

# glossary

The following definitions are also available on our website at [telus.com/glossary](http://telus.com/glossary).

**1X:** Technology standard for 3G (third generation) high-speed wireless Internet service at speeds of up to 153 Kbps. 1X was the first step in the CDMA2000 evolution after IS-95. 1X provides enhanced voice network capacity as well as high-speed packet data mobile wireless Internet access. 1X was previously known as 1XRTT.

**3G (third generation):** Describes next generation wireless technology that offers high-speed packet data mobile wireless Internet access and multimedia communications at minimum transmission rates of 144 Kbps in mobile (outdoor) and two Mbps in fixed (indoor) environments. Analog cellular is considered the first generation of wireless, while digital is the second generation.

**ADSL (asymmetric digital subscriber line):** A technology for transmitting digital information at a high bandwidth on existing phone lines. Unlike dial-up Internet service, ADSL provides continuously available connectivity. It is asymmetric in that it uses most of the channel to transmit downstream to the user and only a small part to receive information from the user.

**ADSL2+:** The next generation of ADSL technology. ADSL2+ offers higher speeds and is backwards compatible with ADSL. ADSL2+ doubles the downstream bandwidth, increasing the downstream data rate to as much as 25 Mbps.

**ARPU (average revenue per unit):** Average revenue per unit, or wireless subscriber, expressed as a rate per month for a given measurement period.

**ATM (asynchronous transfer mode):** A high-speed switching technology that routes voice, data and video at high speeds over the same network.

**bandwidth:** The difference between the top and bottom limiting frequencies of a continuous frequency band, or indicator of the information-carrying capacity of a channel. The greater the bandwidth, the greater the information-carrying capacity.

**bits per second (bps):** A measurement of data transmission speed used for measuring the amount of data that is transferred in a second between two telecommunications points or within network devices. Kbps (kilobits per second) is thousands of bits per second; Mbps (megabits per second) is millions; Gbps (gigabits per second) is billions; and Tbps (terabits per second) is trillions.

**CDMA (code division multiple access):** This technique spreads a signal over a frequency band that is larger than the signal to enable the use of a common band by many users and to achieve signal security and privacy. See also IS-95 and CDMA2000.

**CDMA2000:** A third generation wireless standard adopted by the International Telecommunications Union (ITU) that prescribes an evolutionary path to 3G for IS-95 based systems. The first step in the CDMA2000 evolution after IS-95 is called 1X. See also IS-95 and CDMA.

**CDNA (competitor digital network access):** Provides access arrangements to competitors for the digital transmission of information between end-customer premises served by an ILEC wire centre and a competitor's switch located in an ILEC's wire centre area or at an ILEC's wire centre, in which case it must terminate on the competitor's co-located equipment.

**cell site:** Individual locations of network transmitter, receiver, antenna signaling and related base station equipment. Cell sites may be located on a transmission tower or building rooftop, or consist of an in-building system.

**churn rate:** The number of subscriber units disconnected divided by the average number of units on the network, expressed as a rate per month for a given measurement period.

**CLEC (competitive local exchange carrier):** A category of telecommunications carriers, identified for regulatory purposes, that provides local exchange service in competition with an ILEC, using either the CLEC's own switching and network or the CLEC's switching facilities and a combination of either the CLEC's network facilities or an ILEC's unbundled network facilities.

**COA (cost of acquisition):** Consists of the total of handset subsidies, commissions, and advertising and promotion expenses related to the initial acquisition of a customer during a given period. As defined, COA excludes costs of retaining existing customers.

**core network:** The ultra-high-speed national backbone carrying the aggregated traffic from all services from city to city, and within cities, to the edge of the network, where individual access connections then carry customer-specific traffic to the customer residence or premises.

**CRTC (Canadian Radio-television and Telecommunications Commission):** The federal regulator for radio and television broadcasters, and cable-TV and telecommunications companies in Canada.

**deferral account:** A component of the current price cap regulation regime. A holding account where an amount equivalent to the cumulative annual productivity adjustments for residential services in non-high cost (rural) serving areas is added. The productivity adjustments are determined using the gross domestic product productivity index (GDP-PI) less the productivity offset for the second price cap period of 3.5%.

