

glossary

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1X: Technology standard for 3G (third generation) high-speed wireless Internet service at speeds 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.

1XEV-DO: The second step in the CDMA2000 evolution includes the 1XEV family of technologies. 1XEV-DO focuses on data only, delivering download peak data rates of up to 2.4 Mbps to the end user. It is suitable for high bandwidth download applications such as enterprise VPN computing, MP3 transfers and video streaming.

1XEV-DV: The second member of the 1XEV family. 1XEV-DV integrates both voice and data, providing integrated voice with simultaneous high-speed packet data services, such as video, video-conferencing and other multimedia services at speeds of up to 3.09 Mbps. It is backward compatible with 1X.

3G (third generation): Describes next generation wireless technology that is expected to be CDMA-based and offer 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 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.

analog: A transmission method employing a continuous (rather than pulsed or digital) electrical signal.

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 telecommunication 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.

bundle: A group of telecommunications services (i.e., Internet, wireless, local exchange service, long distance and calling features) that are sold together, which may offer customer benefits such as a lower price, a single point of contact and convenience. Bundles in Canada that include tariffed services must be approved by the CRTC.

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.

CDPD (cellular digital packet data): A specification for supporting wireless access to the Internet and other public packet-switched networks at speeds up to 19.2 Kbps.

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.

cellular: The mobile radio-telephone service, licensed by Industry Canada in Canada and the Federal Communications Commission (FCC) in the United States to utilize 50 MHz of spectrum in the 800 MHz band. There are two 25 MHz licences in each region of Canada.

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 customer acquisition during a given period. As defined, COA excludes costs to retain existing subscribers.

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 the 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.

dial-up access: Connecting to another computer or network using a modem over a regular telephone line.

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): Specialized mobile radio networks that incorporate frequency reuse and digital technology to increase their capacity and to provide service over very large coverage areas. 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.

fibre 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.

GAAP: Generally accepted accounting principles.

hertz: The dimensional unit for measuring the frequency with which an electromagnetic signal cycles through the zero-value state between lowest and highest states. One hertz (Hz) equals one cycle per second. KHz (kilohertz) equals one thousand hertz. MHz (megahertz) equals one million hertz. GHz (gigahertz) equals one billion hertz.

hosting: The business of housing, serving and maintaining files for one or more Web sites. Using a hosting service lets many companies share the cost of a fast 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.

Internetworking: TELUS Internetworking provides LAN-to-LAN connection services allowing data transport and capacity distribution among customer locations and/or access to the TELUS Internet backbone.

IP (Internet protocol): Standards adopted by the Internet community to help with specific tasks such as transferring files between computers and sending mail.

IP-One: The registered brand name for TELUS' suite of IP telephony solutions, which utilize IP technology to send voice calls and associated data and video streams over integrated networks. TELUS IP-One solutions provide advanced IP applications that integrate voice mail, e-mail, data and video through a Web portal interface.

IS-95 (Interim Standard 95): A version of CDMA specified by the Telecommunications Industry Association (TIA) that is used by TELUS Mobility 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 residences and/or businesses.

Java: A general purpose programming language with a number of features that make the language well suited for use on the Web. Small Java applications are called Java applets and can be downloaded from a Web server to run on a computer or wireless phone with a Java-compatible Web browser.

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

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

m-commerce: Mobile commerce is 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.

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

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.

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 to the level appropriate for that traffic type or service.

next generation network (also known as IP-based 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. This network enables a variety of IP-based customer devices and next generation and advanced applications to communicate over a single common network.

non-ILEC (non-incumbent local exchange carrier): The telecommunications operations of TELUS outside of 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.

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.

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.

spam: Unsolicited bulk or junk e-mail.

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 multiple 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 to other LANs over great distances.

WAP (wireless application protocol): An industry standard for the development of data applications and services over wireless communications networks. TELUS Mobility is a member of the WAP Forum, which is developing the open, global wireless protocol specification that works across differing wireless network technology types.

Web portal: An Internet gateway providing customers with access to online news and information, 24 hours a day, seven days a week.

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.

wireless Web/Internet access: Technology that provides access to the Internet through the 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.