**Telecommunications Glossary: Acronyms & Key Terms**

This glossary provides definitions for common acronyms and terms used. Understanding these terms is crucial for effective communication and navigating our industry.

**A**

* **ADSL (Asymmetric Digital Subscriber Line):** A type of DSL broadband communication technology that transmits data over standard copper telephone lines, offering faster download speeds than upload speeds.
* **API (Application Programming Interface):** A set of defined rules that enable different software applications to communicate and interact with each other.
* **ARPU (Average Revenue Per User):** A metric used to calculate the average revenue generated from each subscriber over a given period, typically a month or quarter.
* **AI (Artificial Intelligence):** The simulation of human intelligence processes by machines, especially computer systems, used in areas like network optimization, customer service, and fraud detection.

**B**

* **BSS (Business Support Systems):** Software applications used by telecom operators to manage customer-facing activities, including billing, customer relationship management (CRM), order management, and product catalog.
* **BTS (Base Transceiver Station):** The radio equipment that facilitates wireless communication between user equipment (e.g., mobile phones) and a network. Often referred to as a cell tower.
* **Backhaul:** The process of connecting cell sites or local networks to the main core network, typically using fiber optic or microwave links.
* **Broadband:** High-speed internet access that is always on and faster than traditional dial-up access. Includes technologies like DSL, cable, fiber, and satellite.

**C**

* **CAPEX (Capital Expenditure):** Funds used by a company to acquire, upgrade, and maintain physical assets such as property, buildings, industrial plants, technology, or equipment. In telco, this includes network infrastructure.
* **CDR (Call Detail Record):** A record produced by a telecommunications system that contains information about a call or other telecommunications transaction, such as start time, duration, and destination.
* **CRM (Customer Relationship Management):** A system or strategy used to manage a company's interactions with current and potential customers.
* **CSP (Communications Service Provider):** A general term for a telecommunications company that provides communication services to consumers and businesses.
* **Core Network:** The central part of a telecommunication network that provides services to customers and connects to other networks.
* **Churn:** The rate at which customers discontinue their service with a company during a given period.

**D**

* **DWDM (Dense Wavelength Division Multiplexing):** A technology that multiplexes a large number of optical signals onto a single fiber optic cable by using different wavelengths (colors) of light.
* **DAS (Distributed Antenna System):** A network of spatially separated antenna nodes connected to a common source, providing wireless service within a geographical area or structure.
* **Dark Fiber:** Fiber optic cable that has been laid but is not currently in use, offering future capacity.
* **Data Centre (DC):** A facility used to house computer systems and associated components, such as telecommunications and storage systems.

**E**

* **EPC (Evolved Packet Core):** The flat, all-IP core network architecture for 4G LTE.
* **Edge Computing:** A distributed computing paradigm that brings computation and data storage closer to the sources of data, reducing latency and bandwidth usage.
* **Ethernet:** A family of computer networking technologies commonly used in local area networks (LANs) and metropolitan area networks (MANs).

**F**

* **FTTH (Fiber-to-the-Home):** A type of fiber optic communication delivery where the optical fiber extends directly from the central office to the individual home or business.
* **FTTC (Fiber-to-the-Curb/Cabinet):** A type of fiber optic communication where the fiber extends to a street cabinet, and the final connection to the customer premises is via copper cable.
* **FWA (Fixed Wireless Access):** Broadband internet access delivered wirelessly to a fixed location, often used in areas where wired broadband is not feasible.

**G**

* **Gbps (Gigabits per second):** A unit of data transfer rate, equivalent to one billion bits per second, commonly used to describe internet speeds.
* **GPON (Gigabit Passive Optical Network):** A common type of passive optical network (PON) technology used to deliver fiber-to-the-home (FTTH) services.
* **GSM (Global System for Mobile Communications):** A global standard for digital cellular communications, primarily for 2G mobile networks.

**I**

* **IoT (Internet of Things):** The network of physical objects embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.
* **IP (Internet Protocol):** The fundamental protocol for communicating data across a packet-switched internetwork.
* **ISP (Internet Service Provider):** A company that provides internet access to individuals and organizations.

