CONNECTIVITY GLOSSARY OF TERMS

The ability to "speak internet connectivity" is critical to feel more confident, equipped and empowered to plan for improved connectivity in your community. As you learn more about connectivity planning, you may encounter new terms and context of use.

This glossary is designed to help you understand frequently used terms in the field of telecommunications. The definitions provided on this page do not reflect any government legislation or policy, but rather a shared common language among the connectivity community.

Cannot find the term you are looking for in the glossary? Let us know and we will add it.

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5G	Fifth Generation of Mobile Technology – the fifth generation technology standard for cellular networks. It succeeds to the current 4G (LTE) technology . This technology drives automation and artificial intelligence in many sectors such as agriculture and manufacturing.
ANTENNA	An exterior transmitting or receiving device designed to send and receive radio signals. Antennas are used to deliver LTE, 4G or 5G networks. Antennas are attached on a tower, building or structure. ISED Canada needs to approve their placement. The approval process is set out in the Antenna Siting Procedure.
BACKBONE	Major data routes that interconnect different networks together. It is often made of fiber optic, but it can also consist of microwave and satellite technology.
BACKHAUL	The part of the network between the backbone and the access edge. In the context of a mobile network, it refers to the connection between the tower and the backbone. The backhaul may be either wireless or fiber.
BANDWIDTH	Maximum amount of data that can be transmitted over a network in a given period of time. Bandwidth is expressed in bits per second. Example: 50Mbps/10Mbps and 25Mbps/5Mbps.
BIT	Most basic unit of information in computing and digital communication.
BROADBAND	A high capacity internet connection that enables quick and reliable online services.
CABLE	An insulated wire, set of wires or fiber optic strands used to carry telecommunication signals.

CAPACITY	Ability of a network to provide a specific level of data service to a defined number of users.
COVERAGE	The geographic area served by a telecommunication network. A coverage gap is a geographic area where users are unable to access services due to limited infrastructure. It is synonymous with areas of need.
CELLULAR NETWORK	Refers to a type of communication network where the last link to the user is wireless. The user's receiver or handset may be portable. It is used interchangeably with mobile.
DARK FIBER	Fiber optic cable that has been installed but not yet being used to carry network traffic.
DIAL-UP INTERNET	Early technology that allowed to make internet connections over the telephone line. Users could not make a simultaneous voice call. Maximum speeds were 9600 bits per second (9.6 kbps).
DIG ONCE	A policy that mandates the installation of conduit for fiber optic cables when other construction projects are undertaken to reduce the cost of installing new telecommunication infrastructure in the future. Note that a dig once policy involves the construction of conduits only. The actual fiber optic cable may not be deployed in the conduits during construction.
DOWNLOAD SPEED	The speed at which data is transferred from the internet to a user's computer or device. For example, the speed at which a large file can be downloaded from a website.
DSL	Stands for Digital Subscriber Loop. It refers to a type of broadband connection that brings information to homes and businesses over ordinary copper telephone lines.
ETHERNET	Technology protocol used to allow computers and devices to talk to each other on networks.
FIBER	A type of cable that uses thin glass threads to transmit data using light signals. It enables the transfer of large amounts of data over long distances at much faster speeds than, for example, copper wires.
FIXED WIRELESS	Refers to a type of broadband service using radio signals to transfer information to a fixed location. This technology does not support mobile devices.
FREQUENCY	Refers to the radio wave band that is used for over-the-air broadcast and communications. The frequency is measured in Hertz (Hz). The federal government regulates band usage to prevent interference between different users.
IN-FLIGHT	Refers to connectivity projects that are currently in progress and will be completed in the future.

