

## GLOSSARY

- 3G network:** (also UMTS network) "Universal Mobile Telecommunications System", UMTS represents an evolution in terms of capacity, data speeds and new service capabilities from second generation mobile networks (2G/2.5G) enabling the run of many applications on the mobile device.
- ADSL:** Asymmetric Digital Subscriber Line: Modems attached to twisted pair copper wiring of land telephone network which allows data transmission rates from 1.5 Mbps to 9 Mbps in downstream (to the subscriber) and from 16 kbps to 800 kbps in upstream, depending on line distance to the provider's exchange station.
- APP:** Program designed to run on smart phones, tablet or other mobile devices.
- Bit:** The elementary constituent of digital information, the value of which can take only the forms 0 or 1. Bits are often measured by adding prefixes to signify a value.
- Bitrate:** The number of bits that flow through the network.
- Broadband:** Digital signals delivered (along with analog signals) over a copper medium to businesses and households. Typically refers to an Internet connection via a cable modem or DSL line with speeds of 1 Mbps to 10 Mbps. Broadcast Transmission of data to everybody on the network or network segment.
- Byte:** A data word made up of eight bits of information. One byte is the amount of information required to represent one character.
- CallBack:** Function for reducing call costs (particularly when roaming): when an employee of a given company calls his firm's PBX from abroad, the call is not connected and the PBX calls him back - the employee can then dial any number and it is as if he called from his company (when roaming, an incoming call is always cheaper than an outgoing call).
- Channel:** A signal path of specified bandwidth for conveying information such as voice, data and video.
- DTMF:** or Dual Tone Multi-Frequency signals - Also called touch-tone dialing. The tones that are heard when you press the buttons on a touch-tone telephone. DTMF assigns a specific frequency (consisting of two separate tones) to each key.
- Ethernet:** Very popular standard technology series, widely used to make local area networks (LAN) because of its very cheap cost, easiness to make and scalability. Basically the differences between different versions are due to the used transmission medium and the maximum acceptable bit rate.
- Gateway:** A network element that performs conversions between different coding and transmission formats. The gateway does this by having many types of commonly used transmission equipment and / or circuits from different carriers to provide a means of interconnection. When configuring a device's network parameters on Gateway field there is usually the IP address of the router.

<b>H.323:</b>	A suite of standards for multimedia conferences on traditional packet-switched LANs.
<b>H.263:</b>	A video compression standard originally designed as a low-bitrate compressed format for videoconferencing.
<b>H.264:</b>	or MPEG-4 Part 10, Advanced Video Coding (MPEG-4 AVC) - is a video compression format that is currently one of the most commonly used formats for the recording, compression, and distribution of video content.
<b>HDLC:</b>	is a bit-oriented, link layer protocol for data transmission over synchronous networks. It is an ISO standard, but a superset of IBM's SDLC (Synchronous Data Link Control) protocol.
<b>HTTP:</b>	(HyperText Transfer Protocol) Transfer protocol used for the transmission of data, text pages, images and multimedia contents on the web.
<b>Intercom:</b>	An intercom (door phone, door entry, entry systems) is an electronic communications system within a building or group of buildings. Intercoms are generally composed of fixed microphone/speaker units which are connected to a panel installed outside the building.
<b>Internal Voicemail:</b>	Internal function of a PBX which enables the recording of voice messages for the called person during his absence.
<b>IP:</b>	A packet based Internet Protocol belonging to the TCP/IP internet protocols
<b>IP Address:</b>	The unique address of a computer attached to the TCP/IP network. IP addresses are 32 bits long. Each octet is represented in the decimal format and separated by dots.
<b>IPv4:</b>	Internet Protocol version 4 is the fourth version in the development of the Internet Protocol (IP) Internet, and routes most traffic on the Internet. It is going to be upgraded to IPv6.
<b>IPv6:</b>	Internet Protocol version 6 is the latest version of the Internet Protocol (IP), the communications protocol that provides an identification and location system for computers on networks and routes traffic across the Internet. Respect to IPv4, it allows a lot of improvements such as larger address space, simplified processing by routers, autoconfiguration and so on.
<b>IP PBX:</b>	a customer premises telephone system that manages telephones in the enterprise and acts as the gateway to external networks. Unlike a conventional PBX that requires two separate networks, one each for data and voice, an IP PBX is based on converged networks that enable true one-wire to the desktop connection. An IP PBX can be used with IP phones, softphones and traditional phones connected to Ethernet adapters (ATA) or PCs.
<b>IP telephony:</b>	Internet Protocol telephony, also known as Voice over IP Telephony is a general term for the technologies that use the Internet Protocol's packet-switched connections to exchange voice, fax, and other forms of information that have traditionally been carried over the dedicated circuit-switched connections of the public switched telephone network (PSTN). The basic steps involved in originating an IP Telephony call are conversion of the analog voice signal to digital format and compression/translation of the signal into Internet protocol (IP) packets for transmission over the Internet or other packet-switched networks; the process is reversed at the receiving end. The terms IP Telephony and Internet Telephony are often used to mean the same; however, they are not 100 per cent interchangeable, since Internet is only a subcase of packet-switched networks. For users who have free or fixed-price Internet access, IP Telephony software essentially provides free telephone calls anywhere in the world. However, the