**digital:** A transmission method employing a sequence of discrete, distinct pulses that represent the binary digits 0 and 1 to indicate specific information, in contrast to the continuous signal of analog. Digital networks provide improved clarity, capacity, features and privacy compared to analog systems.

**DSL (digital subscriber line):** A technology that allows existing copper telephone lines to carry voice, data and video images at very high speeds.

**DSLAM (digital subscriber line access multiplexer):** A network device that receives signals from multiple customer DSL connections and puts the signal on a high-speed backbone line using multiplexing techniques.

**ESMR (enhanced specialized mobile radio):** A specialized mobile radio network that incorporates frequency reuse and digital technology to increase its capacity and to provide service over a very large coverage area. An ESMR network is designed not only for the dispatch service associated with SMR, but also for mobile telephony and short messaging services as well as circuit-switched and packet data services. See also iDEN.

**EVDO (evolution data optimize):** Part of the CDMA2000 family of standards, it is wireless radio broadband protocol that delivers download data rates of up to 2.4 Mbps. It is suitable for high bandwidth download applications such as enterprise VPN computing, MP3 transfers and video streaming. EVDO is often abbreviated as EV-DO or 1xEvDO and is commonly referred to as DO.

**fibres network:** Transmits information by light pulses along hair-thin glass fibres. Cables of optical fibres can be made smaller and lighter than conventional cables using copper wires or coaxial cable, yet they can carry much more information, making them useful for transmitting large amounts of data between computers or many simultaneous telephone conversations.

**frame relay:** A high-speed packet switching technology that has evolved to meet the LAN-to-LAN interconnection market. Frame relay is designed to provide high-speed packet transmission, very low network delay and efficient use of network bandwidth.

**GPS (global positioning system):** A radio navigation system that allows users to determine and communicate their exact location, from anywhere in the world.

**GSM (global system for mobile communication):** A second generation digital PCS mobile phone standard used in many parts of the world.

**hosting:** The business of housing, serving and maintaining files for one or more websites. Using a hosting service allows many companies to share the cost of a high-speed Internet connection for serving files, as well as other Internet infrastructure and management costs. Also known as web hosting.

**Hotspot:** A Wi-Fi wireless access point in a public place such as a café, train station, airport, commercial office property or conference centre.

**iDEN (integrated digital enhanced network):** An ESMR network technology developed by Motorola to utilize 800 MHz SMR channels for ESMR digital service. The digital signals offer greatly enhanced spectrum efficiency and system capacity.

**ILEC (incumbent local exchange carrier):** The established telecommunications company providing local telephone service.

**IP (Internet protocol):** A packet-based protocol for delivering data across networks.

**IP-based network (also known as next generation network):** A network designed using IP and QoS (Quality of Service) technology to reliably and efficiently support all types of customer traffic including voice, data and video. The IP-based network enables a variety of IP-based customer devices and advanced applications to communicate over a single common network.

**IP-One®:** The registered brand name for TELUS' IP telephony service, which utilizes IP technology to send voice calls and associated data and video streams over integrated networks. TELUS IP-One® service provides a full suite of advanced IP applications that integrate voice mail, e-mail, data and video through a web portal interface.

**IPTV (Internet protocol television):** TV service that uses a two-way digital broadcast signal that is sent through a switched telephone or cable network by way of broadband connection.

**IS-95 (Interim Standard 95):** A version of CDMA specified by the Telecommunications Industry Association (TIA) that is used by TELUS and other networks around the world. IS-95 is often referred to as cdmaOne. See also CDMA.

**ISDN (integrated services digital network):** Switched network providing end-to-end digital connection for simultaneous transmission of voice and/or data over multiple multiplexed communication channels and employing transmission that conforms to internationally defined standards.

**ISP (Internet service provider):** A company that provides Internet access service to consumers and/or businesses.

**LAN (local area network):** A way of connecting several computers, typically in the same room or building, so they can share files and devices such as printers and copiers.

**LNP (local number portability):** The ability of telephone customers to retain their local phone numbers if they switch to another local telephone service provider.

