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1G	First generation analogue mobile phone technologies encompassing AMPS, TACS and NMT.
2.5G	Second-generation digital cellular network technology enhanced with packet data (GPRS) capability. Considered as a stepping stone between 2G and 3G mobile networks, GPRS enables data transmission speeds averaging 40-50 kbps and supports enhanced services such as internet access (via Wireless Application Protocol) and multimedia messaging (MMS).
2.75G	Term applied to GPRS networks that have been upgraded with Enhanced Data rates for GSM Evolution (EDGE) technology to support data speeds in excess of 144 kbps.
2G	Second generation cellular network: Encompasses digital mobile phone technologies including GSM, CDMA IS-95 and D-AMPS IS-136
3G	Third-generation digital cellular communication system: Refers to cellular technologies defined within the ITU's IMT-2000 family (including variants such as W-CDMA / UMTS and CDMA 2000) supporting average downlink rates of some 300 mbps for delivery of a range of multimedia applications and more efficient transmission of voice, text and data services.
3GPP	Third Generation Project Partnership: Industry body created to produce globally applicable technical specifications and reports for 3G based on evolved GSM core networks and the radio access technologies that they support – i.e. Universal Terrestrial Radio Access (UTRA), both Frequency Division Duplex (FDD) and Time Division Duplex (TDD) modes. This remit was subsequently amended to include the maintenance and development of GSM technical specifications and technical reports including evolved radio access technologies (e.g. GPRS and EDGE).
3GPP2	Third Generation Project Partnership 2: Counterpart of 3GPP comprising North American and Asian interests and with responsibility for standardising the CDMA2000-based members of the IMT-2000 family.
4G	Fourth generation digital cellular communication system: '4G' is still in its gestation period. It is anticipated that 4G radio access networks will evolve from a centralised to a distributed architecture that encompasses 3G, WiFi and WiMAX, providing users with an always-on, high-speed mobile connection to multimedia services based on a fixed monthly fee. However, key 4G technologies may also include Orthogonal Frequency Division Multiplexing (OFDM), Software Defined Radio (an enabler for the aggregation of multi-standard pico cells) and Multiple-input multiple-output (MIMO) antennas for greater spectral efficiency.
A/C or AC	Air conditioning: Refers to the process of controlling temperature, humidity, air quality and motion in an enclosed area such as a telecoms facility. This process is also known as 'aircon' or 'environmental control'.
AAA	Triple A: Term applied to any video game that has achieved (or is likely to) volume retail sales – typically in excess of 1 million units.
AAL	ATM Adaptation Layer
A-bis	Interface between the BSC and BTS in a GSM network.
AC Power (a.c.)	Alternating current (a.c.): An electrical current whose magnitude and direction varies cyclically (normally at around 50 cycles per second in 240V mains voltage supplies).

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Access Charge	A regulated charge made by Local Exchange Carriers (LECs) for use of their facilities to originate / terminate traffic. In most cases, these charges (known as 'CALCs') are billed to interexchange carriers, ensuring LECs are compensated for use of their high-maintenance local access networks.
Access Minutes	A term applied in the U.S. by the FCC and NECA when measuring traffic between LATA carriers so that usage charges (aka 'Minutes of Use') can be calculated.
Access Network	Defined by many wholesale carriers as the fibre connections and associated infrastructure linking a core network to POP and POI switch locations. In the mobile arena, the equivalent is known as the 'Radio Access Network' (see RAN).
Access Tandem	A switching system used by Local Exchange Carriers (LECs) to concentrate and distribute traffic originating from, or terminating in the access / local service area. The access tandem also provides interexchange carriers with access to multiple end offices within the Local Access and Transport Area (see LATA).
ACD	Automated Call Distribution
ACH	Automated Clearing House
ACNA	Access Carrier (or Customer) Name Abbreviation: A three-character code assigned to each Interexchange Carrier (IXC) identifying to whom (i.e. another IXC) circuits are billed.
Active Mobile Subscribers	A term used to qualify mobile operator' subscriber figures. Mobile phone subscribers are considered 'active' when they have generated a billable event within the past three months.
ADS	Advanced Data Server
ADSL	Asymmetric Digital Subscriber Line
AES	Advanced Encryption Standard
AFIS	Automated Fingerprint Identification System: Proven to provide one of the highest levels of security amongst all types of biometrics to date, AFIS allows the automatic matching of one or many unknown fingerprints against electronic databases of prints stored previously.
Aggregate Bandwidth	Total bandwidth of a channel or device (including payload and overhead) carrying a multiplexed bitstream.
Aggregator	<p>i) An independent entity offering land-line subscribers long-distance telecoms services at reduced rates.</p> <p>ii) Access provider to mobile networks handling the network operator relationships on behalf of the customer. Typically, aggregators add value via services such as SMS, marketing, short-code allocation and billing aggregation.</p> <p>iii) An organisation that combines information / multimedia content – such as news, sports scores and weather forecasts – from multiple sources, and makes it available to subscribers.</p>
AI	Artificial Intelligence: Technology that emulates the processes of human thought and behaviour.
AIN	Advanced Intelligent Network
A-interface	Interface between the MSC and BSS in a GSM network.
Air interface	The radio transmission element of a mobile network providing a link between the base station and the mobile device.
Air interface encryption	Encryption on the air interface, the vulnerable link between base station and terminal.

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Air interface protocol	Defines the way in which signals are transmitted between radio terminals and the system infrastructure.
Airtime provider	An organisation selling airtime acquired from cellular networks to individual and corporate end-users – e.g. an independent entity or retail arm of a mobile operator.
AKD	Authentication Key Distribution
AL	Ambience Listening: Supplementary service in TETRA systems that allows an authorised user (e.g. a dispatcher) to remotely switch the Mobile Station (MS) into transmit mode and monitor its environment without the intervention of the MS user.
ALT tags	Designed to provide information to browsers that have either images turned off, or don't use images, such as the text based browsers and speaking browsers for the blind and visually impaired.
Altnet	Alternate Network: A service provider offering local (CLEC), metro or long-distance communications services and whose business is independent of established telcos.
AMPS	Advanced Mobile Phone Service: Analogue (1G) cellular system predominant in the United States operating in the 800 MHz frequency band.
AMPU	Average Margin Per User
AMR	Adaptive Multi-Rate codec: Audio data compression scheme optimised for speech coding and developed for use in GSM networks, but also adopted by 3GPP for 3G.
Analogue Transmission	Traditional technology used for voice transmission whereby sound waves (or other data) are converted into electrical impulses of varying strength or amplitude and transmitted over twisted pair copper wires.
Ancillary Telecommunications Services	Supplementary capabilities made available by Local Exchange Carriers to service providers. These can include emergency calling facilities / short-code dialling, directory assistance, and / or operator services.
ANI	Automatic Number Identification
ANSI	American National Standards Institute: A non-profit US organisation that reviews the work of standards bodies and assigns them category codes and numbers.
APCO	Association of Police Communications Officers
API	Application Program(ming) Interface
APON	ATM Passive Optical Network: The original PON standard based on Asynchronous Transfer Mode (ATM) technology and used in local loop scenarios to connect terminals to an all-optical network.
APOT	Alternate / Additional Point of Termination: Co-location terminations used for the purpose of ordering UNEs and Ancillary Services.
AR	<p>i) Alternate Routing: A mechanism implemented by carriers to increase network resiliency whereby alternate paths are used to arrive at the same destination. Thus, services can continue in the event of a node failure or heavy network congestion (see also Route Diversity).</p> <p>ii) Accounting Rate: Settlement rates often used to facilitate bilateral voice agreements between carriers.</p>
Arbitrage	Used to describe a scenario where carriers exploit high-profit market niches resulting from regulations concerning inter-carrier compensation.

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Arcos-1	Americas Region Caribbean Optical-ring System: An 8,600 kilometre, self-healing submarine cable system that connects USA and Latin America, while passing through several Caribbean islands. This submarine cable consists of both repeated and non-repeated cable segments that use state-of-the-art Wavelength Division Multiplexing (see WDM) and Synchronous Digital Hierarchy (see SDH) technology. Initially, Arcos-1 operates at 15 Gbps, but has a multiple upgradeable design capacity of 960 Gbps.
ARIB	Association of Radio Industries and Businesses: Japan's radio standardisation body designated as "the Center for Promotion of Efficient Use of Radio Spectrum" and "the Designated Frequency Change Support Agency" by the Minister of Internal Affairs and Communications (MIC) under the provisions of the Radio Law.
ARPU	Average Revenue Per User
ARS	Accounting Rate System: ITU system of international Interconnect Billing.
AS	Application Server
ASCII	American Standard Code for Information Interchange
ASIC	Application Specific Integrated Circuit
ASOG	Access Service Ordering Guidelines: Industry guidelines sponsored by the Ordering and Billing Forum (OBF) and ATIS to outline the forms, data elements and business rules required for the issue of an Access Service Request (see ASR).
ASP	Application Service Provider
ASR	Access Service Request: Forms issued by carriers to request Switched Access or Special Access Services.
Asymmetric Transmission	Data transmissions where traffic from the network to the subscriber (downlink) is transmitted at a higher rate than that of the traffic from the subscriber to the network (uplink).
ATC	Access Tandem Connection
ATIS	Alliance for Telecommunications Industry Solutions
ATM	Asynchronous Transfer Mode: A multiplexed information transfer and switching system designed to minimise the magnitude of switching times by organising data into fixed-length, 53-octet cells and transmitting according to each application's instantaneous requirement.
ATSI	Alias TETRA Subscriber Identity
AuC	Authentication Centre: Element within a GSM network that generates parameters for subscriber authentication.
Authentication	Process that establishes the identity of a user or communicating party attempting to access the network.
Avatar	An interactive graphical representation of a player customised and accessorised to reflect their persona in a virtual world or online environment.
AVL	Automatic Vehicle Location: Service or application that identifies the location of a vehicle, either in terms of its geographical coordinates, or by its location on a map.
B	Byte: 8 bits
BAA	Blanket Authorisation Agreement: Signed by interconnecting parties to guarantee they have the authority of the end user to request CPNI and place service orders on behalf of a customer.
Baby Bell	A U.S. term used to describe one of the original seven local exchange companies formed from the break-up of AT&T: NYNEX,

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	Bell Atlantic, BellSouth, Southwestern Bell, Pacific Bell, US West and Ameritec. See also RBOC.
Backbone	A high capacity data transmission link or series of major connections within a network serving as a high bandwidth pathway feeding from lower capacity lines. Typically, a backbone connects a wide area network (WAN) to local area networks. In some WANs, the transmission paths connecting local or regional networks for long-distance interconnection via network nodes are also known as backbones or trunks.
Backhaul	The transmission of data (including voice, video or TV) via wireline, fibre, wireless or satellite circuits, from its network point of entry to the exchange switch, or via multiple network backbones for distribution and delivery to its destination. Backhauling is also the term used in satellite communication to describe the delivery of data to a point from which it can be distributed over a network; and also applies to the transmission of non-live audio and video material to distribution points for broadcasting.
BAN	Billing Account Number: This is the primary telephone number used for billing purposes, given that any number of lines can be associated with a particular telephone number.
Bandwidth	Measured in Hertz (Hz – the number of cycles of change per second), bandwidth is the difference between the highest frequency and lowest frequency required to transmit the signal via wired, optical fibre or wireless methods. In telecommunications and networking terminology, the term bandwidth may also be used to define the maximum data carrying capacity of a given connection by describing the data transfer rate, which is expressed as bits per second (bps).
Bandwidth shaping	See 'Traffic shaping'
Bandwidth trading	The business process by which carriers with excess capacity sell unused bandwidth to smaller carriers and re-sellers in need of extra bandwidth capacity. In deregulated telecom markets, carriers may seek to mitigate risk in planning their purchase and leasing of bandwidth capacity. The aim is to avoid sudden price spikes in scenarios by buying extra capacity on a 'futures market' (i.e. a bandwidth exchange), in accordance with subscriber demand.
Baseband	Original signal impressed on a radio transmission and the spectrum it occupies, via modulation. The baseband for a telephone service for example, is analogue speech.
Bayesian filtering	A modern approach to spam detection whereby two databases – one containing spam email, the other valid email – are 'tokenised' and analysed for tokens that appear frequently in each type of email. Each token can then be given a probability weighting and thus likely spam identified.
BBS	Bulletin Board System: Computer system running software that allows users to dial into the system over a phone line and, using a terminal program, perform functions such as downloading software and data, uploading data, reading news, and exchanging messages with other users.
BCC	Broadcast Control Channel
BER	Bit Error Rate – a measurement of end-to-end performance in a digital link using the ratio of error bits to the total number of bits transmitted.
Best effort	Describes a class-of-service that has no defined parameters regarding delivery of traffic across the network.