challenge of IP Telephony is maintaining the quality of service expected by subscribers. Session border controllers resolve this issue by providing quality assurance comparable to legacy telephone systems.

- IVR:** Interactive Voice Response is a software application that accepts a combination of voice telephone input and touch-tone keypad selection and provides appropriate responses in the form of voice, fax, callback, e-mail and perhaps other media. IVR is usually part of a larger application that includes database access. Common IVR applications include: bank and stock account balances and transfers, surveys and polls, caller authorization centers.
- LAN:** (Local Area Network) is a computer's network in a confined area, such as a room, a premise or a building. A LAN accessed with Internet technologies can be considered an Intranet. Typically, LANs operate at what is considered to be a high bandwidth speed.
- LCD:** Liquid Crystal Display is a display that consists of two polarizing transparent panels and a liquid crystal surface sandwiched in between. Voltage is applied to certain areas, causing the crystal to turn dark. A light source behind the panel transmits through transparent crystals and is mostly blocked by dark crystals.
- Least Cost Routing:** LCR is a function of a gateway/PBX, which selects the cheapest possible route for calls (e.g. a call from a landline to a mobile phone is sent via the GSM network to avoid the higher call charges of using the landline network).
- Mobile Extender:** the redirecting of an office line to a mobile, which also allows the user to use all the PBX functions from a mobile. It is used especially when away from the office, and unlike DECT it is not limited to a certain range and the user does not need another phone, just his standard mobile.
- Modularity:** Attribute of a product which enables expanding or changing the product depending on the growth of the company (number of users, functional requirements).
- Packet:** A block of data used for transmission in packet-switched systems.
- PBX:** Private Branch Exchange. An in-house telephone switching system that interconnects telephone extensions to each other as well as to the outside telephone network.
- Peer-to-Peer (P2P):** Logic architecture of some computer networks where the nodes are organized in a equal hierarchy, so that each of them can be client or server as well.
- PoE (Power over Ethernet):** Technology that allows to power the devices connected on an Ethernet network by using the same cable of data (usually cat. 5e or similar).
- Point to Multipoint:** A session between one location and many points.
- Point to Point** A session between two points only.
- PSTN** or Public Switched Telephone Network - A worldwide voice telephone network. Once only an analog system, the heart of most telephone networks today is all digital.
- RJ45 port / connector:** Physical interface used for plugging electrical twisted pair cables (usually UTP, cat. 5e type). This specification is part of a modular connection series often used for telephone services and standard data transmission.
- S/NR** Signal to Noise Ratio is the final relationship between the video or audio signal level and the noise level. Ratio of the signal power to the noise power in a specified

bandwidth.