INTERNET OF THINGS (IoT)	The network of physical objects, vehicles, buildings and other devices that are able to send and receive data over the internet. These objects are often called 'smart devices'.
INTERNET PROTOCOL (IP)	A set of rules governing the format of data sent over the internet or other networks.
IP ADDRESS	A unique number that identifies each device in a network.
INTERNET EXCHANGE POINT (IXP)	A physical access point where internet service providers connect to for exchanging data from one network to another.
JITTER	Refers to small intermittent delays during data transfers. It can be caused by many factors including network congestion and signal interference.
LAST-MILE INFRASTRUCTURE	The final portion of a telecommunications network that serves to connect homes and businesses to a high-speed network connection. Wired or wireless technologies can be used to build the last mile infrastructure, such as cable, DSL, fixed wireless or satellite.
LATENCY	Describes the time delay between a request for a network to perform an action and the action being carried out. A low latency is required for high-quality real-time applications.
LIT FIBER	Fiber optic cables that are currently in use to transmit information.
LONG-TERM EVOLUTION (LTE)	Long-term Evolution (LTE) is a standard for wireless communications for smartphones and other devices. LTE is commonly referred to as 4G (fourth generation) cellular technology.
LOW EARTH ORBIT (LEO) SATELLITE	A system of satellites that orbit much closer to the earth than traditional communications satellites. A LEO constellation can have hundreds of satellites.
Mbps	Stands for Megabits per second, or millions of bits per second. This is a measurement of how much data can be transmitted through a connection.
MIDDLE MILE	Part of a telecommunications network that links a network operator's core network to local last mile facilities.
MOBILE NETWORK	Refers to a communication network where the last link to the user is wireless, and the user's receiver or handset may be portable. The service will continue to function uninterrupted as the user moves locations. Used interchangeably with cellular.
MODEM	A device that connects a personal or home computer to the internet.
MUNICIPAL ACCESS AGREEMENT (MAA)	An agreement between carriers and a municipality that sets out the conditions under which the carrier can obtain access to municipal rights-of-way or any other property.

NETWORK RESILIENCY	The ability of a network to provide and maintain an acceptable level of service in face of issues with normal network operation.
OPEN ACCESS	A policy requiring that owners of broadband infrastructure provide access to their network to service providers for a fee. It is also a business model whereby broadband infrastructure is built by a local government and then leased to service providers. This strategy is used to promote competition and reduce the risks for service providers.
PASSIVE INFRASTRUCTURE	The existing civil infrastructure needed for network deployment. It includes any structure where cables and antennas can be attached. Telephone poles, underground conduits and wireless towers are common examples.
POINT OF PRESENCE (POP)	Refers to a physical access point to the backbone network. It is a facility where internet service providers house servers, routers, switches and other communications equipment.
SATELLITE NETWORK	Refers to a type of network connection that comprises of satellites orbiting the earth that transmit and receive signals from ground-based stations.
SERVICE PROVIDER	A generic term that refers to an organization that delivers telecommunication services, including internet services, to its customers.
SPECTRUM	Refers to the radio frequencies allocated to the mobile industry and other sectors for communication over the airwaves.
SYMMETRICAL	Refers to a connection with equal download and upload speeds.
TELECOMMUNICATIONS	Refers to the exchange of information by electronic and electrical means over a significant distance. Basic telecommunications services are: i) fixed and mobile wireless broadband internet access services, and ii) fixed and mobile wireless voice services.
TELEHEALTH	Refers to the delivery of health care services using computers and mobile devices.
TRANSPORT	A network connection that transports data traffic from one Point of Presence (PoP) to another or from a Point of Presence to the internet backbone. An example would be a fiber connection that transports data between a small town to another location that provides an interconnection to the internet.
UPLOAD SPEED	The connection speed at which a user can send data to the internet. For example, the speed to upload a video to a social media website.
VOICE OVER INTERNET PROTOCOL (VoIP)	VoIP is a digital communications technology that allows to make voice calls using an internet connection instead of a regular phone line.

Wi-Fi	A radio technology that allows devices to connect to a local area network wirelessly.
WIRELESS	Wireless communication is the transfer of information without a physical wire connection. For example, a signal can be transmitted from a wireless tower to mobile devices such as phones or to fixed locations such as houses.
WIRELINE	A type of connection that transfers information over a wire or cable.