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Beta	Short for beta release – a version of a software product at the final stages of development.
BGCF	Breakout Gateway Control Function
BGP	Border Gateway Protocol: Allows the swapping of routing information between gateway hosts across a network of independent systems.
BHCA	Busy Hour Call Attempts: The number of call attempts made during a network's busiest hour of the day.
BHMC	Busy Hour Minutes of Capacity: The maximum amount of switched access service and / or Directory Assistance Service (in terms of access minutes) expected to be handled in an end office switch during any hour between 8 AM and 11 PM.
BICI	Broadband Inter-Carrier Interface: A carrier-to-carrier PNNI (private network-to-network interface). It is required because carriers do not permit their switches to share routing information or detailed network maps with their competitors.
Biometrics	A term derived from ancient Greek: ' <i>bios</i> ' meaning 'life' and ' <i>metric</i> ', 'to measure' – biometrics embraces a range of techniques such as fingerprinting and handwriting recognition for identity verification using physical data and / or behavioural patterns (see also BIS).
BIS	Biometric Information System: Biometrics is, essentially, based on the development of pattern recognition systems. Today, electronic or optical sensors such as cameras and scanning devices are used to capture images, recordings or measurements of a person's 'unique' characteristics (see biometrics). This digital data is then encoded and can be stored and searched on demand, via a computer. Such biometric search is not only very rapid (often taking place in real-time), it is also a process that is accepted globally in establishing forensic evidence in a law court. Consequently, there are numerous forms of biometric now being built into technology platforms – including fingerprints and palmprints; hand geometry; facial, gait, iris, keystroke, signature and voice recognition.
Bit	Binary Digit: The smallest unit of information made up using either of the two digits – '0' or '1' – in the binary number system. Transmission speeds are given in bits per second (see bps).
Bitstream	A continuous flow of binary digits (bits) via a communications medium.
BLEC	Broadband / Building Local Exchange Carrier
Bleeding edge	Refers to a new technology that is not yet the finished article.
Blockage	Defined as the number of calls out of 100 attempts meeting delays in finding access.
Blog	Web Log: A web site where entries are written in chronological order and typically provide commentary or short essays on a particular topic. 'Blog' can also be used as a verb, meaning to maintain or add content to such a site. A person who runs a blog is called a 'blogger'.
Blogger	See Blog.
Bluetooth	A short-range wireless communications technology intended to replace the cables connecting portable and / or fixed devices. Operating in the unlicensed industrial, scientific and medical (ISM) band at 2.4 to 2.485 GHz, Bluetooth uses a spread spectrum, frequency hopping, full-duplex signal to provide data rates of up to 1 Mbps (Version 1.2) and 3 Mbps (Version 2.0 + Enhanced Data Rate). Its operating range depends on the device class but for mobile devices, (Class 2) typical range is 10 meters.
BOC	Bell Operating Company: Term applied to any of the 22 original

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	companies or their successors (but not their affiliates) created when AT&T's national Bell System was broken up in 1983.
Botnet	A collection of compromised machines running programs usually referred to as worms, Trojan horses, or backdoors, under a common command and control infrastructure.
Bots	Software 'Robots': Software applications that run automated tasks over the internet.
BPO	Business Process Outsourcing: The relocation of entire business functions to either self-owned or third-party service providers, typically in low-cost locations.
BPO	Business Process Outsourcing
BPON	Broadband Passive Optical Network: An ITU standard based on APON that adds support and resilience to WDM, together with dynamic and higher upstream bandwidth allocation.
bps	bits per second: Unit used to express the number of bits passing a designated point per second – i.e. a measure of data transmission volume or throughput.
BRAN	Broadband Radio Access Network
BRAS	Broadband Remote Access Server
BRI	Basic Rate Interface
Broadband	A wide bandwidth for transmission of data that can be multiplexed and sent concurrently on many different frequencies or channels to allow more information to be transmitted in a given amount of time. This term is often applied to any circuit that is significantly faster than traditional dial-up internet access, with broadband services offering 'always-on' connections, fixed price / unlimited access (although some broadband tariffs are based on data volume) and faster, more reliable data transmission rates. As deployment of packet-based, Next-Generation Networks (NGNs) gathers pace and broadband penetration increases, it is anticipated that delivery of services such as multimedia applications via broadband networks will soon use up the excess capacity that carriers have built-in to their networks in recent years.
Broadband Video	The streaming video from a website. This is also known as web video, internet video or broadband television.
BSA	Basic Serving Arrangement: An Open Network Architecture term which encompasses the basic interconnection access arrangement to the PSTN defining the relationship between an enhanced service provider and the service provider.
BSC	Base Station Controller: Network element controlling a number of Base Transceiver Stations (see BTS).
BSE	Basic Service Element: Functions of a carrier's switched network provided on like terms to their competitors within an Open Network Architecture.
BSS	Base Station System / Subsystem
BTO	Business Transformation Outsourcing
BTS	Base Transceiver System: The 'base stations' within a cellular / wireless network that transmit radio frequencies over the air interface.
BTU	British Thermal Unit: Describes the heat value dissipated from technical equipment or the power of a heating or cooling system per hour (1W=3.41 BTU/h).
Bubble years	The period of rapid market growth (aka dot-com boom) in the ICT

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	sector prior to the 'dot-com' crash shortly after the year 2000.
BULS	Basic Unbundled Loop Service
Bundle	i) A number of fibres or wires encased within a single cable sheath. ii) Where carriers entice their customers to buy more than one telecoms service – e.g. long distance, local and internet service – as a single package.
Bundled	In the context of tariffing, it is the practice of charging a flat rate per period of service up to a set limit of call time (for voice calls) or data transmitted (for data services like GPRS).
Bundled services	Provision of several services under a single tariff or charge.
Busy Hour	The hour a telecoms network carries its most traffic. This information is vital for service providers when establishing switching and transmission capacities (see also 'traffic shaping').
Cable	A generic term used when referring to different types of wires or groups of wires (conductors), capable of carrying voice, data and power.
Cable Entrance Facility	The point of entry in a central office or building for outside plant cables carrying subscriber lines and inter-office transmission facilities.
CABS	Carrier Access Billing System: Process for billing interexchange carriers and other services. It may be regarded by network operators as a critical component for generating top-line revenues in that it enables the cost of providing the local loop to be recovered.
CAC	Carrier Access Code
CAGR	Compound Annual Growth Rate
CALC	Customer Access Line Charge: A per-minute charge paid to local service providers by long-distance carriers, which is applied to local loop networks according to the type of circuit (e.g. leased line or local access circuit) and also whether the end user is classed as business or residential.
CALEA	Communications Assistance for Law Enforcement Act: U.S. law that requires digital telecom carriers to let law enforcement authorities eavesdrop if they have a warrant.
Call minute	Basic unit of measurement used for wholesale billing of telecoms services.
Caller ID	Caller Identification: A telephony service that transmits the caller's number to the called party's device during the ringing signal or when the connection is being established (aka CID or calling number identification).
CAMEL	Customised Applications for Mobile network Enhanced Logic: Intelligent Network (see IN) feature in GSM networks enabling users to carry personal services with them when roaming onto other networks supporting CAMEL.
Capacity	The volume of traffic a telecoms circuit (fixed or wireless) is able to carry simultaneously.
CapEx	Capital Expenditure
CARE	Customer Account Record Exchange: ATIS industry standard format for the exchange of Equal Access / subscription information between interexchange carriers and telcos.
CARE / ISI	Customer Account Record Exchange / Industry Standard Interface
CAROT	Centralised Automatic Reporting on Trunks
Carrier	i) A private or public company providing communications circuits.

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	ii) A radio wave used for the transmission of voice and / or data.
Carrier Hotel	A building housing several local and long distance telcos who provide data / voice / video, internet access, web hosting and / or switching services. Also, known as a 'co-location centre', a Carrier Hotel is a secure physical site offering bulk capacity processing and the handling of services, and is also where various data communications media converge. Service providers may often share such facilities, minimising overheads and optimising efficiency for all participants.
Carrier-grade Ethernet	Technology developed for network operators to provide Ethernet over a network infrastructure. Five key attributes are defined for Carrier Grade Ethernet by the Metro Ethernet Forum (MEF): Hard QoS, Reliability, Scalability, Service Management, and TDM Support. Service benefits include lower cost and higher-speed data for subscribers, while the technology itself heralds major savings in terms of OpEx for service providers and operators in the Access / Metro, WAN and long-haul sectors. For carriers, there are as many as nine different approaches to service implementation depending on the method of access (i.e. copper, fibre or wireless) and their legacy infrastructure. These approaches include: Ethernet over ATM; Ethernet over Copper; Ethernet over MPLS; Ethernet over SDH/SONET; Ethernet over WDM; Native Switched Ethernet; and Multi-Link Point-to-Point Protocol (MLPPP), which is also known as 'Bonding'. Emerging wireless access methods include WiFi and WiMAX.
Cascade billing model	Interconnect Billing method under which each operator in the chain pays or charges only the 'downstream' or 'upstream' operators respectively.
CATS	Calling Card & Third-Party Number Settlement (see CMDS)
CATT	China Academy of Telecommunications Technology
CBEFF	Common Biometric Exchange File Format
CBR	Constant Bit Rate: A continuous, uniform data delivery (i.e. bitstream). This is a requirement of applications such as digitised video and voice, which rely on guaranteed levels of service and throughput.
CCBS	Completion of Call to Busy Subscriber / Customer Care and Billing System
CCC	Clear Channel Capability (see clear channel)
CCI	Call Clarity Index: Measure of telephone voice quality derived from the monitoring of ordinary user calls by the ITU-T.
CCIS	Common Channel Interoffice Signalling: Call information signalling method that uses a separate path to that of the voice or data transmission line. It was the forerunner to SS7.
CCNA	Customer Carrier Name Abbreviation: A common language code that identifies an Interexchange Carrier (IXC) so that other IXCs may contact it regarding provisioning at its interLATA facilities (see also ACNA).
CCS	Common Channel Signalling: A specialised and high-speed packet-switched network that is separate (out-of-band) from public packet-switched communications networks. In a multi-channel network scenario for example, one channel in each link is used for signalling – i.e. to control, account for, and manage traffic on all the channels within the link.
CD	Chromatic Dispersion: A physical phenomenon occurring in optical

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	<p>fibre systems. When different frequency light waves travel through the same material, photons are dispersed throughout the optical conductor, causing degradation of the transmission signal.</p>
CDEFFS	Committee for Definition of Extended Fingerprint Feature
CDG	CDMA Development Group
CDMA	Code Division Multiple Access: A form of Direct Sequence Spread Spectrum communications whereby bandwidth is spread using a code, allowing multiple users to access the same frequency band at the same time. The receiver synchronises to the code to recover the data.
CDMA 1xEV-DO	Code Division Multiple Access 1x (first generation) Evolution-Data Optimised / Only: An evolution of CDMA 2000 1X that provides access to mobile devices with air interface speeds of up to 2.4 Mbps with Rev. 0 and up to 3.1 Mbps with Rev. A. The WCDMA equivalent is known as High-Speed Downlink Packet Access (HSDPA).
CDMA TDD	Code Division Multiple Access Time-Division-Duplexing (aka TD-CDMA): A packet data implementation of the international 3GPP Universal Mobile Telecommunication System (UMTS) standard and one of three alternative air-interface (physical layer) standards. Unlike W-CDMA, which uses FDD (Frequency Division), UMTS TDD uses Time-Division-Duplexing (TDD) and is designed to work in a single unpaired frequency band. UMTS TDD solutions are said to support peak downlink sector capacities of up to 12 Mbps and average capacities per sector that are more than 3 times higher than any other commercial mobile platform.
CDMA2000	The North American CDMA air interface standard defined as 3G within the ITU's IMT-2000 umbrella standard. Considered to be a rival to UMTS (the 3G standard dominant in European mobile markets), it represents a family of standards encompassing: CDMA2000 1X; 1xEV-DO; and Ultra Mobile Broadband (UMB). CDMA 2000 introduces enhancements, such as Orthogonal Frequency Division Multiplexing (OFDM and OFDMA), advanced control and signalling mechanisms, improved interference management techniques, end-to-end Quality of Service (QoS), and new antenna techniques such as Multiple Inputs Multiple Outputs (MIMO) and Space Division Multiple Access (SDMA) – increasing data throughput and quality of service, while significantly improving network capacity and reducing cost of delivery.
CDMA2000 1X	The first generation of CDMA2000 (2X and 3X were planned under the standardisation process but now seem unlikely).
cdmaOne	The family of IS-95 CDMA technologies prevalent in North America supporting services including cellular, PCS and fixed wireless (wireless local loop). It is recognised as a second generation (2G) mobile network technology having superseded analogue systems.
CDR	Call Detail Record: A data file generated for billing purposes containing subscriber call information including the identities of call sources (points of origin), destinations (endpoints), call duration, amount billed, total usage time and total free time remaining in the billing period.
CDSA	Common Data Security Architecture
Cell	The area covered by a cellular base station within a wireless network.
Cell splitting	Technique employed by cellular operators to improve network capacity by enabling frequencies to be re-used more often. It

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	involves splitting cells into smaller / multiple cells by either sectorising the antennas or constructing additional cells within a cell site.
Cellular Telephone System	A land-based, high-capacity mobile / wireless telephone system comprising a network of radio base stations (known as 'cells') that reuse frequencies as much as possible in order to cover a defined geographic service area. Examples include CDMA2000, GSM and UMTS.
Centrex	Derived from the term 'Central Exchange', Centrex is a central office-type service provided direct over the local loop via the telco's exchange switch and offers the equivalent of PBX functionality such as call forwarding, call transfer and least cost routing (see LCR).
CEPT	Conférence des administrations Europeanes des Postes et Télécommunications: European Conference of Postal and Telecommunications Administrations
CES	Circuit Emulation Switching
CFA	Carrier Facility Assignment: The identifier or location where an IXC, CAP or LEC interconnects with the incumbent carrier and allows wholesale access customers to validate the DS1 / DS3 at system and channel levels.
Channel Surveillance	In a PMR network, this is the monitoring of signal strength against a pre-determined threshold in order to decide if Direct Mode Operation (DMO) may be permitted.
CHAP	Challenge Handshake Authentication Protocol: Defined in IETF RFC 1994 to provide authentication for PPP.
CHTML	Compact HTML: A derivative of HTML for use with mobile devices.
Churn	Churn is considered as a key performance indicator of any telecoms business with a subscriber-based service model since it reflects the fluctuation in subscriber numbers as customers migrate from one network to another as a result of market competition. The initial cost of customer acquisition is significant, so high churn can mean eroded profits for mobile network operators and long-distance carriers. Churn is represented as a monthly, quarterly or annual percentage based on the number of service disconnects relative to total subscriber base.
CIC	Carrier Identification Code
CIP	Carrier Identification Parameter: An SS7 service allowing carriers to consolidate trunk groups by recognising traffic generated by multiple Carrier Identification Codes (CICs) onto a single trunk group.
Ciphertext	The result of enciphering plaintext.
CIR	Committed Information Rate: Bandwidth guaranteed to Virtual Circuit (see VC) customers utilising Frame Relay services and where the customer stipulates the average rate of information transfer required.
Circuit	A two-way communication path between two end-points, either between an end-point and a network service node, or between two service nodes. It can be a physical path (as in the case of voice transport) or a logical / virtual path for the transport of data.
Circuit Code	The specific Interexchange Carrier trunk group required to carry SS7 messages for calls.
Circuit Emulation	A connection over a virtual, circuit-based network providing the same service to end users as delivered by a physical, point-to-point, fixed-bandwidth circuit.
Circuit Switching	The switching system employed by traditional PSTN networks, whereby a dedicated, physical circuit exists between sender and receiver for the duration of the call. Next-generation networks

