

Business Communications: What It All Means

A glossary of key terms, mainstay technologies
and occasional jargon

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Tech terms for business owners...at a glance

Stumped, perplexed or just plain curious about telecom tech terminology? You're not alone. Here's a quick-read glossary of terms that'll have you up to speed (and back to running your business) in no time.

3G (3rd generation wireless): An internationally defined set of standards for mobile telecommunications services providing downstream data rates of at least 200 kbps (kilobits per second) at peak usage times.

4G (4th generation wireless): 3G's successor. It prescribes standards for mobile broadband services that deliver downstream data at up to 1 Gbps to individual users.

Anti-virus software: Computer programs designed to detect, eliminate and/or guard against the infiltration of malware, or malicious software that can prevent computing equipment from working properly.

Backup: The practice of duplicating stored data. Ask anybody who's ever lost a week's worth (or worse, a month's worth) of data about the value of backing up your files. The best approach is often a transparent networked backup service, meaning your data automatically gets copied to a secure offsite storage location.

Bandwidth: An indication of how fast a network transmits data, with the measurements typically expressed as Mbps (megabits per second) or Gbps (gigabits per second).

Broadband: High-speed data transfer within a communications network. Exactly what constitutes "high speed" has been fuzzy for some time, although the Federal Communications Commission has decreed that if the bits hurtle down the pipe at 4 Mbps or faster, it's broadband.

Bundle: A combination of communications services typically sold for a combined price that's less than the sum of the individual components. Some of the best deals in business communications today spring from bundles packaged by communications companies.

Carrier: A telecommunications provider with regulatory authorization to provide telephone, Internet and other networked services.

Cloud computing: Reliance on a network-connected computing infrastructure, instead of local computers, laptops and office servers, for applications, data and storage. Advantage of cloud-based approaches may include lower costs of establishing and maintaining systems, plus data storage and backup automation.

Digital: In communications and media, a catch-all for describing images and sounds translated into the binary code that is the language of computers. Once converted into exacting combinations of 0s and 1s, sounds and images can be distributed, translated and replicated with tremendous fidelity.

Digital voice: A category of telephone service that makes use of techniques to translate sounds into digital codes, transmit those codes across a network, and reassemble them into recognizable sounds on the receiving end. It's a core technology behind new high-performance phone services that offer compelling alternatives to legacy lines.

Disaster recovery: Various techniques for repairing or restoring data that have been lost or compromised because of a system failure, theft or other events. Usually accomplished through networked storage and retrieval.

Downstream: The direction data travels to the end user from a connected host or server. Downstream rates are usually much faster than upstream rates, owing to the asymmetrical nature of modern data communications, in which users typically send less data back up the network.

Dynamic IP address: A unique numeric identifier, associated with Internet-connected devices like PCs, used to route Internet traffic. Most of the time, if you're checking email or using the Internet, you're making use of a dynamically assigned address, which can change from time to time as you start up your computers and log on to the Internet. If you need a fixed address (commonly used for direct computer-to-computer communication), a static IP address is in order.

E-commerce: When you identify a product, select it from a website and enter your payment credentials, you're engaging in the fast-growing world of e-commerce, a category that has helped many a small business play on the global stage.

Email: The messages and attachments that travel between your inbox and outbox. Still a staple of the business world, even though real-time platforms such as instant-messaging and text or SMS messaging are gaining momentum.

Escalation: A tiered progression within technical-support operations that hands certain troubleshooting, repair or complaint calls to specialists with particular knowledge relevant to the problem. Escalation procedures often are used to distribute and manage trouble calls among support staff so that problems can be solved quickly by the appropriate team.

Ethernet: A set of specifications for high-performance networks, prescribing physical connections, addressing formats and signaling standards. The familiar multi-pin connector at the end of the data cable that plugs into your PC is a creation of Ethernet. Other related terms:

- Ethernet Networks (sometimes called fiber networks) provide for the establishment of extremely fast data connections between or among business locations, allowing customers to bypass the public Internet in favor of a private network.
- Ethernet Dedicated Internet networks allow users to customize their IP networks by adding bandwidth and upgrading capacity.

Facilities-based: Owned and operated by a communications provider such as a cable telecommunications company that has responsibility for its own physical network infrastructure, as opposed to a provider that obtains and resells capacity from a network owned/operated by another company.

Fiber optics: A family of communications technologies making use of air-thin glass fibers that transport information affixed to pulses of light. Its high capacity, long-distance performance and other advantages over electrical transmission have made fiber optical transmission a favored transmission technology for today's high-capacity networks.

Firewall: A physical device or software agent designed to allow or prevent data from passing between networks or connected devices based on established rules. A key defense mechanism in the ongoing war against computer viruses, worms and other forms of malware, it gets its name from the world of building architecture, where firewalls were built to contain fire outbreaks.

