

Annex B: Glossary

2G: Second generation of mobile telephony systems. Uses digital transmission to support voice, low-speed data communications, and short messaging services.

3G: Third generation of mobile systems. Provides high-speed data transmission and supports multimedia applications such as full-motion video, video-conferencing and internet access, alongside conventional voice services.

4G: Fourth generation mobile phone standards and technology. Provides faster mobile data speeds than the 3G standards that it succeeds.

Access Network: The part of the fixed network that connects directly to customers from the local telephone exchange. The mobile equivalent is the radio access network

ADSL: Asymmetric digital subscriber line. A digital technology that allows the use of a standard telephone line to provide high-speed data communications. Allows higher speeds in one direction (towards the customer) than the other.

Backhaul: For fixed networks the term refers to segment(s) of a communications network that connect(s) segments of an access network (e.g. from the Digital Local Exchange to the Premise or from a Cabinet to the Premise) with the core network and for mobile networks from the mast to the core network.

Bandwidth: This is the measure of the maximum capacity of a data link in the network.

Broadband: A service or connection generally defined as being 'always on' and providing a bandwidth greater than narrowband.

CDN (Content Delivery Network): A method where content is cached within the network to improve user experience and optimise core bandwidth use.

Cloud computing: A model of network computing where a programme or application runs on a connected server or servers rather than on a local computing device such as a PC, tablet or smartphone.

Communications Provider: An organisation which provides an electronic communications network or provides an electronic communications service.

DAB: Digital audio broadcasting. A set of internationally-accepted standards for the technology by which terrestrial digital radio multiplex services are broadcast in the UK.

DSL (Digital Subscriber Line): A family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary phone lines (also known as "twisted copper pairs") into high-speed digital lines, capable of supporting advanced services such as fast internet access and video-on-demand.

DTT: Digital Terrestrial Television - Broadcasting delivered by digital means. In the UK and Europe, DTT transmissions use the DVB-T and DVB-T2 technical standards.

Ducts: Underground pipes which, inter alia, hold copper and fibre lines.

DVB-T: Digital Video Broadcasting – Terrestrial. A standard for terrestrial transmission of digital television developed by the DVB consortium.

DVB-T2: Digital Video Broadcasting – Terrestrial 2. The latest digital terrestrial transmission technology developed by the DVB consortium.

Exabyte (EB): 1,000,000,000,000,000 (or 10^{18}) bytes of digital information.

Fibre To The Cabinet (FTTC): An access network structure in which the optical fibre extends from the exchange to a flexibility point in the BT network known as a cabinet. The remaining part of the access network from the cabinet to the customer is usually copper wire but could use another technology, such as wireless.

Fibre To The Premises (FTTP): An access network structure in which the optical fibre network runs from the local exchange to the end user's house or business premises. The optical fibre may be point-to-point – there is one dedicated fibre connection for each home – or may use a shared infrastructure such as GPON. Sometimes also referred to as Fibre to the home (FTTH).

Freeview: DTT, radio stations and interactive services through an aerial. Freeview is a company owned and run by the BBC, BSkyB, Channel 4, ITV and Arqiva.

FreeSat: A UK-based free-to-air satellite service operated by a joint venture between the BBC and ITV Plc.

Generic Ethernet Access (GEA): BT's wholesale non-physical product providing communication providers with access to higher speed broadband products, also known as VULA.

Gigabit Passive Optical Network (GPON) or Passive Optical Network (PON): A shared fibre network architecture that can be used for NGA.

GHz: Gigahertz. 1,000,000,000 (or 10^9) oscillations per second.

HDTV: High Definition Television - A television or other video service with at least 2 mega pixels per frame which is 5 times as many pixels as standard television. This provides enhanced quality and more detailed pictures. .

Heterogeneous Wireless Networks: A wireless network which consists of devices using different underlying radio access technology.

Internet: A global network of networks, using a common set of standards (e.g. internet protocol), accessed by users with a computer via a service provider.

IoT: Internet of Things. There is no universally agreed definition of the Internet of Things but in general it is used (like M2M) for communications that involve communication with at least one machine.

IP (internet protocol): The packet data protocol used for routing and carrying messages across the internet and similar networks.

IPTV: Internet Protocol television. The term used for television and/or video signals that are delivered to subscribers or viewers using internet protocol (IP), the technology that is also used to access the internet. Typically used in the context of streamed linear and on-demand content, but also sometimes for downloaded video clips.

Last mile: The part of a communications network that connects to the customer.

Latency: The amount of time a message takes to traverse a system.

Leased line: A transmission facility which is leased by an end user from a public carrier, and which is dedicated to that user's traffic.

Local loop: For non-fibre networks, the access network connection between the customer's premises and the local serving exchange, usually comprised of two copper wires twisted together.