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	(NGNs) are based on shared networks that employ packet switching.
CJIS	FBI Criminal Justice Information Services
Class 4 Switch	Switching equipment used within the PSTN to interconnect Class 5 Switches for high-volume traffic exchange and serve several service providers with call termination.
Class 5 Switch	PSTN switching equipment that supports PBX features such as voicemail, call forwarding and redial.
Class of Exchange or Class of Office	A ranking assigned to a switching point in the telephone network and classified by the number / type of switching functions, inter-relationships with other exchanges and transmission requirements.
Clear Channel	A circuit in which no framing or control bits (for signalling) are required and where the user is provided full bandwidth capacity. The ability to transmit Unrestricted Digital Information (UDI) over a channel has two benefits: it allows carriers to transmit information directly to Europe and other countries that have 64kbps clear channel services; and also enables carriers to use aggregation of time slots to create larger transmission pipes. A transparent, 64 kbps clear channel connection between mobile networks, for example, allows mobile operators to offer subscribers high-quality, face-to-face video calls, without the need for echo suppression or bit manipulation.
Clearing house	An organisation that collects and processes billing and roaming information (CDRs) on behalf of carriers in order to facilitate settlement of inter-carrier fees.
CLEC	Competitive Local Exchange Carrier
Click distance	The number of 'clicks' a user must make to navigate to a particular service via the user interface on their [mobile] device.
CLID	Calling Line Identification: See Caller ID.
Clipcasting	A generic term used to define broadcasting or multicasting of video or music clips. Distribution of media files over the internet is conducted using syndication feeds (see RSS) for playback. It is a one-way audio / video transmission over a data network. More popularly known as 'podcasting' – a term derived from combining Apple's portable media player (iPod) and broadcasting.
CMD	Circuit Mode Data: Transmission scheme that required a continuous connection for the duration of a session in order to transmit all the data in a complete burst; as opposed to Packet Data, where the information can be split into smaller units (i.e. packets) and sent via alternative paths.
CMDS	Centralised Message Distribution System: The billing record and clearing house data distribution system used by ILECs to exchange information, such as CABS and CATS records.
CMIP / CMIS	Common Management Information Protocol / Common Management Information Services: Network management standard for OSI networks.
CNM	Central Network Management
CNMI	Central Network Management Interface
CO	Central Office: A building where subscriber lines connect to switching equipment and interconnect with other end users, both locally and via long distance carriers. This term can also apply to a building that houses just a single switch (aka public exchange) or a number of switching exchanges.
Codec	Coder Decoder / Combined Coder and Decoder

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Co-located Interconnection Equipment	Telecoms cabling and equipment owned / leased and installed by the co-locator for their sole use.
Co-location	An arrangement whereby a competing local phone company places its equipment (i.e. switches) within an incumbent local exchange carrier's central office. The premises of the housing party can be physical or virtual. For physical co-location, the co-locating party would install and maintain its own equipment in the housing party's premises. For virtual co-location, the housing party owns, installs, and maintains the equipment located in the housing party's premises, but dedicates its use to the co-locating party. A carrier hotel provides co-location on a massive scale, offering various services to customers – ranging from modest-sized racks to dedicated rooms or operations suites.
COMSEC	Communications Security: Conventional non-trunked radio communication whereby RF channels and base station sites are selected manually.
CON	Connection Oriented Network Services
Concatenation	A mechanism for allocating very large amounts of bandwidth for transport of a payload associated with a 'super-rate service' – i.e. a service provided at a transmission rate greater than the normal maximum rate of OC-1 (see OC-1 to OC-192). At the physical layer, this means replacing multiple payload groupings to create a single communications channel.
Content Provider	A company supplying enhanced subscriber services / material / media (e.g. ringtones, news, sports and weather information) to a telecoms or internet service provider.
Contention	<p>i) Arises when two or more independent data sources compete for available bandwidth on a shared channel. It is often described as a 'contention ratio' in order to indicate the level of competition that can be anticipated on the shared channel, and applies specifically to the number of users connected simultaneously to an ISP who share a fixed bandwidth. As the number of users increases, the quality of service degrades accordingly.</p> <p>ii) Contention is also defined as a ratio by ISPs and cable operators to indicate the ratio by which bandwidth capacity will be oversold. Typically, ADSL ratio is 20:1 for business and 50:1 for residential customers.</p>
Control Signal	Signal sent to a mobile device from a base station (or vice versa) that carries information essential to the call, but not including the audio portion.
COPS	Common Open Policy Service
Core network	Combination of high-capacity switches and transmission facilities forming the backbone of a carrier's network. End users access the core network via the network edge.
COTS	Commercial-off-the-shelf: Typically used to describe conventional and standardised hardware available from multiple manufacturers.
CPE	Customer Premises Equipment
CPNI	Customer Proprietary Network Information
CPP	Calling party pays: a system of charging for telecoms services whereby the party who initiates the call (the 'calling party') pays for both the origination and termination of that call.
CPRI	Common Public Radio Interface

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CPS	Carrier Pre-selection: A facility offered to customers by operators allowing selection of defined classes of call to be specified in advance, without the customer having to dial a routing prefix or use a dialler box.
CPU	Central Processing Unit
CRM	Customer Relationship Management
Crowdsourcing	The act of taking a job traditionally performed by a designated agent (i.e. an employee) and outsourcing it to an undefined (and generally large) group of people, in the form of an open call. Essentially, this is the application of 'open source' principles to fields outside of software, with companies using social networks such as MySpace, Second Life, and a multitude of virtual communities, to solve business issues, get ideas and generally tap the collective's imagination.
CRX	CDMA Roaming Exchange: The CDMA equivalent of a Global / GPRS Roaming Exchange Node (see GRX).
Cryptography	The coding of messages so as to render them unintelligible to anyone other than authorised recipients.
Cryptosystem	A system for encrypting and decrypting data that typically involves an algorithm for combining the original data (plaintext) with one or more 'keys' – numbers or strings of characters known only to the sender and / or recipient. The resulting output is known as 'ciphertext'.
CSCF	Call Session Control Functions
CSD	Circuit switched data
CSI	Called Subscriber Identifier
CSR	Customer Service Record: A record containing customer-specific information including Listing, Billing / Service and Equipment sections. It provides a detailed reference for the account including lines provided and features.
CSU / DSU	Channel Service Unit / Data Service Unit.
CTD	Cell Transfer Delay: ATM performance parameter representing the average transit delay of cells between a source and destination over a given virtual circuit.
CTI	Computer Telephony Integration
CVO	Clear Voice Override: Switching from encrypted to clear voice.
CWDM	Course Wavelength Division Multiplexing: A form of optical wavelength division multiplexing using wider spacing between channels so that component costs can be minimised.
DAB	Digital Audio Broadcasting (Digital Radio)
DAL	Dedicated Access Line: A private line (analogue or digital / local or long distance) between the subscriber and the service provider.
DAMA	Demand Assigned Multiple Access: A method of sharing the capacity of a channel by assigning capacity on demand to an idle channel or an unused time slot. The ability to share bandwidth is based on the assumption that not all users will require simultaneous access to communication channels. DAMA is typically used by satellite-based communications systems.
D-AMPS	Digital-Advanced Mobile Phone Service
Dark fibre	Optical fibre (cabling and repeaters) laid in anticipation of future usage but not active. For example, some power utilities install optical fibre cable on power lines with the objective of leasing the fibre infrastructure to telephone or cable TV companies, or for interconnection between their own business premises. Since the

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	laying of fibre cable is, in itself, a major cost consideration, running additional 'dark fibre' during installation programmes provides for future network expansion, plus additional network resilience. A Dark Fibre Service offered by local exchange carriers (LECs) may also be provided for maintenance of optical fibre transmission capacity between subscriber locations and where optical transmission sources are provided by the subscriber rather than the LEC.
Datcasting	The delivery of multimedia content and services such as text, music, or visual images, over a wide area, using digital broadcasting networks. The term is derived from the combination of data and broadcasting – 'data' being the additional information included in a radio frequency (RF) signal needed for a traditional television radio program; 'broadcasting' being the process by which the data is channelled by a digital TV transmitter over a long range.
Datacentre	A central location where business-critical computing resources are maintained.
dB	Decibels: A standard unit for measuring relative levels of current, voltage, or power. The decibel shows the ratio between the input and the output. A minus sign before the dB indicates a loss, while a plus sign (or no sign at all) indicates a gain.
dBm	Similar to dB (Decibels), a dBm is a standard unit for measuring levels of power in relation to a 1 milliwatt reference signal. A minus sign before the dBm indicates a loss, while a plus sign (or no sign at all) indicates a gain.
DBMS	Data Base Management System
DC power (d.c.)	Direct Current (d.c.): Considered as the constant flow of electrons in a single direction, from low to high potential – e.g. a battery.
DC powered fuel cells	Fuel cells powered by adjacent hydrogen tanks and used for back-up by carriers and operators at remote switching facilities to ensure continuous service in the event of a (local) commercial power failure.
DCE	Data Communications Equipment
DCK	Derived Cipher Key: A key produced as a result of authentication and used for uplink and one-to-one messages.
DCS	Digital Cross-Connect System: A specialised, high-speed data channel switch for connecting various circuit types. All the functions of a traditional switch are provided and the connections to be switched are, typically, pre-programmed via an administrative process. DCS functions include de-multiplexing an incoming higher-bit rate, digital line into its constituent signals and switching these signals to a different time slot on an outgoing higher-rate line. The combination of these functions allows for aggregation, grooming and redistribution of traffic with a view to increasing network use and efficiency. A DCS is often used on a network backbone to re-arrange the trunk groups associated with physical facilities for routing purposes.
DDD	Direct Distance Dialling
DDI	Direct Dialling In: Enables callers across the PSTN to dial a public network number and allows the call to be made to the specified internal number without the intervention of the PABX operator.
DDI	Direct Dialling In
DECT	Digital Enhanced Cordless Telecommunications: An ETSI standard for digital portable phones.
DEISA	Distributed European Infrastructure for Supercomputing
Demarc	Demarcation Point: The point at which the telco's local loop network

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	terminates and connects with a subscriber's telephone system, or wiring, at the customer's premises.
Deregulation	A governmental process to remove, reduce or simplify restrictions on businesses and individuals and encourage development by opening national markets to national / international competition. De-regulation by governments of PTT (Post Telegraph & Telecommunications) monopolies has speeded the growth of national and international communication infrastructures throughout the world, at the same time opening a minefield of regulatory controls, licence agreements and interconnectivity wrangles with regional fixed-line operators using the national trunk network.
DES	Data Encryption Standard
Description Tag	A field within HTML used by meta search engines to create a summary, or abstract, of the contents of the page within the SERP.
DGNA	Dynamic Group Number Assignment: Supplementary service defined in the TETRA standards for dynamic management (i.e. creation and dissolution) of user talk groups.
DHCP	Dynamic Host Configuration Protocol
Direct Billing	Enables costs associated with various call elements to be allocated by the originating operator, directly to the organisations involved.
Discreet Listening	A TETRA supplementary service enabling an authorised user, e.g. dispatcher, to covertly monitor calls in progress.
DLC	Digital Loop Carrier
DLEC	Data Local Exchange Carrier
DM Repeater	A radio device designed to retransmit each call and thus increase the operational area of Direct Mode terminals (see DMO).
DMO	Direct Mode Operation: The facility for PMR terminals to communicate directly with each other without using the network infrastructure.
DMR	Digital Mobile Radio: A new ETSI standard developed for users of professional mobile radio (PMR).
DNS	Domain Name Service
DoS	Denial of Service
Dot Com	A commercial company operating via the internet.
Downlink	i) Transmissions from a base station to a radio terminal (or from a satellite to an earth station). ii) Describes a data transmission from the head end of a system to a data station.
DRM	Digital Rights Management: An umbrella term for technologies designed to give content providers control over third party redistribution and access to material for playback on computers, portable and networked (connected) devices. DRM enables operators to effectively 'monetise' content by charging subscribers for access to protected digital content. Standardisation is being driven by a number of groups including The OpenEBook Forum (OEBF) and the MPEG group (MPEG) in the ebook and multimedia sectors, as well as the Internet Engineering Task Force (IETF) and World Wide Web Consortium (W3C).
DS	Digital Signal: DS is the nomenclature used in the tabulation of digital signal speeds (DS-1 to DS-4) for classification of the capacities of digital lines and trunks.
DS-CDMA	Direct Sequence Code Division Multiple Access