**L**

* **LAN (Local Area Network):** A computer network that interconnects computers within a limited area such as a residence, school, laboratory, university campus, or office building.
* **LTE (Long-Term Evolution):** A standard for wireless broadband communication for mobile devices and data terminals, based on the GSM/EDGE and UMTS/HSPA technologies, offering significantly increased speed and capacity (often referred to as 4G).
* **Latency:** The delay before a transfer of data begins following an instruction for its transfer. Lower latency is better for real-time applications.

**M**

* **Mbps (Megabits per second):** A unit of data transfer rate, equivalent to one million bits per second.
* **MNO (Mobile Network Operator):** A telecommunications company that owns and operates its own mobile network infrastructure.
* **MVNO (Mobile Virtual Network Operator):** A wireless communications services provider that does not own the wireless network infrastructure over which it provides services, but instead uses the network of an MNO.

**N**

* **NFV (Network Function Virtualization):** A network architecture concept that virtualizes network functions (e.g., firewalls, routers) onto standard server hardware, rather than requiring dedicated hardware.
* **NOC (Network Operations Centre):** A centralized location from which network administrators monitor, manage, and troubleshoot telecommunications networks.
* **NPS (Net Promoter Score):** A widely used market research metric that asks customers how likely they are to recommend a company's product or service to others.

**O**

* **OSS (Operations Support Systems):** Software applications used by telecom operators to manage network-facing activities, including network inventory, service provisioning, fault management, and performance monitoring.
* **ONT (Optical Network Terminal):** The device that connects the fiber optic network to the customer's home or business, converting optical signals into electrical signals.
* **OLT (Optical Line Terminal):** The equipment at the service provider's central office that connects the fiber optic network to the rest of the broadband network.
* **OPEX (Operating Expenditure):** The ongoing costs for running a product, business, or system (e.g., salaries, utilities, maintenance, software licenses).

**P**

* **PON (Passive Optical Network):** A fiber optic network technology that uses passive (unpowered) optical splitters to share a single optical fiber among multiple premises.
* **PSTN (Public Switched Telephone Network):** The traditional circuit-switched telephone network that connects landline telephones.
* **PoP (Point of Presence):** An artificial demarcation point or interface point between communicating entities, often where network equipment is housed.

**R**

* **RAN (Radio Access Network):** The part of a mobile telecommunications system that connects mobile user equipment to the core network through radio connections.
* **RF (Radio Frequency):** The oscillation rate of an electromagnetic radio wave.

**S**

* **SDN (Software-Defined Networking):** An approach to network management that enables dynamic, programmatically efficient network configuration in order to improve network performance and monitoring.
* **SLA (Service Level Agreement):** A contract between a service provider and a customer that specifies the level of service expected from the provider.
* **SIM (Subscriber Identity Module):** A smart card used in mobile phones to identify and authenticate subscribers on a mobile network.
* **Spectrum:** The range of electromagnetic frequencies used for wireless communication.

**U**

* **UMTS (Universal Mobile Telecommunications System):** A 3G mobile cellular system for networks based on the GSM standard.
* **URI (Uniform Resource Identifier):** A string of characters that identifies a logical or physical resource.

**V**

* **VoIP (Voice over Internet Protocol):** A technology that allows you to make voice calls using a broadband Internet connection instead of a regular or analog phone line.
* **VPN (Virtual Private Network):** A secure connection over a public network, allowing users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network.
* **VDSL (Very-high-bit-rate Digital Subscriber Line):** An enhancement to ADSL, offering significantly faster data rates over shorter distances, often used in FTTC deployments.

**W**

* **WAN (Wide Area Network):** A telecommunications network that extends over a large geographical area for the primary purpose of computer networking.
* **Wi-Fi:** A wireless networking technology that allows devices to connect to a network or the internet using radio waves.

**X**

* **xDSL:** A generic term for the various forms of Digital Subscriber Line technologies (e.g., ADSL, VDSL).

**5G:** The fifth generation technology standard for broadband cellular networks, offering higher speeds, lower latency, and greater capacity than previous generations.