openreach

Community
Fibre Partnerships

Broadband Glossary

2G
The second generation of mobile telephony systems. It uses digital transmissions to support voice, low-speed data communications and short messaging services.

3G
The third generation of mobile systems. It provides high-speed data transmission and supports multimedia applications such as video, audio SMS, and internet access as well as conventional voice services.

4G
The fourth generation of mobile systems. It is designed to provide faster data download and upload speeds than 3G on mobile networks.

5G
The coming fifth generation wireless broadband technology which will provide better speeds and coverage than the current 4G.

A

ADSL
Asymmetric Digital Subscriber Line – a digital technology that allows the use of a standard telephone line to provide high-speed data communications.

B

Bit
A bit is the smallest unit of information that travels across a communications network. When you speak on the phone, watch TV or browse the internet, the information contained within those activities is converted into binary code, made up of 1s and 0s, as it travels through the wires of the network. This is then transmitted either as electrical pulse for copper and coaxial wires, or as a pulse of light for fibre optic cables. When the information reaches its destination, the phone or modem converts the 1s and 0s back into the words and pictures you see or hear on your phone, TV or computer screen.

Bits per second
Bits per second (bps) is the way we measure the speed of an internet connection. Bps refers to the number of individual bits that are sent over a network in a second. It is similar to measuring the speed of a car in miles-per-hour. For ultrafast broadband connection, the speed is usually measured in megabits or gigabits per second (see 'table of units' below).

C

Coaxial cable
The type of wire traditionally used by the cable industry in their networks. It is made up of a shielded copper core and uses electrical signals to send information, such as voice calls, internet packets or TV signals.

CBT
A Connectorised Block Terminal is a common termination point where the small individual fibres going into a premise are connected to the main fibre cable.

Connection
In simple terms, this refers to the wires and electronic equipment that connect your home to the global communications network.

CP
Communications Provider – a provider of communications services; telephony, broadband, video on demand and other services. Typical companies are BT, Sky and Talk Talk.

D

Dark Fibre
A fibre-only connection provided without the associated electronics at either end that would be needed to provide the light pulses required to carry data. The company buying dark fibre has to provide the electronics at either end to make the fibre work.

DOCSIS 3.0/3.1
Data Over Cable Service Interface Specification – a standard which allows a cable TV company to supply internet access on its existing hybrid fibre network. DOCSIS 3.0 delivers ultrafast speeds and, in the future, DOCSIS 3.1 will allow even faster speeds well over 1Gbps.

DP
Distribution Point – the point near to premises where the main cable from a cabinet, or the fibre from a telephone exchange, is split to provide service at one or more localised premises.

DSL
Digital Subscriber Line – a broadband technology where existing wires between the local telephone exchange and a customer's telephone sockets are transformed into a high-speed digital line.

DSL Vectoring
A technology that supercharges a copper broadband connection to provide ultrafast speeds. The fibre network is rolled out as close to the home or business as possible and then vectoring technology is overlaid. The technology works in a similar way to noise cancelling headphones, by cutting out the interference between the broadband lines to produce faster speeds.

E

EAD
Ethernet Access Direct – an access product in the Openreach Ethernet portfolio which provides point-to-point data connectivity between sites. It can be used to build and extend customer networks, develop new infrastructure, and meet low-capacity backhaul requirements. It supports a range of requirements including cloud computing, and storage area network connectivity.

Ethernet
Ethernet - high-capacity, high-speed digital connections available throughout the UK. They tend to be used by businesses and offices for which a domestic connection is inadequate due to the large number of devices needing online connectivity.

F

Fibre Optic Cable

A type of cable in a communications network that uses light pulsed through a glass fibre to send information, such as voice calls, internet packets or TV signals.

Fibre to the Building (FTTB)

This connection uses fibre optic cables from the exchange to the basement of an apartment building. It is different from Fibre to the Home (FTTH) because the connection from the basement into the individual apartments or flats may still rely on existing copper or coaxial wire.