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DSLAM	Digital Subscriber Line Access Multiplexer
DSP	Digital Signal Processing
DSS 1	Digital Subscriber Signalling 1
DTE	Data Terminal Equipment
DTMF	Dual Tone Multi-Frequency: Also known as 'Touch Tone', this describes the tones generated by pushing the keys on a phone.
DTN	Delay Tolerant Network
Duplexing	A technique used to transmit information in each direction simultaneously within a two-way communication system (as it is necessary to use separate channels).
DVB	Digital Video Broadcasting
DVB-H	Digital Video Broadcasting - Handheld
DVR	Digital Video Recorder: A device that records video in a digital format and writes it to a hard disk or other electronic storage medium.
DWDM	Dense Wavelength Division Multiplexing
E-1	The European equivalent of the T-1 circuit – i.e. 30 channels of 64 kbps (per channel) along a 2.046 Mbps bearer channel.
e2e	End to End Encryption: Describes encryption of the total communication link (i.e. from one end to the other) without intermediate decryption.
EAD	Ethernet Access Device
Earth Station	A ground-based antenna and associated equipment for transmission and / or receiving telecoms signals via satellite (aka 'downlink' or 'ground station').
EBITDA	Earnings Before Interest, Depreciation and Amortisation
EC	European Commission
ECCSA	European Calling Card Services Association
ECTA	European Competitive Telecommunications Association
EDGE	Enhanced Data rates for GSM Evolution: Also known as 'Enhanced GPRS', this technology is effectively the last phase in GSM evolution and employs new modulation techniques to deliver data speeds at up to 384 kbps (although commercial EDGE networks typically support actual speeds of circa 200 kbps).
Edge network	The access portion of the network.
Edge vehicle	Network switching or transmission equipment located at the subscriber's first point of access. It can be used for traffic grooming.
EDI	Electronic Data Interchange: Industry standard for the electronic exchange of data such as orders and invoices between two different locations or organisations.
EFM	Ethernet in the first mile
EFR	Enhanced Full Rate
EFT	Electronic Funds Transfer
EGP	Exterior Gateway Protocol: The TCP/IP-based service used by gateways to exchange information as to which systems can be accessed.
EGPRS	Enhanced General Packet Radio Service (aka EDGE).
Egress	Exit from a network.
ELAN	Ethernet Local Area Network: A service type defined by the MEF, which is implemented for service provision in large residential areas via copper, Fibre-to-the-home (FTTH) or to the building.
EMI / EMR	Exchange Message Interface / Exchange Message Record: Standard

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	format for the exchange of telecoms message information among Local Exchange Carriers (LECs).
EMLI	Ethernet Layer Management Interface
EMS	Element Management System
Encryption	Method for coding / scrambling information (voice or data) so that it cannot be understood or deciphered without special equipment or software.
Encryption key	A pseudo-random number or string of characters generated by a cryptosystem that allows the encrypted secret code to be decrypted, or allows plaintext (data that can be read by anyone) to be encrypted.
ENGINE	Experimental Next Generation Internet in Europe
Entrance Facility	Point of interconnection between the local exchange carrier's residence demarcation point and the external carrier's point of presence (PoP). Also known as End User Point Of Termination (EU-POT).
ENUM	Electronic Numbering: IETF's draft standard for unifying traditional telephony and next-generation IP networks. Provides a framework for mapping and processing diverse network addresses – effectively transforming the telephone number into a universal identity.
EO	End Office: The central office trunking / switching entity where telephone loops are terminated for interconnection purposes – i.e. a central office to which a telephony end user is connected, or the final central office before the subscriber's telephone.
EOAM	Ethernet Operations, Administration and Maintenance
EoC	Ethernet over Copper: Uses bonded multi-copper pairs that are grouped to serve as a single link. This technique enables service providers to distribute symmetrical, high-speed carrier-class Ethernet services of up to 45 Mbps or more over existing copper infrastructure.
EoS	Ethernet-over-SDH / SONET: Uses GFP to encapsulate Ethernet and other data protocols into SDH / SONET.
e-Passport	Electronic Passport: Machine-readable travel documents that can store three biometric identifiers: a mandatory photograph and optional two fingerprints and iris, on a secure embedded RFID chip.
EPL	Ethernet Private Line: Service type defined by the MEF, whereby all the bandwidth is made available to the subscribers (as opposed to ELAN).
EPON	Ethernet PON: An IEEE / EFM standard for transmission of packet data over Ethernet.
EPROM	Erasable Programmable Read Only Memory: A read only memory device that can be erased and reprogrammed.
Equal Access	Describes the process / scenario whereby all end users have easy access to long-distance networks via the carrier of their choice.
Equivalence of inputs	Supply of products by an incumbent operator at the same price, sales terms and conditions, to both third-party customers and their own retail subsidiaries.
ERG	European Regulators Group
Erlang	A measure of traffic capacity on telecoms networks that is calculated as the ratio of the time a circuit is occupied, to the total time being measured.
Erlang Forecast	Engineering formula used to forecast the amount of capacity required at a specific service provider facility.
ERO	European Radiocommunications Office

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ESRB	Entertainment Software Rating Board: Industry body that assigns ratings polices advertising guidelines and promotes responsible online privacy practices for the interactive entertainment software industry.
Ethernet	The dominant local and wide area networking standard as defined by IEEE 802.3.
Ethernet over WDM	The transmission of Ethernet over a fibre pair using protocol-independent, Wavelength Division Multiplexing (WDM) technology. It makes use of GFP to encapsulate Ethernet into SDH – the SDH signal being dedicated to a wavelength.
ETSI	European Telecommunications Standards Institute
EUPOT	End User Point of Termination
EVDO	Evolution Data Optimised / Evolution Data Only
EVE Online	An MMOG in which all players co-exist in one virtual universe.
EVPL	Ethernet Virtual Private Line
Exchange	An operations facility generally smaller than a LATA, established by the local exchange carrier for the administration of communications service in a specified area (usually a city, town, or village). An exchange consists of one or more central offices.
Facilities	An umbrella term for infrastructure used by an operator to provide telecoms services – e.g. cables, switching equipment, hardware and software, conduit, wireless transmission systems, etc.
Facilities-Based Carriers	CLECs that own or lease their dedicated facilities. The latter can be co-located in a telecoms service provider's office.
FAN	File Area Networking
Favicon	Logo that replaces the default Microsoft icon in the location bar and 'Favourites' list (see the T©W logo for example, which should be top left in your browser bar if you are using Internet Explorer).
FCC	Federal Communications Commission: The U.S. regulatory body for telecommunications.
FDD	Frequency Division Duplex: Employed by wireless systems to provide an uplink and downlink radio channel between the network and the user.
FDM	Frequency Division Multiplexing: A technique that divides the available bandwidth of a circuit into multiple channels, so that each can carry an individual voice / data transmission.
FDMA	Frequency Division Multiple Access: A method of allowing more than one signal to be sent on a communications channel by assigning each transmission a dedicated frequency that will not interfere with other transmissions.
FEC	Forward Error Correction / Forwarding Equivalence Class
FER	Frame Error Rate
FGNGN	Focus Group on Next Generation Networks
FH	Frequency Hopping: The repeated switching of frequencies during radio transmission.
FH-CDMA	Frequency Hopping Code Division Multiple Access
Fibre Optics	The transmission of information in the form of a light impulse passed along a glass or plastic strand. Fibre optics (aka optical fibre) uses photons travelling at the speed of light (rather than electrons via a metal conductor) as the signal carrier. Less subject to electromagnetic interference, fibre-optic transmissions use a signal regenerator to convert the pulsed photon streams to electronic data flow at the fibre / copper interface. Widely deployed to provide for

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	high-bandwidth backbones, national trunk lines, local loop networks and international data pipes, fibre-optic cable essentially comes in two forms: single mode and multi-mode. Fibre is an ideal carrier medium because the transmission of much higher data capacities is possible using WDM (Wavelength Division Multiplexing) than multiplexing over conventional copper wire.
Filecasting	Distribution of a digital data / information file, or a series of files, over the internet, using syndication feeds (see RSS) about updates and new data for downloads. Although filecasting is very similar to podcasting, it essentially serves as an alternate medium for delivering syndicated web content to users.
FIPS	Federal Information Processing Standard
FIT	Fingerprint Image Transmission
FMC	Fixed-Mobile Convergence: Describes seamless connectivity between fixed and wireless telecoms networks. It encompasses any device that can connect through, and be switched between wired and wireless networks. Generic Access Network (GAN) technology supports FMC by integrating Bluetooth, 3G and WiFi connectivity in a single mobile handset and enabling hands-free voice calls at less cost over WiFi networks and internet browsing / data applications over mobile infrastructure.
FMS	Fixed-to-mobile Substitution: Constitutes call substitution and line substitution. The term addresses scenarios where customers retain a fixed line but use it infrequently or where they are a mobile-only subscriber with no fixed line.
FNO	Fixed Network Operator
FOAF	Friend of a Friend: a machine-readable ontology that describes persons, their activities and their relations to other people and objects.
FOC	Firm Order Confirmation: A form issued by one local phone company to another indicating when the circuits previously ordered are to be installed.
FOMA	Freedom of Mobile Access: The brand name for 3G services offered by Japanese cellular operator NTT DoCoMo.
Footprinting	Using a search engine to find things like extension listings on the open internet.
FOT	Fibre Optic Terminal
FPS	First-Person Shooter: A type of massively multiplayer online role-playing game (MMORPG).
FR	Frame Relay
FSO	i) Foreign Switching Office: Describes the switching entity when a subscriber is not being served from their traditional wire centre. ii) Free Space Optics: Line-of-site transmission systems based on infra-red beams and deployed by carriers in areas where installation of fixed-line infrastructure is difficult. FSO is licence-free and thus outside the regulations associated with wireless technologies.
FSSN	Fleet Specific Short Number: One of the numbering mechanisms used in TETRA.
FTTC	Fibre To The Curb: Fibre terminated in a street cabinet with connectivity to the subscriber provided via a copper pair – usually over a distance not exceeding 100m.
FTTH	Fibre To The Home: Also known as FTTP / FTTU (or FTTx as an umbrella term), FTTH is an access network where optical fibre is

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	terminated within a residential or business building.
FTTN	Fibre To The Node Network
FTTP	Fibre to the Premise (see FTTH)
FTTU	Fibre to the User (see FTTH)
Fuzzing	A denial-of-service attack against a VoIP system.
Games Publisher	Publishers of interactive games developed either in-house, or by a video game developer.
GAN	Generic Access Network: A telecoms system supporting seamless roaming and handover between local area networks and wide area networks. Also known as UMA, GAN integrates Bluetooth, 3G and WiFi connectivity in a single mobile handset and enables hands-free voice calls at less cost over WiFi networks and internet browsing / data applications over mobile infrastructure.
GAP	Generic Access Profile: An interoperability profile used by DECT systems.
Gateway	<p>i) A translator between two similar applications that use different communication protocol suites. Gateways operate on all levels of the OSI model and provide functional bridges between networks by receiving protocol transactions on a layer-by-layer basis from one protocol, and transforming them into comparable functions for the other protocol.</p> <p>ii) A device that interfaces a PMR network with other private or public telecoms networks, e.g. PSTN, VHF / UHF radio networks.</p> <p>iii) A telephone switch that handles international calls.</p>
Gb	Gigabit: 1000 Megabits
GB (binary)	Gigabyte: 1024 Megabytes
GB (decimal)	Gigabyte: 1000 Megabytes
GbE / GigE	Gigabit Ethernet
Gbps	Gigabits per second: 1,000 Megabits per second (Mbps – also see bps).
GCK	Group Cipher Key: A key used (in conjunction with CCK) to give crypto group separation between groups.
Generator	An engine-powered electricity generation unit often used to ensure power continuity in the event of a mains power failure.
GEO	Geostationary Orbit (for a satellite).
GERAN	GSM / EDGE Radio Access Network (see RAN)
GFP	Generic Framing Procedure
GGSN	Gateway GPRS Support Node: A router within GPRS networks for disassembling GTP tunnels and forwarding IP packets to internet or mobile operator servers.
GHz	Gigahertz: A unit of frequency equal to one thousand million Hertz (see Hz).
GigE	Gigabit Ethernet
GMPLS	Generalised Multiprotocol Label Switching
GMSC	Gateway Mobile Services Switching Centre: The gateway between two networks.
GPON	Gigabit Passive Optical Network: Encapsulates traffic in a version of the SDH-compatible GFP to support real-time services such as on-demand television.
GPRS	General Packet Radio Service: The first implementation of packet

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	switching within GSM (which is a circuit switched technology) supporting data rates up to 115 kbps – although commercial GPRS networks typically support actual data rates of circa 70 kbps.
GPS	Global Positioning System: A location system that uses satellites to pinpoint a location. The most common applications for GPS include in-vehicle navigation systems such as 'Tom Tom' and 'Navman', where it is used to overlay a user's current position onto a map and plot journeys, as well as commercial vehicle tracking / security systems and in the near future, Location Based Services (LBS) for cellphones. Depending on the number of satellites visible to the user, GPS can provide accuracies down to tens of metres.
GRAN	GSM radio access network (see RAN).
Grey Nets	Networks formed from applications and devices installed by end users without the authorisation of the IT department / enterprise. These might include removable storage media such as iPods, and applications like Instant Messaging and Skype.
GRX	Global / GPRS Roaming Exchange Node: Interconnects with GPRS networks to facilitate global roaming coverage. Based on the GSM Association's IR.34 Recommendation, GRX is, essentially, a centralised IP-routing network for interconnecting GPRS and 3G networks. GRX can be implemented on a private or public IP backbone and transports GPRS roaming traffic via the GPRS Tunnelling Protocol (GTP). As traffic is aggregated at the regional GRX level, carriers require only a connection to a local point of presence to enable global roaming. GRX networks interconnect to create a tier of the internet through which carriers can exchange IP traffic generated by roaming customers.
GSM	Global System for Mobile Communication: Second generation digital cellular technology originally developed for Europe.
GSM-R	GSM-Railway: GSM variant designed for use by train operators.
GSN	GPRS support node
GTP	GPRS Tunnelling Protocol: Used to encapsulate mobile subscriber data traffic between SGSN and GGSN nodes, in non-roaming and roaming situations.
GTSI	Group TETRA Subscriber Identity
H.323	An earlier multimedia IP protocol mostly associated with Voice over IP (see VoIP).
Habbo Hotel	Believed to be one the world's largest and fastest growing virtual worlds and social networking services for teenagers, with some 78 million avatars (as of September 2007).
Handoff / Handover	The transfer of a call or data session in progress from one cell to another, without any discontinuity.
HDTV	High Definition Television
High Capacity Access Service Request	An order defining capacity / equipment (to be built or reserved) and specifying terms on the part of the telco and the Interexchange Carrier.
High-Capacity Link / Service	Tariffed, digital data transmission service equal to, or in excess of T-1 data rates (1.544Mbps).
HLR	Home Location Register: The database within a network that stores all the subscriber data (important for roaming).
HSCSD	High Speed Circuit Switched Data
HSDPA	High Speed Downlink Packet Access: Technology upgrade to 3G cellular networks that accelerates download speeds beyond 3G /

