefore be less expensive than brownfield. However, availability is obviously going to depend on an upturn in the land development market.

*A trial deployment at Ebbsfleet in Kent is currently delivering download speeds of up to 100Mb and upload speeds of up to 2Mb (with 10Mb planned). When completed Ebbsfleet will be one of the UK's first mass scale pure fibre optic networks for the residential and small business market.

Want to get involved?

If you would like to participate in the Super-fast Fibre Access rollout – or would like to know more about it – please contact your Openreach Sales & Relationship Manager.



www.openreach.co.uk

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