Telecommunication Terms Explained

For the uninitiated, the dizzying assortment of acronyms and terminology used to describe computer and telephone communication technology and services can be extremely confusing. To help make sense of this alphabet soup of industry jargon, Sling Broadband presents this glossary of commonly used telecommunication terms.

4G – Refers to the fourth generation of mobile communication standards that define qualifying peak speed requirements for data transmission. The primary technologies used to achieve 4G speeds are LTE and WiMAX.

Access Line – A communication line that creates a circuit between the subscriber's telephone or computer to the provider's switching center.

Analog – An alternating frequency current used to transmit communications data, used extensively for telephone and television signals prior to the development of digital technology.

Bandwidth – In relation to computers, the term is generally used to indicate the rate of data transfer as measured in bits per second (bps), or sometimes in bytes per second (Bps).

Bits Per Second (bps) – A measurement of the speed at which data is transferred via a modem or wirelessly. Other related terms include Kilobits per second (Kbps) equal to 1,000 bps, Megabits per second (Mbps) equal to one million bps and Gigabits per second (Gbps) equal to one billion bits per second. In computer technology a "bit" is equal to one digit, either a 1 or a 0.

Broadband – This term is used to describe a high-speed Internet connection that is capable of carrying a wide range of frequencies and large volume of communication traffic simultaneously. Internet service using DSL, cable or WiMAX is generally considered as a broadband connection.

Bytes Per Second (Bps) – A byte is a group of digital characters, either eight or sixteen bits, acted upon by a computer processor as a unit. Bytes Per Second is a rate of measuring data transfer speed using bytes as the base unit, rather than bits.

Blocking – Occurs when a telecommunication connection fails. This can be caused by equipment failure or inadequate capacity to handle the volume of data transmission.

Cable Internet – An Internet access connection delivered via a cable television line over coaxial copper cable or fiber optic cable. A modem is needed at the subscriber's location.

Central Office – The location of a telephone company's switches for a geographic area. Each telephone area code and prefix is handled by a specific Central Office.

Centrex – A service offered to businesses by telephone companies that takes the place of an internal private branch exchange (PBX). The service can include direct inward dialing, sharing of the telephone system among branch locations, and customer managed line allocation and cost-accounting.

Customer Premises Equipment (CPE) – Telecommunications equipment located at a customer's place of business. It can be owned by the customer, or leased from a communications provider.

Digital – A term to describe technology or equipment that uses computer or telecommunication data based on the binary coding system of 1 and 0.

Direct Inward Dialing – A telephone company service that routes incoming calls to specific extensions and allows a greater number of direct dial numbers than the actual number of incoming telephone lines.

Digital Subscriber Line (DSL) – Internet service provided through a telephone network. DSL uses a higher frequency for computer data than for telephone calls, allowing the same line to be used for both types of communication. DSL provides high-speed transmission unlike its predecessor, dial-up service.

Exchange – The set of switches that facilitates connections between telephone lines.

High Speed Packet Access (HSPA) – Term to describe the technology for providing high speed wireless data transmission to Internet-enabled cell phones and other mobile computer devices.

Integrated Services Digital Network (ISDN) – A telephone communications network that accepts both analog and digital data. ISDN was widely used for Internet communication before the development of DSL and cable modem technology.

Interexchange Carrier (IXC) – A communications provider that offers interstate (long distance) communications, linking local telephone exchanges.

Internet Service Provider (ISP) – An entity that provides an Internet connection for individuals or businesses. These providers can be private, for-profit or publically-owned and non-profit.

Key System – A telephone system that is not connected to a PBX service. The system typically has multi-line phones that can dial outgoing calls directly, without going through a central switching system where you first have to dial a "9".

Kilobyte – A kilobyte is equal to eight kilobits, or 8,000 bits of digital information.

Local Exchange Carrier (LEC) – A telephone company that manages telephone lines and switches for a local geographic region.