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	UMTS and requires HSDPA-capable handsets.
HSM	Hardware Security Module
HSP	Hosted Service Providers operate on a one-to-many business model, and serve as both an ASP and ISP – offering applications delivered remotely, infrastructure services plus web hosting as an outsourced service.
HSUPA	High Speed Uplink Packet Access
HTML	Hypertext Markup Language: Facilitates the electronic exchange and display of simple documents using the internet.
HTTP	Hypertext Transfer Protocol: Facilitates the transfer of hypertext-based files between local and remote systems.
Hub	Designated wire centre at which bridging, multiplexing or connections to other services are performed for voice, data and multimedia traffic (aka 'hubbing').
HVAC	Heating, Ventilating and Air-Conditioning (systems)
Hypertext	Generic term describing techniques used to create and view multidimensional documents, which may be entered at many points and browsed in any order by choosing keywords or phrases as search parameters.
Hz	Cycles per second
I/O	Input/Output
IAFIS	Integrated AFIS
IC	Integrated Circuit
ICAO	International Civil Aviation Organisation
IDEA	International Data Encryption Algorithm
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IGMP	Internet Group Management Protocol
IGP	Interior Gateway Protocol
IGRP	Interior Gateway Routing Protocol
ILD	International Long Distance
ILEC	Independent Local Exchange Carrier
IM	Instant Messaging
IMA	Interconnect Mediated Access
IMEI	International Mobile Equipment Identity
i-mode	A mobile internet service developed by NTT DoCoMo in Japan that uses CHTML rather than WAP to deliver services such as email, sports results, weather forecast, games and financial services. It was adopted by various cellular operators in other countries but in the main, these have failed to replicate i-mode's success in Japan.
IMPS	Instant Messaging and Presence Service
IMS	IMS is a next generation networking (NGN) architecture for telecom operators launching mobile and fixed multimedia services and merges the internet with the cellular world. Using Voice-over-IP (VoIP) based on a 3GPP (3rd Generation Partnership Project) standardised implementation of SIP; it operates using standard Internet Protocol (IP) and supports both packet-switched and circuit-switched communications. The aim is not only to provide new services, but all the services, current and future, that the internet provides. In this way, IMS offers telcos and service providers the

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	<p>ability to control and charge for individual services irrespective of a user's location, access technology or device. Users can also execute all their services when roaming.</p> <p>that the goal is for IMS to work with any network (fixed, mobile or wireless) with packet-switching functions, such as GPRS, UMTS, CDMA2000, WLAN, WiMAX, DSL and cable. Older circuit-switched phone systems (POTS, GSM) would be supported via gateways. Open interfaces between control and service layers allow elements and calls / sessions from different access networks to be mixed.</p>
IMSI	International Mobile Subscriber Identity: Internal subscriber identity used only by the network.
IMS-MGW	IP Multimedia Subsystem-Media Gateway Function
IM-SSF	IP Multimedia-Services Switching Function
IMT-2000	International Mobile Telecommunications 2000: The ITU's umbrella global standard for third generation (3G) mobile communications that embraces five terrestrial radio interface technologies – CDMA Direct Spread (WCDMA / UMTS); CDMA Multi-Carrier (MC); CDMA TDD (UTRA TDD & TD-SCDMA); TDMA Single Carrier (UWC-138 / EDGE); and FDMA / TDMA (DECT).
IMT-2000 CDMA Multi-Carrier (MC)	The official ITU designation for CDMA 2000 (see CDMA 2000 1X).
IN	Intelligent Network: A network controlled by a separate network of computers, allowing functionality to be distributed at a variety of nodes. Capable of recognising subscriber profiles (i.e. authorisation and service profiles); IN enables operators to offer enhanced facilities such as freephone, premium rate information services, call distribution services and alternate call billing.
INCITS	InterNational Committee for Information Technology Standards
Incumbent	<p>The indigenous wireline telecoms network operator / services provider that operates or previously operated as a government-controlled monopoly. Following deregulation and privatisation, incumbent operators commonly undertake to operate, maintain and improve their respective national telecoms network, but are required to enter into interconnection agreements and share access with independent national / regional telcos and local exchange carriers.</p> <p>In the U.S., an Incumbent Local Exchange Carrier (ILEC) is a telephone company that was providing local service when the Telecommunications Act of 1996 was enacted. ILECs include the former Bell operating companies (see BOC).</p>
Ingress	Entrance to a network.
Interactive game	Computer and video game in which the choices, actions and decisions of the user influence how the game unfolds.
Inter-carrier compensation	Defined by the FCC (US), as the charge that one carrier pays to another carrier for origination, transport, and / or termination of telecommunications traffic'. There are two major forms of inter-carrier compensation – access charges and reciprocal compensation.
Interconnect Billing	The process used by service providers to identify, maintain and settle the various interconnect fees, discounting agreements and billing that results from linking many different types of services – i.e. traditional voice (origination, termination and transit); mobile (roaming voice, SMS and data) ISPs' data traffic (Broadband) and content aggregation and delivery.
Interconnection	Connection of individual items of equipment or transmission facilities

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	within, between or among telecoms networks.
Interconnection Agreement	An agreement between carriers providing for interconnection, co-location, resale, network elements and ancillary services.
Interconnection Point	The physical point of demarcation between ownership of the transmission facility and the network.
InterLATA Service	Telecoms between a point located in a Local Access and Transport Area (LATA) and a point located externally.
internet	A worldwide interconnection of networks operated by academia, government, industry and private parties, that transmits data via packet switching based on IP.
Interoffice trunk	Trunk circuit connecting two local telcos' central offices (see CO).
IntraLATA Service	Telecoms services that originate and end within one Local Access and Transport Area (LATA).
Intranet	A private network that uses the same techniques as the internet but is accessible only to authorised users.
IOF	Interoffice Facility: Provides routing for CLECs using multiple interoffice transmission paths via non-dedicated facilities.
IOP	Interoperability (of TETRA equipment).
IP	Internet Protocol
IP MPLS	Internet Protocol Multi Protocol Label Switching: Integrates Layer 2 information on network links (bandwidth, latency, and utilisation) into Layer 3 (IP) within a particular autonomous system (e.g. an ISP) to simplify and improve IP-packet exchange. It offers network operators the flexibility to divert and route traffic around link failures, congestion and bottlenecks.
IP on Demand	An auction process that allows IP transit buyers to purchase bandwidth as and when required.
IP Transit	Wholesale internet bandwidth sold to ISPs and content providers, whereby pricing is typically offered on a 'per Mbps per month' basis and requires the purchaser to commit to a minimum volume of bandwidth.
IP VPN	Internet Protocol Virtual Private network
iPALS	Online services where users share their identity, Presence, Attention, Location and Status.
IPLC	International Private Leased Circuit
IPsec	secure IP
IPTS	Institute for Prospective Technological Studies
IPTV	Internet Protocol Television: The delivery of either live TV or stored video encoded as a series of IP packets. IPTV primarily uses multicasting with Internet Group Management Protocol (IGMP) version 2 for live television broadcasts and Real Time Streaming Protocol for on-demand programmes. Compatible video compression standards include H.264, Windows Media Video 9 and VC1, DivX, XviD, Ogg Theora and MPEG-2 and -4.
IPv4	Internet Protocol Version 4: The version of Internet Protocol on which the current internet is based.
IPv6	IP version 6: The next-generation protocol designed by the IETF to replace the current version (IPv4) and which fixes a number of problems, such as the limited number of available IPv4 addresses. It also adds improvements in areas such as routing and network auto configuration.
IPX	IP Exchange: A next-generation backbone network for all commercial IP traffic with governance authority, whereby end-to-end SLAs are

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	established between dual carriers / operators using standardised QoS attributes and controlled Round-Trip Delay (RTD), jitter and packet-loss tables. A GSM Association development, IPX is a 'hubbing' model that will be open to all GSM, CDMA and WiFi operators, and enable the provision of multiple services and secure application and content distribution.
IR	Infrared
IRU	Indefeasible Rights of Use: An IRU agreement underwrites the use the circuit (typically a submarine or fibre-optic cable) by a network or user for an defined time and bandwidth
ISDN	Integrated Services Digital Networks
ISI	Inter-System Interface: Open interface standard used to connect two TETRA networks together.
ISO	International Organisation for Standardisation
ISP	Internet Service Provider
ITIL	IT Infrastructure Library – a standard for IT service management.
ITO	Information Technology Outsourcing
ITSI	Individual TETRA Subscriber Identity
ITU	International Telecommunications Union
ITU-T	International Telecommunications Union – Telecommunication Standardisation Sector: The body responsible for studying technical, operating, and tariff issues and making recommendations on such matters.
IVR	Interactive Voice Response System
IXC	Interexchange Carrier or Interexchange Common Carrier: Provides interLATA or intraLATA long distance telephone services.
IXC mileage	Inter-exchange mileage: Airline mileage between two cities.
J2ME	Java 2 Micro Edition
JAIN	JAVA IN
JAVA	Programming language developed by Sun Microsystems and characterised by the fact that programs written in Java do not rely on an operating system.
Jitter	Variability in latency or delay disruptive to communications – particularly audio transmissions.
Jitter	Variability in latency or delay disruptive to communications – particularly audio transmissions.
kb	kilobit: 1000 bits
KB (binary)	kilobyte: 1024 bits
KB (decimal)	kilobyte: 1000 bytes
kbps	kilobits per second: 1,000 bits per second (see bps).
KEI	Keyword Effectiveness Index: A formula used in search engine optimisation (SEO) to rate the effectiveness of a keyword, whereby the square of the popularity of a particular keyword (i.e. the number of times it has been searched for within a given timeframe) is divided by its competitiveness (i.e. the number of web sites displayed when that keyword is searched for using an exact match).
Keyword Tags	Assist search engine 'spiders' in determining the relevancy of a particular web page.
KMC	Key Management Centres: An entity for remotely loading keys to user terminals.
KSG	Key Stream Generator: Produces key stream from inputs of encryption key and synchronisation vectors fed into the encryption

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	algorithm.
LAN	Local area network
LAP	Link Access Protocol
LAPB	Link Access Protocol Balanced
LAPD	Link Access Protocol for the ISDN D Channel
Last Mile	Typically, the link between the subscriber and the telco's central office.
LATA	Local Access and Transport Area: A geographic area within a telco's franchised territory.
LATA Access	Origination or termination of interLATA telco traffic for an Interexchange Carrier.
Late Entry	A TETRA supplementary service that allows a user who has, for example, just switched on their mobile radio, or has finished another call, to join a call in progress between the members of their talkgroup.
Latency	The time taken to transmit information across a network.
Lawful Interception	Facility for telecoms networks to be monitored and calls intercepted by government agencies.
LBS	Location Based Services
LCR	<p>i) Least Cost Routing: Provides telecoms carriers with the ability to land calls at any given destination using the most cost-effective call delivery route. Maintaining a competitive cost base and acceptable call quality requires that a number of routes to a given country are established at different pricings, quality and capacity. Carriers sign interconnect agreements with each other specifying their terms of business.</p> <p>ii) Least Cost Routing is also used to describe independent service provider equipment installed on customers' premises, which is pre-programmed for automatic selection of call routing of each call via an appropriate telecoms operator and based on the lowest call cost to the required destination.</p>
LDAP	Lightweight Directory Access Protocol
LDP	Label Distribution Protocol
LEC	Local Exchange Carrier
LEO	Low Earth Orbit
LER	Label Edge Router
Link Reputation	A Search Engine Optimisation (SEO) term used to describe where the link on a web page also says something about the destination page. In other words, the keywords used in that link have a large influence on the rank of the page that the link points to.
LLU	Local Loop Unbundling
LNM	Local Network Management
LNP	Local Number Portability
Local Loop	The communications circuit between the local exchange and the subscriber's equipment.
Local Trunk	Trunk lines between local exchanges.
LoS	Line of Sight
LPOG	Limited Player Online Game: Games for between 2 and 256 concurrent players.
LS	Line Station: A fixed, wireline user terminal (as distinct from a mobile radio terminal) that is connected to a TETRA network and providing

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	services without needing to be in range of the system facilities.
LSI	Line Station Interface
LSR	i) Local Service Request: Forms used by CLECs to request a local loop from ILECs. ii) Label Switch Router
MAC	Media Access Control
MACD	Moved, Added, Changed, or Deleted
MAN	Metropolitan Area Network (aka metro)
MAPI	Messaging Application Programming Interface
Margin management	Complementary to all other areas of revenue assurance, margin management entails the processing of usage records, billing, inventory and invoice data, with the objective of identifying revenue and cost opportunities.
Master DMO terminal / radio	The radio that initiates a DMO conversation and, in the absence of the synchronisation signal from the infrastructure, is acting as a control of the synchronisation timing.
Mb	Megabit: 1000 kilobits
MB (binary)	Megabyte: 1024 kilobytes
MB (decimal)	Megabyte: 1000 kilobytes
Mbps	Megabits per second: 1,000 kilobits per second (see bps).
Mbps	Megabits per second
MCC	Mobile Country Code: Part of TETRA Number Identity.
m-commerce	Mobile commerce / mobile e-commerce
MD	Mediation Device
MDU	Multiple Dwelling Units
Mediacasting	Transmitting or broadcasting media in the form of multimedia programming that includes text, images, sound, and video. Encompasses three main categories: datacasting, clipcasting and filecasting.
Mediaflo	A proprietary media streaming solution (forward only) for CDMA networks developed by Qualcomm.
MEF	Metro Ethernet Forum
MEO	Mid Earth Orbit (satellite)
Mesh network	<p>A mesh network is a resilient, wide area network (WAN) topology where devices are connected with multiple redundant interconnections between network nodes. In a true mesh topology, there are multiple paths connecting multiple sites and every node has a connection to every other node in the network. Switching between nodes provides for redundancy in the event of local or regional failure ensuring that data is transmitted / delivered with high reliability. In practise, carrier networks may use only a partial mesh network topology due to cost considerations.</p> <p>In the context of cellular or WiFi, mesh networks take the form of multi-hop systems in which devices assist each other in transmitting packets through the network, especially in adverse conditions and over wide geographic areas.</p> <p>WAN architectures, such as the internet, can employ mesh routing, creating a virtual global mesh network allowing communication – even during times of conflict.</p>