Fibre to the Home (FTTH)

This connection uses fibre optic cables from the exchange all the way to the socket on the wall of your home or business. It is sometimes call 'Fibre to the Premises (FTTP) or 'Full Fibre'.

Fibre to the Cabinet (FTTC)

A connection that uses fibre optic cables from the telephone exchange to a cabinet on the street. A new piece of equipment is installed near the existing cabinet that creates a superfast broadband connection using Very high speed digital subscriber line (VDSL) technology over the remaining copper cable between the cabinet and the home. FTTC can be paired with vectoring and Gfast to give ultrafast speeds. (See VDSL and G,fast)

Fibre to the Premises (FTTP) or 'Full Fibre'

This connection uses fibre optic cables from the exchange all the way to the optical termination point on the wall of your home or business. It is sometimes called Fibre to the Home (FTTH). It's sometimes referred to as 'Full Fibre' because the fibre runs form the telephone exchange all the way to the interior of the home or business.

Fibre to 5G

This is a mixed fibre and microwave technology where the fibre cable is run as close to the home as possible. A small microwave antenna is connected to the fibre and another to the home. The final connection is sent using wireless microwave signals. This avoids having to run fibre all the way to the home. However, the two antennae need an uninterrupted line of sight between them to work.

Fibre to the Distribution Point (FTTdp)

This connection uses fibre optic cables from the exchange to a point tens of metres from the home. The final length of copper or coaxial cable may be paired with G.fast, vectoring or DOCSIS technology to produce even faster speeds.

G

GEA

Generic Ethernet Access – is an access product that uses Fibre to the Premises (FTTP) or Fibre to the Cabinet (FTTC). It provides an 'always on' virtual LAN over an optical fibre from the telephone exchange to the optical device either at the customer's premises (FTTP) or at the street cabinet (FTTC).

Gfast

A mixed fibre-copper network technology. A fibre optic cable is brought as close to a home or business as possible. Then, special Gfast electronics supercharge the last bit of copper cable to provide ultrafast speeds.

H

Hyperfast

An internet service that provides data speeds of 500Mbps or higher.

I

IoT

Internet of Things – the interconnection via the internet of computing devices embedded in everyday objects, enabling them to send and receive data. For example internet enabled lighting that allows control of the timing and lighting level of individual light bulbs throughout the home, that can be controlled remotely,

IP

Internet Protocol – a packet-based protocol for delivering data, including voice and video, across networks.

L

Last Mile

The part of a communications network running from the local exchange to a home or business.

LLU

Local Loop Unbundling – the process by which communications providers can rent the copper lines between BT's exchanges and customer premises from Openreach, to provide voice and broadband services using their own equipment.

M

Managed Ethernet Access Service

A product that uses pseudo-wire technology (a mechanism for emulating various networking or telecommunications services across packet-switched networks) to carry Ethernet traffic between a mobile operators' cell and core sites in a single converged packet network.

MiiS

Mobile Infill Infrastructure Solution – allows communications providers to install their radio equipment in special cabinets linked to antennae on telephone poles and use their spectrum to improve mobile coverage.

MPF

Metallic Path Facility – a fully unbundled line is a product that enables service providers to offer line rental, calls and broadband to their customers. The service provider installs their own equipment in local telephone exchanges through a process known as "unbundling" that allows them to offer you both phone and broadband services directly.

MPLS

Multi-Protocol Label Switching – supports the rapid transmission of data across network routers, enabling modern networks to achieve high quality of service.

MSL
Minimum Service Level – set by Ofcom in relation to the quality of service that Openreach offers. They are a minimum standards are set at a regional geographic level and are set against three service levels covering installation and repair that Openreach provides to service providers.

MVNO
Mobile Virtual Network Operator – an arrangement by which a retailer sells mobile services under its own brand but uses a mobile network owned by another operator to do so.

N

NFV
Network Function Virtualisation – a network architecture in which dedicated network appliances are replaced with software running on off-the-shelf servers.