Local Loop – The line that provides communication service between a home or business to the telephone company's central office.

Long Term Evolution (LTE) – Term for the technology that enables transmission of mixed voice, data, video and text messaging traffic at 4G speed standards, which "evolved" from the previous 2G and 3G technology.

Network Interface – A device that facilitates the connection of individual computers to create a local area network, and to allow this network to communicate with outside networks by providing a common transmission language known as a "protocol".

Near Field Communication (NFC) – A technology standard that uses magnetic field induction for wireless communication, allowing short-range transmission of data between two devices when they are touched together.

Numbering Plan Area (NPPA) – A numbering system used for assigning telephone numbers. In North America, the numbering plan uses a 10-digit telephone number including 3-digit area codes and prefixes that relate to a specific geographic area.

Off Premise Extension – A telephone at a remote location that works as an extension. The routing is managed through a PBX system that re-routes the incoming call to an outbound line.

Plain Old Telephone Service (POTS) – This term means exactly what it says. It refers to the traditional low-speed analog telephone service that uses twisted-pair copper wiring that is still used in most homes and many businesses.

Point of Presence (POP) – Defines the point at which a telephone company or Internet provider supplies the service to a customer, where equipment on one side belongs to the provider and the other side belongs to the consumer.

Primary Rate Interface (PRI) –A standard service level when using an Integrated Services Digital Network for voice and data transmissions. In the U.S., this is typically refers to a T1 line, which has 24 data channels.

Private Branch Exchange (PBX) – A telephone system used by organizations that allow users to share a fixed number of telephone lines, avoiding the need to have one line for each user. The system is typically owned by the organization, although provider-hosted PBX systems for Internet telephone service (VoIP) are now available.

Proprietary Telephone Sets – Telephone units designed to work only with a specific service provider's PBX system.

Public Switched Telephone Network (PSTN) – The world-wide network of traditional voice-oriented telephone lines operated by both private and government entities. It is also referred to as Plain Old Telephone Service.

Switch – The means by which telecommunications devices are connected for transfer of voice or data. Early telephone switching was done manually. Now this process is managed automatically by computers.

T1 – Often referred to as a T1 line, it is a type of carrier used for transmission of digital information with 24 separate channels. Telephone company T1 lines were primarily made of copper wire; however optical and even wireless technology is now available.

Throttling – This term refers to a deliberate restriction of the data transfer rate. It is sometimes used to prevent "spam", the sending of bulk email messages and some public Internet providers employ throttling to prevent individual users from using excessive bandwidth. The practice is also controversially used by Internet providers to keep subscribers with "unlimited" data plans from using high levels of bandwidth if it interferes with the provider's ability to serve all its subscribers.

Trunk – A major communications line that can handle a large volume of multiple transmissions simultaneously.

Uniform Call Distribution – A method of distributing a high volume of calls made to one telephone number among a number of agents, automatically routing calls to the next available agent. This technology is used for applications such as a customer service center or help desk.

Voice Over Internet Protocol (VoIP) – A technology used for making telephone calls over a computer network with a high speed broadband Internet connection instead of traditional telephone lines. The analog voice signal is digitized, then encoded and turned into data packets for transmission over the Internet connection. At the receiving end, the data packets are decoded and converted back into an analog voice signal.

Worldwide Interoperability for Microwave Access (WiMAX) – The standard for wireless communications used to create a wireless Internet network across a large area, typically in cities. The technology works in a similar way to Wi-Fi, but it can cover a range of up to 30 miles.

While this is not an exhaustive list, it will help business managers to understand the components of their company's communication system and to make informed decisions when comparing Internet and telephone service plans.

Sling Broadband is one of the top ten providers of Internet and VoIP service for businesses in over 30 major markets. Sling's data network is independent of telephone and cable networks, allowing them to reduce the cost of high quality bandwidth down to a level never before offered in the marketplace.