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Meta tags	Information inserted into the 'head' area of web pages. Other than the title tag, information in the head area is not seen by those viewing the pages in browsers. Instead, meta information in this area is used to communicate information that a human visitor may not be concerned with. For example, they can tell a browser what 'character set' to use, or whether a web page has self-rated itself in terms of adult content.
Metadata	Describes what a set of data is about – i.e. its relevance. Metadata can be used to convey to search engines which pages to index and which to ignore, whether or not to follow links, as well as to add relevancy to a page for ranking purposes.
MGCF	Media Gateway Control Function
MGIF	Mobile Games Interoperability Forum
MHz	megahertz: One million Hertz (see Hz).
MIM	Mobile Instant Messaging
MIMO	Multiple Inputs Multiple Outputs: Signal processing technology designed to achieve data throughput speeds of 100Mbps by using multiple receivers and multiple transmitters (i.e. antennas) in both the client and access point.
MIT	Minutiae Interoperability Testing
MLPPP	Multi-Link Point-to-Point Protocol
MMC	Monopolies and Mergers Commission
MMD	Multimedia Domain
MMI	Man Machine Interface
MMOFPS	Massive Multiplayer Online First Person Shooter
MMORPG	Massively Multi-Player Online Role Playing Game
MMOSG	Massively Multiplayer Online Social Gaming
MMPOG	Massively Multiplayer Online Gaming
MMR	Meet Me Room: A place within a co-location centre or carrier hotel where multiple telcos can physically connect to one another and exchange data without incurring local loop fees. Services provided include voice, data and IP circuits.
MMS	Multimedia Messaging Service
MNC	Mobile Network Code: Part of TETRA Number Identity.
MNC	Multinational Corporation
MNE	Multiple Network Environment
MNO	Mobile Network Operator
MNP	Mobile Number Portability
MO	Mobile Originated
Mobile TV	Mobile Television: The viewing of a live broadcast video on a mobile phone.
Moblog	Mobile blogging: Services that allow users to post short notes and photos to their 'moblogs' on the go via their cellphones.
Modulation	The addition of information (or the signal) to an electronic or optical signal carrier.
MOS	Mean Opinion Score
MoU	Memorandum of Understanding
MOU	Minutes of Use
MPD	Minutes Per Drop
MPD	Multislot Packet Data: IP data service using multiple timeslots.

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MPEG	Moving Picture Experts Group
MPLS	Multi Protocol Label Switching: An IETF standard that adds routing and priority to packets transmitted across IP, ATM and frame relay networks allowing low and predictable delay for time-critical traffic such as VoIP.
MPOP	Minimum Point of Presence
MRFC	Media Resource Function Controller
MRFP	Media Resource Function Processor
MRTD	Machine Readable Travel Document: See e-Passport.
MS	Mobile Station: A wireless device – i.e. a mobile phone or radio.
MSC	Mobile Switching Centre
MSO	Multi-System Operator
MSPP	Multi-service Provisioning Platform
MTU	Multi-Tenant Unit
Multi Mode Fibre	Optical Fibre with a diameter large enough to permit light waves to travel in multiple paths concurrently (typically used for backbone applications within buildings or on campus because of its high capacity over shorter distances).
Multicasting	The broadcasting of data to multiple clusters of destinations on a network at the same time using only one transmission stream to the link, from where data is distributed to specific users on separate lines.
Multiplayer game	A game with a number of participants playing either against each other or in co-operation. The Internet has taken this game concept to a whole new level with the emergence of 'Massively Multiplayer Online Gaming' (MMPOG).
MUX	Multiplexer: Equipment allowing two or more signals to pass over one communication circuit.
MVIC	MPLS VPN Inter-provider Connection
MVNO	Mobile Virtual Network Operator
MVPN	Mobile Virtual Private Network
MVS	Mobile Voice System: Allows office phones and mobile phones to be integrated into a single system – i.e. a single phone number that works across all phone platforms, enhanced security, and the ability to work with a variety of IP-PBXs.
NAC	Network Access Control: Considered the 'holy grail' of network security, as it is an intelligent network infrastructure that can identify users, conduct integrity checks on their computers and then grant them access to specific locations and / or resources and set policies based on user and machine identity.
NAP	National Access Point
NAT	Network Address Translation
NCI	Network Channel Interface
NE	Network element: term used to describe a facility or equipment used for telecoms service provision.
NECA	National Exchange Carrier Association (U.S.)
NEPs	Network Equipment Providers
Net neutrality	Network neutrality: The concept that all like internet content must be treated alike and move at the same speed over the network. Although there are those (i.e. carriers) that argue they should be able to charge subscribers for accessing content at a guaranteed quality.

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Network Elements	Telecoms hardware (i.e. CPU-based infrastructure) for switching and transport functions, and containing network operations functions.
Network topology	The specific physical or logical (i.e. virtual) arrangement of the elements of a network.
ngDLC	next-generation Digital Loop Carrier
NGN	Next Generation Network
NGOSS	New Generation Operations Systems and Software: A TeleManagement Forum programme defining an integrated framework for developing, procuring and deploying operational and business support systems and software for service providers and their suppliers.
NIST	National Institute of Standards and Technology (U.S.)
NMS	Network Management System
NMT	Nordic Mobile Telephony: Analogue mobile telephone system deployed in Denmark, Finland, Norway and Sweden.
NNI	Network-to-Network Interface
NOC	Network Operations Centre
Node	A point of connection into a network.
Node B	UTRAN base station in UMTS 3G system.
NP	Number portability: A process whereby subscribers are able to retain existing telephone numbers when switching carriers, changing location, or service type.
NRENs	National Research and Education Networks
OAA	Over-The-Air Activation
OAM	Operations, Administration and Maintenance
OAP	Over-The-Air Programming
OBSAI	Open Base Station Architecture Initiative
OC	Optical Carrier: The range of digital signals that can be carried on a SONET fibre optic network.
OC-1 through OC-192	Optical Carrier Level: SONET digital hierarchy defining data rates from OC-1 at 51.84 Mbps, to OC-192 at 9,952 Mbps.
OCR	Optical Character Recognition
OEBF	The OpenEBook Forum
OECD	Organisation for Economic Cooperation and Development
OEM	Original Equipment Manufacturer
Ofcom	Office of Communications: Independent regulator and competition authority for the UK communications industries.
OFDM	Orthogonal Frequency Division Multiplexing: A multi-carrier transmission technique squeezing multiple modulated carriers tightly together, reducing the required bandwidth but keeping the modulated signals orthogonal, so they do not interfere with each other.
OFDMA	Orthogonal Frequency Division Multiple Access (OFDMA): A multi-user version of OFDM.
Off-net call	Calls carried transported over one network but destined for termination on another network.
OLT	Optical Line Termination (see ONU)
OMA	Open Mobile Alliance
OMA DRM	[Open Mobile Alliance] Digital Rights Management
Ontology	A data model comprising a description of some concepts and their relationships, designed to allow a computer to represent them and reason about them.

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ONU	Optical Network Unit: A device terminating an optical circuit at the customer premises, at the curb or in the neighbourhood.
Open Access (Duct)	A shared duct network for optical fibre cabling used by multiple retail or wholesale service providers that covers a substantial area or region.
Open Access (Fibre)	Allows connection at the physical layer interface, so that multiple retail or wholesale service providers can use the same FTTH network for competing services.
Open Access (Packet)	A scenario where multiple retail service providers share a FTTH network via the packet layer interface and compete via their end-user service offerings
Open Access (Wavelength)	A scenario where multiple retail or wholesale service providers connect to a FTTH Network at the wavelength layer interface and are able to offer competing services.
OpEx	Operational Expenditure
OR	Onward Routing
OSA	Open Service Access in 3GPP / ETSI
OSI	Open Systems Interconnection reference model: Organises communication processes into seven distinct and sequenced layers – <ul style="list-style-type: none"> • Layer 1 (Physical Layer): Defines the mechanical, electrical signalling standards for transmission of data between systems in physical networks • Layer 2 (Data Link Layer): Defines formats, such as frames and cells, for transmission of Layer 3 information between adjacent nodes in a network across a physical link • Layer 3 (Network Layer): Handles network addressing, routing and switching of data • Layer 4 (Transport Layer): Provides reliable, end-to-end connection between systems • Layer 5 (Session Layer): Allows presentation entities to organise and synchronise their dialogue and manage data exchange • Layer 6 (Presentation Layer): Specifies the format, coding and encryption of communications between applications running on different systems • Layer 7 (Application Layer): Sets up logical connections for the passing of application requests and responses
OSPF	Open Shortest Path First
OSPN	Open Service Provider Network (DynamicCity): Separates the infrastructure owner from the wholesale operator of the infrastructure.
OSS	Operations Support Subsystem
OTA	Over-The-Air
OTAR	Over The Air Re-keying: TETRA facility that allows encryption keys in the terminals to be changed remotely over the air.
OTDR	Optical Time Domain Reflectometer: A measurement device used for testing the integrity of a fibre optic cable.
Outsourcing	Transferring or sharing management control and / or decision-making of a business function to an outside supplier. In the telecoms domain, this can entail Business Process Outsourcing (BPO), Business Transformation Outsourcing (BTO) and Information Technology Outsourcing (ITO).
P2P	Peer-to-Peer: A network reliant on the infrastructure and bandwidth

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	of other participants on the same network for the exchange of traffic (i.e. voice, video, data).
PABX	Private Automatic Branch Exchange
Packet switching	Transmission of data that has been divided into fixed-sized pieces – i.e. ‘packets’ – which contain header information including the network address of the sender and the destination. This enables the packets to be sent over different routes and reassembled at their destination. Packet switching takes advantage of the ‘bursty’ nature of data applications and facilitates sharing of physical transmission resources, by enabling increased volumes of traffic to be sent at any one time on a given circuit. X.25 is the classic example of a packet-switched network technology.
PAMR	Public Access Mobile Radio: Commercial service that uses trunking techniques in which multiple groups of users can set up their own closed systems within a shared public network (typically a two-way radio network).
PAN	Personal Area Network
Parlay	Collection of open, technology-independent application programming interfaces (APIs) enabling development of applications that operate across converged networks. Parlay (aka Parlay X) integrates internet multimedia networks and intelligent networks (IN) with IT applications via a secure, measured, and billable interface. It is used by network operators to generate new revenue streams from value-added services.
PBB-TE	Provider Backbone Bridging Traffic Engineering (PBB-TE): The new connection-oriented technology for Carrier Ethernet networks designed to optimise packet transport.
PBT	Provider Backbone Transport
PBX	Private Branch Exchange
PCM	Pulse Code Modulation: The standard format for encoding an analogue voice signal into a digital bit stream.
PCN	Personal Communications Network
P-CSCF	Proxy Call Session Control Functions
PCU	Packet Control Unit: An element in a GPRS / UMTS network.
PD	Packet (Mode) Data: A mode of data transmission where a message is split into small packets, and transmitted packet by packet to the end destination (without a need for dedicated connection in between, as for circuit data), and assembled again in the correct order at the receiving end.
PDA	Personal Digital Assistant
PDH	Plesiochronous Digital Hierarchy: Conventional multiplexing technology for network transmission systems now being replaced by SDH and SONET. Plesiochronous refers to the fact that PDH networks operate in a state where different parts of the network are almost, but not quite perfectly synchronised.
PDO	Packet Data Optimised: A variant of the original TETRA standards set originally developed.
PDSL	Personal Digital Subscriber Line
PDU	i) Protocol Data Unit: Open Systems Interconnection (see OSI) reference for a packet containing data and control / header information being exchanged over a network. ii) Power Distribution Unit: Device used in data centres for distributing

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	electric power via a multi-phase, high voltage supply and transforming it to a 220V or 110V single phase output with various current ratings.
PEI	Peripheral Equipment Interface: Standard interface defined in TETRA for connecting a data terminal to a TETRA radio terminal.
Phantom traffic	A problem whereby telephone traffic is terminated at a local exchange but the originating carrier has manipulated or stripped information from the CDRs or signalling messages to avoid paying access charges. Some LECS / CLECS claim that as much as a third of their traffic cannot be billed for because of this issue.
PHY	PHYSical specifications (see OSI Layer).
PIC	Primary Interexchange Carrier
PIN	Personal Identification Number
Ping	A short message sent by an application from one system on a network to another in order to establish whether the receiver is operational.
PIV	Personal Identity Verification
PKI	Public Key Infrastructure
Plaintext	Refers to a message before it has been encrypted.
PLU	Percent of Local Usage: A figure produced on a regular basis by carriers and shared with other carriers to identify the jurisdiction of each call type carried over their trunk groups.
PMR	Professional (or Private) Mobile Radio communications: Describes a two-way radio technology (i.e. TETRA) that is widely used for mission / business-critical communications, as well as despatch and delivery services.
PNT	Private Transport Network
PoC	Push-to-Talk over Cellular
Podcasting	A term derived from combining Apple's portable media player 'iPod' and 'broadcasting', podcasting is a method of delivering internet-based audio programmes automatically to an MP3 player.
POI	Point of Interconnection / Point of Interface: The physical interface between the LATA access and inter-LATA functions. It is also the demarcation point between the local exchange carrier and a wireless service provider, which establishes the points for testing and the technical interface.
PON	Passive Optical Network: Comprising an Optical Line Termination (OLT) at the carriers' central office and a number of Optical Network Units (ONUs) located near end users, a passive optical network is designed to eliminate expensive network elements so that carriers can reach a large number of end-points at comparatively low cost.
PoP	Point of Presence
POT	Point-of-Termination
POTS	Plain Old Telephony Service
PPC	Partial Private Circuit
ppi	pixels per inch
PPP	Point-to-Point-Protocol: A Layer 2 (see OSI Model) protocol that allows two peer devices to transport data over a simple link (i.e. a serial line).
PPPoA	Point-to-Point-Protocol over ATM