O

Ofcom
The independent communications regulator in the UK with responsibilities across TV, radio and video on demand sectors; fixed line telecoms, mobiles and postal services; and the airwaves over which wireless devices operate.

Optical Fibre
A type of cable in a communications network that uses light shined through a glass fibre to send information – voice calls, internet packets or TV signals.

P

Passive Optical Network (PON)
A type of FTTP network that uses splitters to serve multiple homes and businesses, without having to lay individual fibre to each until the final distribution point outside the home or business.

PCP
Primary Cross Connection Point – the cabinet, often seen on street corners, that connects the cables running from individual homes and businesses to the local telephone exchange.

PIA
Physical Infrastructure Access – this occurs when one company accesses infrastructure (like ducts and poles) owned by another and installs its own fibre optic or other cables.

PoPs
Points of Presence – an industry term that refers to a location in a city where we have the ability to connect end customers to one of communications providers networks.
It also refers to the space communications providers occupy in Openreach's telephone exchanges under local loop unbundling (LLU).

S

SDN
Software Defined Networking – one of the new generation of networking technologies that is giving us a new way to build and manage corporate networks that are fit for the digital age.

SEP
Superfast Extension Programme. The Government, through Broadband Delivery UK (BDUK), initially set aside £530 million of public funding to help BDUK reach 90 per cent of premises by 2016. Each local authority evaluated bidders (during the procurement stage) before awarding the contracts. The Superfast Extension Programme (SEP) represents a further £250 million investment to extend superfast broadband. The scheme is open to all communications infrastructure providers in the UK.

Service
This is what you buy from your phone or cable or mobile phone company. In most locations, you can buy a combination of internet, phone or TV services. Internet service is often sold at different speeds, based on megabits per second (Mbps) or gigabits per second (Gbps).

SMPF
Shared Metallic Path Facility – access to the non-voice band frequencies of the metallic path facility. It lets communications providers provide broadband services over the copper network by sharing a line with another communications providers providing a voice service to the same customer.

Superfast
An internet service that gives you a speed of 24Mbps, or more.

Super Vectoring
An enhanced version of vectoring that delivers higher broadband speeds.

T

Twister Pair Copper Cable
This is the traditional type of wire used by telephone companies to build their networks. It uses electrical signals sent down a copper pair to send information, like voice calls, internet packets or TV signals.

U

Ultrafast
An internet service that gives you a speed of over 100 Mbps.

Undertakings
Legally binding commitments BT made to Ofcom in 2005, designed to bring greater transparency and certainty to the regulation of the telecommunications industry in the UK.

V

VDSL
Very high speed DSL – a high-speed variant of digital subscriber line (DSL) technology. It provides a high headline speed by reducing the length of the access copper line by connecting to fibre at the cabinet.

VDSL2
Very-High-Bitrate Digital Subscriber Line 2 – this technology is used by the telecoms industry to produce superfast speeds on a hybrid copper-fibre network. It requires a new piece of equipment to be built near the existing telecoms cabinet. A fibre cable connects to the new equipment whilst the rest of the connection is provided by the existing copper (see FTTC).

VoIP

Voice Over Internet Protocol – a method of transporting speech over the internet.

VPN

Virtual Private Network – a secure way to create an apparent dedicated network between nodes over a network infrastructure, which is in reality shared with other services.

W

WAN

Wide Area Network – a computer network that exists over a relatively large geographical area that connects two or more smaller networks. This enables computers and users in one location to communicate with computers and users in other locations.

WLR

Wholesale Line Rental – a product supplied by Openreach which is used by other communications providers to offer telephony services using their own brand, pricing structure and billing, but using BT's network.

Bit	Smallest unit of digital information
Byte	Equal to 8 bits
Bps	Bits per second
Kbps	Kilobits per second (1000 bits per second)
Mbps	Megabits per second (1 million bits per second
Gbps	Gigabits per second (1 billion bits per second)
Tbps	Terabits per second (1 trillion bits per second)