- SIP** Session Initiation Protocol is an IP telephony signaling protocol developed by the IETF. SIP is a text-based protocol suitable for integrated voice-data applications. SIP is designed for voice transmission and uses fewer resources and is considerably less complex than H.323.
- SIP protocol:** Control protocol even for telephone calls via internet or multimedia distributions. It allows the transfer of different kinds of data (audio, video, text messages...). At the moment it is the most popular VoIP protocol in residential and business areas.
- SIP server:** Also called SIP PBX, it is a device which takes care of VoIP communication management (creating, modifying and terminating sessions) between two end-points.
- SNMP monitoring:** Online monitoring of a telecommunication device via the TCP/IP protocol (LAN/Internet)
- Soft phone:** Generally speaking is a software which allows to make telephone calls over the Internet using a normal PC instead of specific hardware. It means that the PC must be equipped with a sound card with microphone and speaker or an USB headset.
- Softswitch:** (Also referred to as *media gateway controller* or *call agent*). The generic name for a new approach to telephony switching that has evolved to enable transporting voice traffic over packet-switched networks. At the most basic level, a softswitch is defined as media gateway controller software that provides call control and resource management for a media gateway. Call control relates to the setup and termination of calls, including call routing. A softswitch also provides call authentication and authorization, and accounting services by accessing information available in an existing Signaling System 7 (SS7) network.
- STUN services:** It helps a VoIP device determine a change in the IP address of the router connecting the VoIP device to the internet (if the internet provider in the given country uses dynamic IP addresses)
- Switch:** A mechanical or solid state device that opens and closes circuits, changes operating parameters or selects paths for circuits on a space or time division basis.
- UMTS Networks:** "Universal Mobile Telecommunications System", UMTS represents an evolution in terms of capacity, data speeds and new service capabilities from second generation mobile networks enabling many extraordinary applications.
- VoIP:** Voice over IP is the capability to carry normal telephony-style voice over an IP-based Internet or data links with POTS-like functionality, reliability, and voice quality. VoIP enables a router to carry voice traffic (for example, telephone calls and faxes) over an IP network. In VoIP, the DSP segments the voice signal into frames, which then are coupled in groups of two and stored in voice packets. These voice packets are transported using IP in compliance with ITU-T specification - H.323, SIP, MGCP.
- VoIP (Voice over IP):** Technology that allows to make a telephone call by using the Internet connection or a different dedicated network that uses IP protocol without data connection.
- VoIP provider:** Telephone provider who offers Internet services through VoIP technology.
- WAN or Wide Area Network:** A data network typically extending a LAN outside a building or beyond a campus, over IXC or LEC lines to link other LANs at remote sites. Typically created using bridges or routers to connect geographically separated LANs.

**Wi-Fi:** (Wireless Fidelity) - Wi-Fi is the popular term for a high-frequency wireless local area network (WLAN). The Wi-Fi technology is rapidly gaining acceptance in many companies as an alternative to a wired LAN. It can also be installed for a home network. Wi-Fi is specified in the 802.11b specification from the Institute of Electrical and Electronics Engineers (IEEE) and is part of a series of wireless specifications together with 802.11, 802.11a, and 802.11g.

**www:** World Wide Web is one of the main Internet services that allows to exchange information and multimedia contents organized in pages linked each other through links that usually are available to all the users in the net.

## ABBREVIATIONS:

**BRI:** Basic Rate Interface  
**CDR:** Call Detail Record  
**CSV:** Coma Separated Values  
**DHCP:** Dynamic Host Configuration Protocol  
**FTP:** File Transfer Protocol  
**IP:** Internet Protocol  
**IP PABX:** IP-based Private Automatic Branch Exchange  
**IP PBX:** IP-based Private Branch Exchange  
**LCD:** Liquid Crystal Display  
**MVTS:** MERA VoIP Transit Softswitch  
**MGCP:** Media Gateway Control Protocol  
**NAT:** Network Address Translation  
**PBX:** Private Branch Exchange  
**PRI:** Primary Rate Interface  
**PSTN:** Public Switched Telephone Network  
**QoS:** Quality of Service  
**RAS:** Registration, Admission, and Status protocol.  
**RTCP**