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PPPoE	Point-to-Point-Protocol over Ethernet
Pre-roll	Short advertising spot which is immune to fast-forwarding, unlike regular TV ads for those with Digital Video Recorders (see DVR). Currently, YouTube, Google, Yahoo, AOL, Microsoft's MSN, and MTV's Overdrive all use pre-roll advertising. Although pre-rolls mean huge revenues for advertisers, media outlets could lose internet viewers who may simply go elsewhere rather than sit through video ads. However, companies using pre-roll advertising are finding ways to make them more appealing to viewers. AOL for example, does not use pre-rolls that are longer than 15 seconds.
PRI	Primary Rate Interface (ISDN)
Private Line	A direct circuit or channel dedicated to a specific end user that bypasses the Interexchange carrier.
Protected circuit	A circuit that uses 'self-healing' transmission technology – i.e. if one route fails, traffic is automatically redirected over the diverse standby route.
Pseudo-wire	Pseudowire technology, as defined by IETF's TW3, effectively turns the OSI model upside down because it can be used to carry any type of Layer 1 / 2 traffic – i.e. ATM, FR, SDH / SONET, TDM, WDM – over a packet architecture.
PSQM	Perceptual Speech Quality Measure
PSTN	Public Switched Telephone Network
PSU	Power Supply Unit
PTO	Public Telecommunications Operator
PTT	i) Postal, Telegraph and Telephone operator ii) Push-to-Talk: A feature of PMR systems.
Public exchange	The European term for Central Office (see CO).
PVC	Permanent Virtual (data) Circuit
PVR	Personal Video Recorder (see DVR).
PVW	Persistent Virtual World
QAM	Quadrature Amplitude Modulation: An advanced modulation / compression technique that uses variations in signal amplitude and phase. QAM is a scheme used in the next-generation TETRA Release 2 for the TETRA Enhanced Data Service (TEDS).
QinQ	Adds another layer of IEEE 802.1Q tag (called 'metro tag' or 'PE-VLAN') to the 802.1Q tagged packets that enter a network and allows service providers to offer services, such as internet access, on specific VLANs. QinQ is also known as 'VLAN stacking'.
QoR	Query on Release: A number portability routing technique (as in Mobile Number Portability) using IN.
QoS	Quality of Service
Quad-play	Provision of voice, video, data and mobile services.
RAM	Random-Access Memory: Forms the main memory of a computer and is made using semiconductor technology. RAM allows the user to access (read) or change (write) information stored within individual locations.
RAN	Radio Access Network: Refers to the wireless portion of the network that sits between the mobile phone and the core network. Examples include GRAN (GSM radio access network), GERAN (signifies the inclusion of EDGE packet switching) and UTRAN (UMTS radio access network).
Rating	The process of calculating charges for calls entering or leaving the

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	network. It is the first step in CDR processing for billing.
RBL	Real-time blacklist: Databases of known spammers maintained by ISPs and other industry organisations.
RBOC	Regional Bell Operating Company
RDP	Residence Demarcation Point
Reciprocal compensation call	Essentially, the payment by telcos to one another for terminating each other's local exchange traffic. This is a telephone exchange service call, completed between the end users of different carriers, that qualifies for reciprocal compensation under the terms of an interconnection agreement and any prevailing regulatory rules.
Request Type	A categorisation of Local Service Requests (LSRs) including Resale, UNE, Platform, Directory, Operator Services and AIN.
Resale Carrier	See 'Reseller'
Reseller	<p>i) A business entity that purchases telecommunications services at wholesale and sells them to third parties.</p> <p>ii) A service provider that obtains communications services from a carrier for resale to the public for profit.</p>
Reuse	The assignment of frequencies or channels to cells so that adjoining cells do not use the same frequencies and cause interference.
RF	Radio Frequency
RFC	Request For Comments
RFID	Radio Frequency Identification: Technology that uses small and relatively low-cost circuits capable of communicating with a fixed or portable device (i.e. the reader) via an antenna attached to the silicone chip. Chip and antenna together are referred to as RFID tags or transponders. RFID tags can be attached to consumer goods, packaging and other items, and can also be implanted into animals and humans.
RFP	Request For Proposal
Ring	A closed loop network topology.
RNC	Radio Network Controller
RNS	Radio Network Subsystem
Roaming	A service that enables a subscriber to make and receive calls when outside the service area of their home network.
ROI	Return On Investment
Route Diversity	<p>The allocation of a circuit between two points but over more than one geographic or physical route. This provides carriers with a means of ensuring redundancy in their network, because there is no single point of failure. It also enables carriers to meet service availability requirements for applications such as disaster recovery and video backhaul.</p> <p>Protocols are established for maintaining physical diversity of circuits within and across telecoms carriers. Known as 'diversity assurance', these protocols ensure that the different interpretations of 'diversity' among telecoms providers and customers – regarding maintenance of physical diversity for paired critical circuits – may be clearly understood.</p>
Route Server	A device that uses one or more network layer routing protocols.
Router	Any communications equipment that forwards information in a network on a connectionless basis (typically operates at Layer 3 of the OSI reference model).

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Routing	<p>i) Management of wholesale capacity agreements, such as bilaterals, transit and hubbing, are an integral part of the routing process, which can enhance business performance and play a vital role in the profitable trading of telecoms traffic. Dedicated network management software is used to conduct various complex tasks such as least cost routing (see LCR) or programming of routing commands into various switch types.</p> <p>ii) In packet-switched networks such as the internet, routing refers to router equipment that determines the next network point to which a packet should be forwarded toward its destination. The router is connected to at least two networks and decides which way to send each information packet. A router may create or maintain a table of the available routes and their conditions and uses this information, together with distance and cost algorithms, to determine the best route for a given packet. Typically, a packet may travel through a number of network points via routers before arriving at its final destination.</p> <p>iii) Routing is a function associated with the network layer (layer 3) in the Open Systems Interconnection (see OSI) model. A layer-3 switch is a switch that can perform routing functions.</p>
RPR	Resilient Packet Ring: The RPR (or IEEE 802.17) standard defining a new MAC layer to support Ethernet over fibre optic rings, although it can also be implemented as part of an SDH / SONET solution.
RSL	Restricted Service Licence
RSS	Really Simple Syndication (RSS 2.0) / RDF Site Summary (RSS 1.0 and RSS 0.90) / Rich Site Summary (RSS 0.91): A family of web feed formats based on lightweight XML and used to push small amounts of content from a web site to a computer. RSS has evolved into a popular method of sharing content such as blog entries, news headlines and podcasts (see podcasting), between sites. An RSS document contains either a summary of content from an associated web site or the full text.
RTD	Round-Trip Delay
RTP	Real-time Transport Protocol: IETF standard for streaming real-time multimedia (such as interactive voice and video) over IP.
RTT	Round Trip Time: The time taken to send a packet to a remote host and receive a response – i.e. a method of measuring delay on a network at a given time.
S/N	Signal to noise ratio (aka SNR).
SaaS	Software-as-a-Service: Where a software application is hosted and operated by the vendor, and accessed via the internet by users. Customers pay for usage rather than owning the software.
SAM	Software Asset Management: Processes covering compliance, IT risk management and licence optimisation.
SAN	Storage Area Networking
SAP	Service Access Point
SAPI	Service Access Point Identifier
SAR	Specific Absorption Rate
SARFT	State Administration of Radio, Film, and Television (China)
SAT-3/WASC/SAFE	Southern Africa - Western Africa Submarine Cable / South Africa - Far East

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SBC	Session Border Controller: A VoIP device controlling call admission to a network and performing a number of call-control functions.
Scbus	Signal Computing bus
SCE	Service Creation Environment
SCF	Service Control Function
Schengen Agreement	In 1985, France, Germany, Belgium, Luxembourg and the Netherlands decided to create a territory without internal borders. This became known as the 'Schengen area'. The name was taken from that of the town in Luxembourg where the first agreements were signed. This intergovernmental cooperation has gradually expanded to include every EU Member State and, in 1997, the signing of the Treaty of Amsterdam incorporated into EU law on 1 May 1999 the decisions taken since 1985 by the Schengen group members and the associated working structures. By 2009, all signatories of the Schengen agreement, which facilitates the free movement of people across the borders of EU member countries, will require their citizens to have an e-Passport.
SCIM	Service Capability Interaction Manager
SCK	Static Cipher Key: Used for protecting direct mode transmissions between radio terminals where no authentication is possible, and as a fallback key for use on base stations disconnected from the SwMI.
SCP	Service / Switching Control Point
S-CSCF	Serving Call Session Control Functions
SDF	Service Data Function
SDH	Synchronous Digital Hierarchy: ITU-approved fibre-optic standard enabling telcos to interconnect with one another by using the same standards within their fibre-optic transmission systems. SONET is the North American version of SDH.
SDK	Software Development kit: Developer tools used to write programs / applications for specific platforms.
SDLC	Synchronous Data Link Control: Bit-oriented synchronous communications protocol.
SDMA	Spatial Division Multiple Access
SDMA	Space Division Multiple Access
SDP	Session Description Protocol
SDR	Software Defined Radio
SDRAM	Synchronised Dynamic Random Access Memory
SDS	Short Data Service: A service in TETRA to deliver short data messages between user terminals. A message is composed of a number of characters and / or numerals up to a predetermined maximum.
SDSL	Symmetric Digital Subscriber Line
SDU	Service Data Unit
Sea-Me-We 3	South East Asia - Middle East - Western Europe 3: Submarine cable network claimed to be the longest system in the world with a total length of 39,000 km and including 39 landing points in 33 countries and 4 continents – from Western Europe (including Germany, England and France) to the Far East (including China, Japan and Singapore) and Australia.
Second Life	An online society within a 3D world and almost 3 million residents.
SEO	Search Engine Optimisation: Techniques employed to ensure that web pages are accessible to search engines and are focused in

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	ways that help improve the chances they will be found.
SERP	Search engine results page.
SGF	Signalling Gateway Function
SGSN	Serving GPRS Support Node: Mobile packet data element within a GPRS network handling GTP tunnels and forwarding them to Gateway GPRS Support Nodes.
Shadow consumer	The in-game avatar.
SIM	Subscriber Identity Module: The smart card used within a mobile device to store subscriber-related (i.e. the user) information.
Single Mode Fibre	Optical Fibre with a diameter of 8-10 microns over which only a single wave of light at the operating wavelength can propagate.
SIP	Session Initiation Protocol: Widely recognised as the protocol for all IP-based media sessions for today and the future, this text-based OSI Application Layer protocol is touted as a much more capable replacement of H.323.
SIP Enumeration	Probing ports on a network to find one that isn't tightly locked down.
SIR	Signal to Interference Ratio
Skype	Acquired by eBay in October 2005, Skype is a peer-to-peer VoIP network founded by entrepreneurs Niklas Zennström and Janus Friis (also founders of the file sharing application Kazaa) and competes against existing open protocols such as SIP, IAX and H.323.
SLA	Service Level Agreement
SLAPP	Strategic Lawsuits Against Public Participation: U.S. laws designed to protect whistleblowers from lawsuits when speaking out against large corporations. The latter are subsequently punished if they are considered to have filed frivolous lawsuits in order to silence the whistleblower.
Slave DMO terminal / radio	The receiving participant radio in a Direct Mode Operation (see DMO) conversation.
SLC	Subscriber Loop Carrier
SLF	Subscription Locator Function
SLG	Service Level Guarantee
SMDS	Switched Multimegabit Data Service
SME	Small or Medium sized Enterprise
SMIL	Synchronised Multimedia Integration Language: Pronounced "smile", SMIL is a markup language like XHTML and WML that enables simple coordination of interactive multimedia content. For example, integrating audio, video, still images, text etc.
SMS	Short Messaging Service
SMS	Short Message Service: A text message service that enables users to send short messages (each of 160 characters) to other users via the control signalling portion of a cellular network.
SMSC	Short Message Service Centre
SMSC	SMS Centre: Network element that switches SMS traffic.
SMT	Scar Mark & Tattoo
SN	Service Node
SNCP	Single Node Control Point
SNIPP test	Short but significant non-transitory increase in price
SNMP	Signalling / Simple Network Management Protocol
SOA	Service Oriented Architecture
SOAP	Simple Object Access Protocol: XML-based protocol defining a

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	framework for passing messages between systems via the internet.
Soft Client	Visual software client for telecoms services – i.e. the graphical representation of a telephone keypad displayed on a desktop PC.
Softswitch	Telecoms switching equipment combining the functionalities of old PSTN switches and next-generation packaged switches, typically with routing intelligence separated from the physical interface unit to allow a more cost-efficient deployment of several switches within the same network. Also known as a 'call agent' / 'media gateway controller' / 'media gateway', a softswitch uses network processors at its core and can support ATM, DSL, Frame Relay and IP.
SoHo	Small Office/Home Office
SONET	Synchronous Optical Network: A fibre-optic transmission system using time division multiplexing (TDM) to achieve multiple channels for voice or data communications.
SOX	Sarbanes-Oxley Act: US legislation concerning financial transparency that affects any company with a listing on a U.S. Exchange. Named after its main architects, Senator Paul Sarbanes and Representative Michael Oxley.
SPAM	Unsolicited commercial email.
Spamware bots	Software 'robots' that can run autonomously and trawl web sites looking to obtain email addresses.
Special Access Service	A transmission path connecting an Interexchange Carrier location in a LATA directly to an end user premise or another Interexchange Carrier location.
Spectrum	A continuous range of communications frequencies.
Spiders	Software algorithms used by search engines to crawl the internet to discover and rank web pages (for relevancy) according to the keywords and phrases used by each web page.
SPIT	Spam over Internet Telephony
SPOI	Signalling Point of Interconnection: The demarcation point on an SS7 signalling link where information is exchanged.
Spread Spectrum	A transmission technique where the frequency spectrum of a data signal is spread using methods such as assigning a code (see CDMA), Direct-Sequence (DS), Frequency-Hopping (FH), Time-Hopping (TH) or Multi-Carrier, in order to enable all users to transmit in the same bandwidth simultaneously.
SR	Signalling Relay
SS7	Signalling System Number 7
SSI	Short Subscriber Identity, part of TETRA Subscriber Identity.
SSL	Secure Socket Layer: Protocol employed to provide secure connections by allowing two applications connecting over a network to authenticate the other's identity and encrypt the data being exchanged.
SSP	Service Switching Point
Standard DMO	Direct Mode Operation using two out of the four timeslots available in a frame (one for uplink and the other for downlink), thus enabling a single conversation on the carrier.
Star (topology)	Network architecture where all nodes are connected to a central point or hub.
Status Messages	Words or concise phrases selected from a predetermined list that is resident in the terminal, and which are transmitted as a simple code reference, and then decoded by the receiving device and displayed as the word message.