**local loop:** The transmission path between the telecommunications network and a customer's terminal equipment.

**m-commerce (mobile commerce):** The buying and selling of goods and services through wireless handheld devices such as cellular telephones and personal digital assistants.

**MMS (multimedia messaging service):** Allows wireless customers to send and receive messages that contain much more than text including formatted text, graphics, photographs, and audio and video clips.

**multiplexing:** Sending multiple signals or streams of information on a carrier at the same time in the form of a single complex signal and then recovering the separate signals at the receiving end.

**MVNO (mobile virtual network operator):** A mobile service operator without licensed spectrum or network that leases wireless capacity from other carriers.

## glossary

**network edge:** The point in the network where customer access traffic enters or exits the service provider's shared core network. Functionality at the network edge ensures traffic streams are handled appropriately within the core network to allow privacy, security, reliability and service quality at the level appropriate for that traffic type or service.

**non-ILEC (non-incumbent local exchange carrier):** The telecommunications operations of TELUS outside TELUS' traditional operating territories, where TELUS competes with the incumbent telephone company (e.g. Ontario and Quebec). TELUS' non-ILEC operations are focused on data and IP services for business in urban centres.

**PCS (personal communications services):** Digital wireless voice, data and text messaging services. In Canada and the United States, PCS spectrum has been allocated for use by public systems at the 1.9 GHz frequency range.

**points of presence:** An access point to the Internet that has a unique IP address. The number of points that an Internet service provider has is sometimes used as a measure of its size or growth rate.

**POP:** One person living in a population area that, in whole or in substantial part, is included in a network's coverage area.

**postpaid:** A conventional method of payment for wireless service where a subscriber pays for a significant portion of services and usage in arrears, subsequent to consuming the services.

**PTT (Push To Talk):** A two-way communication service that works like a "walkie-talkie" using a button switch. A normal cell phone call is full-duplex, meaning both parties can hear each other at the same time. PTT is a half-duplex, meaning communication can only travel in one direction at any given moment.

**prepaid:** A method of payment for wireless service that allows a subscriber to prepay for a set amount of airtime in advance of actual usage. Generally, a subscriber's prepaid account is debited at the time of usage so that actual usage cannot exceed the prepaid amount until an additional prepayment is made.

**price cap:** A regulation, set by the CRTC in Canada, that sets the maximum price telephone companies can charge for a designated group of services. The set price changes over time, based on inflation and targets for improvements in productivity.

**roaming:** A service offered by wireless network operators that allows subscribers to use their mobile phones while in the service area of another operator; this requires a roaming agreement between the operators.

**SMS (short messaging service):** A wireless messaging service that permits the transmission of a short text message from and/or to a digital wireless terminal.

**spectrum:** The range of electromagnetic radio frequencies used in the transmission of sound, data and video. The potential capacity of a wireless network is in part a function of the amount of spectrum licensed to the carrier.

**switch:** In a telecommunications network, a device that channels incoming data from any of a number of input ports to the specific output port that will take the data toward its intended destination.

**VoIP (voice over Internet protocol):** The real-time transmission of voice signals over the Internet or IP network.

**VPN (virtual private network):** A private data network that makes use of a public telecommunications infrastructure, maintaining privacy through the use of a private secure network and security procedures.

**WAN (wide area network):** A data network extending a LAN (local area network) outside its building, over telecommunication lines or wirelessly, to link with other LANs over great distances.

**Wi-Fi (wireless fidelity):** The commercial name for networking technology, which allows any user with a Wi-Fi enabled device to connect to a wireless access point at speeds of up to 11 Mbps.

**WiMax:** A standards-based wireless technology that provides high-throughput broadband connections over long distances. WiMax can be used for last mile broadband connections, Hotspots, cellular backhaul and high-speed enterprise connectivity.

**Wireless Web/Internet access:** Technology that provides access to the Internet through a wireless cellular network instead of the traditional wireline telephone network.

**WLANs or wireless LANs:** A type of local area network that uses high-frequency radio waves rather than wires to communicate between nodes.

**WLNP (wireless local number portability):** A service that allows wireless consumers to change service providers within a given location while retaining the same phone number.