Local Loop Unbundling (LLU): A process by which a dominant provider's local loops are physically disconnected from its network and connected to a competing provider's networks. This enables operators other than the incumbent to use the local loop to provide services directly to customers.

Long Term Evolution (LTE): A 4G mobile technology standardised by 3GPP. LTE is the 4G technology used in the UK.

Machine to machine (M2M): Technologies that allow both wireless and wired systems to communicate with other devices of the same type. M2M is a broad term as it does not pinpoint specific wireless or wired networking. Also referred to as the Internet of Things

Mbps: Megabits per second. Bit rate is the rate at which digital information is carried within a specified communication channel.

MHz: Megahertz - A unit of frequency of one million cycles per second.

Mobile broadband: Various types of wireless high-speed internet access through a portable modem or dongle, mobile telephone or other device.

MNO: Mobile Network Operator, a provider which owns a cellular mobile network.

MVNO: Mobile Virtual Network Operator. An organisation which provides mobile telephony services to its customers, but does not have allocation of spectrum or its own cellular wireless network.

Multiplex: In digital TV broadcasting, a single signal which contains, when decoded, multiple discrete streams of digital information (including video and audio streams). Individual components of the multiplex are decoded at the receiver in order to present the desired TV service to the viewer.

Net neutrality: The principle that all traffic on the internet should be treated equally, regardless of content, site or platform.

Next Generation Access (NGA) networks: Wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over already existing copper networks. In most cases, NGAs are the result of an upgrade of an already existing copper or co-axial access network. Also referred to as a superfast network.

Next Generation Network (NGN): A fixed network that uses IP technology in the core and backhaul to provide all services over a single platform.

Over the top (OTT) operators: Communications services provided on the 'open' internet rather than by network operators.

Petabyte (PB): 1,000,000,000,000,000 (or 10^{15}) bytes of digital information.

Physical Infrastructure Access (PIA): A regulatory obligation under which BT is required to allow CPs to deploy NGA networks in the physical infrastructure of its access network such as ducts and poles.

Public service broadcasting or public service broadcaster (PSB): The Communications Act in the UK defines the PSBs as including the BBC, ITV1 Channel 4, Five and S4C.

QoS: Quality of service is the overall performance of a telephony or computer network, particularly the performance seen by the users of the network. To quantitatively measure quality of service.

Significant Market Power (SMP): The significant market power test is set out in European Directives and in the Communications Act 2003. It is used by National Regulatory Authorities (NRAs), such as Ofcom, to identify those CPs which must meet additional obligations under the relevant Directives.

Spectrum: The airwaves over which all wireless communications devices (televisions, mobile phones, tablets, radios, microphones and more) communicate.

Statistical Multiplexing: A type of communication link sharing, that provides dynamic bandwidth allocation. In statistical multiplexing, a communication channel is divided into an arbitrary number of variable bit-rate digital channels or data streams.

Streaming content: Audio or video files sent in compressed form over the internet and consumed by the user as they arrive. Streaming is different to downloading, where content is saved on the user's hard disk before the user accesses it.

Sub-Loop Unbundling (SLU): Like local loop unbundling (LLU), except that CPs interconnect at a point between the exchange and the end user, usually at the cabinet.

Superfast broadband: A broadband connection that can support a maximum download speed of 24Mbps or greater. Also called an NGA network.

Telecommunications, or 'telecoms': Conveyance over distance of speech, music and other sounds, visual images or signals by electric, magnetic or electro-magnetic means.

UHDTV: Ultra High Definition Television, sometimes referred to as 4K UHD. The minimum resolution of 3840 x 2160 pixels (2160p), provided a greater enhanced quality than HDTV. 8K, also known as Super Hi-Vision, has a higher resolution of 7680 x 4320 pixels (4320p).

Unbundled local loop: An internal wiring frame where copper access network cables are terminated and cross connected to exchange equipment by flexible wire jumpers.

Universal Service Obligation (USO): Ensures that basic fixed line services are available at an affordable price to all citizen-customers across the UK. The scope of the Universal Service Obligations is defined by the EU Universal Services Directive.

VDSL (Very-high-bit-rate digital subscriber line): An upgrade to ADSL technology which allows for very fast internet access over copper lines. It is the technology which is currently used in FTTC deployments.

Virtual Unbundled Local Access (VULA): A product which provides a connection from the nearest 'local' aggregation point to the customer premises. BT's VULA product is called GEA.

VoIP: Voice over Internet Protocol. A technology that allows users to send calls using internet protocol, using either the public internet or private IP networks.

WDM (Wave Division Multiplexing): A method of delivering multiple services over a single fibre optic connection

WiFi: Commonly used to refer to wireless local area network (WLAN) technology, specifically that conforming to the IEEE 802.11 family of standards.