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STK	SIM ToolKit: GSM specification enabling operators to add new functions to the phone menu and support additional value-added services (VAS).
STM	Synchronous Transfer Mode: A transport and switching method based on information occurring in regular and fixed patterns.
Streaming	The one-way transmission of video and audio content.
Street cabinet	An outdoor cabinet that provides environmental and mechanical protection for fibre management functions: splicing, patching and passive component integration.
Supernode	Used to describe a user's computer in a peer-to-peer network that acts as a relay between one user and another.
SVC	Switched Virtual (data) Circuit
Switch	General term referring to ACD, PBX or telephone exchange.
Switched Access Service	Transport of switched traffic between subscribers and carriers. Switched Access connects end-users to interexchange carriers (IXCs), mobile network operators (MNOs) and Competitive Local Exchange Carriers (CLECs).
SwMI	Switching and Management Infrastructure
Symbian	Creates and licenses Symbian OS, an operating system based on open standards for advanced mobile phones (known as smartphones).
T-1	North American standard digital trunk with 24 channels of 64 kbps.
TACS	Total Access Communications System: AMPS variant deployed in a number of (mainly) European countries.
TAR	Total Accounting Rate
TCP	Transmission Control Protocol
TD-CDMA	Time Division CDMA: A 3G cellular technology developed and used primarily in China that combines time division multiplexing (see TDMA) and CDMA techniques.
TDD	Time Division Duplex: A method of sharing a transmission channel by allocating specific timeslots to the uplink and the downlink to facilitate two-way, simultaneous communication.
TDM	Time Division Multiplexing
TDMA	Time Division Multiple Access
TDPU	Transport Packet Data Unit (see PDU).
TD-SDCMA	Time Division Synchronous Code Division Multiple Access: A third-generation (3G) cellular technology supporting data transmission at speeds of up to 2 Mbps. TD-SCDMA combines support for both circuit-switched data (i.e. speech or video) and also packet-switched data. The standard combines Time Division Multiple Access (see TDMA) with an adaptive, synchronous-mode Code Division Multiple Access (CDMA) component and was developed by the China Academy of Telecommunications Technology (CATT) in collaboration with Datang and Siemens.
TEIN2	Trans Eurasia Information Network
TEK	Traffic Encryption Key: End-to-end keys used to protect the user traffic payload.
Telehousing	A facility offering space, security and environmental controls for equipment owned by various carriers.
Telematics	Wireless communications systems designed for the automatic collection and dissemination of information.
Temporary / permanent disabling	Process whereby the network disables terminals connected to the TETRA system that have been reported as lost or stolen, or which

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	have fallen into unauthorised hands.
TETRA	TErrestrial TRunked RAdio: ETSI standard for digital trunked radio communications.
TETRA Network Protocol 1	A computer controlled communications system that allocates a communication channel for a call (either voice or data) from a common pool of available channels.
TETRA V+D	TETRA Voice + Data: The suite of TETRA standards normally referred to as 'TETRA'.
Tetrapol	A digital PMR technology developed by the French Government together with a number of vendors, that competes with TETRA in the mission / business-critical communications market.
TFN	Toll Free Number
Timeslot	A frame within a TDMA schema committed to a voice or data transmission.
TIPHON	Telecommunications and Internet Protocol Harmonisation Over Networks
TISPAN	Telecoms & Internet converged Services & Protocols for Advanced Networks
Title Tag	The HTML title tag that sits between the TITLE and /TITLE portions of web page code and appear in the reverse bar (i.e. the blue bar running across the top of the Explorer window) of someone's browser when they view the web page.
TM Forum	TeleManagement Forum
TMN	Telecommunications Management Network
TMO	Trunked Mode Operation: Trunked radio communications (see Trunk), as distinct from Direct Mode Operation (DMO).
T-MPLS	Transport – MPLS: Defined by ITU-T as an application of the MPLS technology for packet transport networks and considered a building block for next generation networks, T-MPLS is a derivative of MPLS being developed by the ITU as a carrier-grade technology supporting OAM and protection switching capabilities.
TMSI	Temporary Mobile Subscriber Identity: The identity that is most commonly sent between the mobile and the network, and covers the IMSI to prevent over-the-air interception and tracing.
Traffic	i) Messages sent and received over a communications channel. ii) Quantitative measurement (i.e. the load on a network) of the total messages and their length, expressed in hundred call seconds (CCS) or other units.
Traffic aggregation points	Carrier facilities (hotels / central offices / co-location etc.) where telecoms traffic from various sources come together for retransmission.
Traffic shaping / grooming	Techniques to control the rate of specific traffic types on the network and optimise or guarantee performance, low latency and / or bandwidth – such as traffic classification, queue disciplines, enforcing policies, congestion management, QoS and fairness.
Transit network	An intermediate network located between an originating network and a terminating network. Revenue is obtained via interconnect billing.
Tri-band	A mobile device able to operate on the three internationally designated GSM frequencies – 900 / 1800 / 1900MHz.
Triple-play	The provision of voice, video and data services.

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Tromboning	<p>i) A scenario where a call comes in on a trunk and is transferred back out over the same physical path on which it arrived.</p> <p>ii) Sending domestic fixed-to-mobile traffic via international routes to bypass domestic interconnection rates.</p>
Trouble Ticket	A form for reporting and managing the outcome of network or circuit outages.
Truck roll	Telco terminology that refers to a technician sent in a service truck to visit a site and diagnose a problem.
Trunk	A communication path between two entities – i.e. connecting two switching systems in a network – to establish an end-to-end connection (used to mean a T-1 or E-1 digital connection). Also referred to as a 'pipe' or 'span'.
TRX	Transmitter / Receiver (transceiver).
TSI	TETRA Subscriber Identity
TTS	Tandem Transit Service: Provided via a third party to indirectly interconnect with the terminating carrier's edge network.
TVoIP	Television over Internet Protocol
Tweener	New category of mobile computing devices that are smaller than laptops yet larger than smartphones, being developed by certain manufacturers to provide an alternative to carrying a laptop.
U.S. TAG	U.S. Technical Advisory Group
UAN	Unified Attachment Node: Allows cellular network operators to use SIM authentication for different access technologies and services.
UBR	Unspecified Bit Rate
UDI	Unrestricted Digital Information
UGC	User-generated content: Online content created and published by users of digital video, photography and music – on social networking and file-sharing sites such as Youtube, Myspace and Wikipedia.
UI	User Interface
UM	Unified Messaging: Integration of email, voicemail and fax at the desktop.
UMA	Unlicensed Mobile Access (see GAN).
UMB	Ultra Mobile Broadband: Combines elements of CDMA, OFDM, OFDMA, LS-OFDM and TDM into a single air interface using advanced control and signalling mechanisms. It also incorporates antenna techniques such as MIMO and SDMA to deliver peak data rates of 288 Mbps on the forward link and 75 Mbps on the reverse link. Commercial availability expected in 2009.
UMPC	Ultra-Mobile Personal Computer: A very small computing device that can be used for phone calls and instant messaging, or as a fully functional personal computer, by plugging in a monitor, mouse and keyboard. Asus, Aigo, Fujitsu, Haier, HTC and Samsung are initial manufacturers on board for the devices, which are expected to feature 256-512 MB RAM, widescreen displays and connectivity options including WiFi, Tri-band HSDPA / UMTS and GSM / GPRS.
UMS	Unified messaging service
UMTS	Universal Mobile Telecommunications System: WCDMA-based third-generation (see 3G) mobile network technology.
Unbundling	The scenario whereby the main carrier provides access to local exchange carriers so that independent service providers can buy or lease portions of their network elements – i.e. an unbundled exchange.

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UNE	Unbundled Network Element: Telecoms equipment and facilities that are part of the main carrier's network and made available for use to other local exchange carriers at an incremental cost.
Uplink	i) Connection from radio terminal to the base station (or earth station to a satellite). ii) Describes a data transmission from a data station to the head end.
UPS	Uninterruptible Power Supply: Device that maintains a continuous electric power supply to connected equipment in the event of mains power failure.
USIM	Universal Subscriber Identity Module: 3G equivalent of the SIM (GSM).
USOC	Universal Service Order Code
US-VISIT	United States Visitor and Immigrant Status Indicator Technology: Programme implemented in 2005 that requires everyone travelling to the US to have machine-readable travel documents – known as 'e-Passports' – containing digital fingerprints and photos. By 2009, all signatories of the Schengen agreement, which facilitates the free movement of people across the borders of EU member countries, will require their citizens to have an e-Passport.
UTRA	Universal Terrestrial Radio Access: Air interface component of WCDMA.
UTRA TDD	UMTS Terrestrial Radio Access (UTRA) Time Division Duplex (see TDD).
UTRAN	UMTS radio access network (see RAN).
UWB	Ultra-Wide Band: Designed for low-power, short-range, wireless personal area networks (PANs); UWB technology is used to relay data from a host device to other devices in the immediate area (up to 10 metres, or 30 feet). UWB radio transmissions can legally operate in the range from 3.1 GHz up to 10.6 GHz, at a limited transmit power of -41dBm/MHz.
VANS	Value Added Network Services
VATSI	Alias TETRA Subscriber Identity allocated in the visiting network.
VBR	Variable Bit Rate
VC	Virtual Circuit
VCAT	Virtual Concatenation: Inverse multiplexing mechanism used to split SONET / SDH bandwidth into logical groups that can be combined into an aggregate link to achieve a commensurate increase in available bandwidth on that aggregate link.
VDSL	Very high bit-rate Digital Subscriber Line (also seen as VHDSL).
VGTSs	Group TETRA Subscriber Identity / Identities allocated in the visiting network.
VHE	Virtual Home Environment: Personalised service portability across network boundaries and between terminals.
Video game developer	A developer of computer or video games.
Virtual Co-location	An arrangement whereby a CLEC has telecoms equipment installed, configured and maintained by an ILEC, within the ILEC's central office.
Virtual world / Universe	A computer-simulated environment in which users inhabit and interact via avatars.
VIS	Visa Information System (VIS): A central database of demographic information, digitised photographs and fingerprints, supporting

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	Common Visa Policy for the exchange of visa information (including biometrics) between EU Member States and Schengen signatories.
VLAN	Virtual private local area network
VLAN stacking	See QinQ.
VLR	Visitor Location Register
VMS	Voice Message Service / voicemail
VNO	Virtual Network Operator
VoB	Voice over Broadband
VOD	Video on Demand
VoIP	Voice over Internet Protocol: Voice traffic partly or totally routed via a packet-switched network.
VPF	<p>Voice Peering Fabric: Allows participants to establish peer-to-peer connections over a distributed Ethernet network. By establishing network connections with other VoIP providers, VPF participants are able to route their network traffic around the PSTN.</p> <p>Features that a VFP service provider may offer include caller ID, local number portability (LNP) and Signalling System 7 (SS7). It is claimed that VPF also allows enterprises and carriers to manage and access multiple services with a single VPF Ethernet connection without the need to provision disparate dedicated TDM connections.</p>
VPLS	Virtual private LAN service: Connection of multiple subscriber sites emulating a single bridged domain over a managed IP/MPLS network – whereby all services appear to be on the same LAN, regardless of location.
VPN	Virtual Private network
VWP	Visa Waiver Program: North America's programme that requires everyone travelling to the U.S. to have machine-readable travel documents – known as 'e-Passports' – that store passport information and photos on an electronic data storage chip.
W3C	World Wide Web Consortium
Walled garden	Term used to describe a closed set of information services / content – i.e. a browsing environment that controls what the user is able to access.
WAN	Wide-area network
WAP	Wireless Application Protocol: A protocol based on existing internet standards such as XML and IP that enables devices such as mobile phones to connect to the internet. It was developed by the WAP Forum, which is now a part of the Open Mobile Alliance (OMA), and its latest incarnation is known as WAP 2.0.
Wavelength	The length of one complete wave cycle.
WCDMA	Wideband CDMA
WDM	Wavelength Division Multiplexing: A method of increasing optical fibre transmission capacity using different light wavelengths (colours) to carry different signals simultaneously over a single optical fibre.
Whiteboarding	Voice calls over the internet (using VoIP) where the communicating parties can share on-screen images.
Widgets	Modules of software that web / mobile phone users can drag and drop onto the personal page of their social network or blog. When installed, widgets typically look like a little window or box, with a small amount of the functionality that you would get with a stand-alone web site or software package.
WiFi	Wireless-Fidelity: Generic term used to describe IEEE 802.11-based

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	wireless LAN technologies.
WIM	Wireless Identification Module: A separate hardware module or a software component on an existing SIM
WiMAX	Worldwide Interoperability for Microwave Access: Equipment interoperability of the IEEE 802.16 standard for wireless data transfer with a speed of 10 Mbps at 10 km range (though considerably higher speeds and ranges can be reached under ideal circumstances it is claimed).
WLAN	Wireless LAN (aka WiFi).
WLL	Wireless Local Loop
WLR	Wholesale Line Rental
X.25	ITU defined general-purpose packet switching protocol for terminals operating in the packet mode on a public data network.
xDSL	'Generic' Digital Subscriber Line
XML	eXtensible Markup Language: A standard method of tagging data so that it can be read and interpreted by different web browsers.