GB (gigabyte): A measure of digital information storage. One GB is equal to 1,000 megabytes (MB). Common business-class desktop and laptop computers typically offer built-in drive storage of hundreds of GBs. Next up: Terabytes, equivalent to about 1,000 GBs.

Gbps: Gigabits per second. A measure of bandwidth, or the speed at which data travels through a network.

Gig-E (gigabit Ethernet): The transmission of data across an Ethernet-outfitted network at a rate of roughly 1 Gbps.

HD voice: Supremely high-quality transmission of sound that travels over telephone connections. It gets its mojo from a much wider frequency range (30 hertz to 7,000 hertz) than what traditional phone calls accommodate. It's not quite up there with the range of the human voice, but it's getting close.

HDTV (high-definition television): A standard for video resolution packing 1 million or more pixels – small shapes of color and light – into a video frame. HDTV delivers roughly five times the resolution of standard television.

Hosted services: Computing functions such as storage, website serving, data security and others accomplished from a network-connected infrastructure rather than your own internal equipment.

Hunt group: A configuration of phones or phone lines that share in the distribution of calls according to an assigned set of rules. Typically a hunt group is used to limit busy signals for incoming calls by assigning a new call to a hunt group phone that's free at the time.

Internet: A system of rules and protocols that describe how data travels among networks ascribing to common technology and communication principles. Its origins come from work conducted beginning in the 1960s by the U.S. Advanced Research Projects Agency with partners in industry and academics.

IP (Internet protocol): The language of the Internet, consisting of addressing schemes that enable data packets to find their way to the intended device.

- *IPv4* (Internet protocol version 4) is the prevailing Internet specification set for defining and assigning addresses to websites and devices. The current pool of available IPv4 addresses is dwindling, hastening a move to IPv6, which uses a lengthier addressing protocol to create a nearly inexhaustible pool of addresses.

ISP (Internet service provider): A company that provides a connection between your business locations and the public Internet, through a wired or wireless network. Many communications companies that supply phone or video service double as ISPs.

LAN (local area network): A computer network that shuttles data to and from connected devices within a defined area, commonly an office building.

Malware: Bad stuff from bad guys out to wreck your data. Short for "malicious software," it includes computer viruses, spyware, worms and other hostile programs that attempt to infiltrate your network or computers and generally cause havoc. Anti-virus software helps guard against it.

Managed services: Data and information management functions provided by a third-party. Network monitoring, data backup, security and PC monitoring/ servicing from remote locations are examples.

Managed Internet router: Hardware and associated intelligence for connecting a network to the Internet.

Mbps (megabit per second): A commonly used measure of how fast packets of data travel between devices along a network. A data rate of 5 Mbps is capable of transferring a 10 megabyte file (a high-resolution photo you need for a brochure, for instance) in less than 30 seconds.

MB (megabyte): A measure of digital information storage. One MB is equal to 1,000 kilobytes (KB), and 1,000 MB makes up a gigabyte (GB).

MEF (Metro Ethernet Forum): A non-profit organization that publishes a broad range of technical specifications describing performance and characteristics of carrier Ethernet networks.

Metro Ethernet: A standards-based wide-area data network operating within or throughout a metropolitan area.

Number portability: Preservation of an existing phone number by its assigned user in the event of a switch to a new or different voice-service provider.

Optical transport: A secure, private connection between two or more sites, offering custom configurations and often targeted to larger enterprises. Variations include Ethernet, SONET (synchronous optical networking) and TDM (time-division multiplexing), each with associated bandwidth characteristics.

PBX (private branch exchange): A mini-telephone network operating within an office environment or enterprise. PBXs allow businesses to distribute external phone calls among multiple phones, rather than having to assign a separate phone line for every connected phone. Users also can connect with one another by pressing just 3 or 4 digits, rather than having to use an external line.

PRI (primary rate interface): A defined telecommunications specification for carrying multiple data and/or voice transmissions for use by larger customers. When you hear “PRI Trunk,” think lots of capacity for lots of incoming and outgoing calls.

Remote number forwarding: A technique for sending local phone calls to a prescribed long-distance number, without requiring a caller to dial (or even know about) the transfer. Businesses use it to provide customers a local number to call, even when the business doesn’t maintain a physical presence.

Reseller: A company that obtains network capacity from a facilities-based provider – usually through a leasing arrangement – and offers it to customers through a separate brand name.

Router: A key building block of the Internet, responsible for shuttling the right packets to their assigned destination addresses. Routers are the Internet’s traffic directors.

Security: In communications, it describes various methods for protecting data and computing resources from corruption or attack by various forms of malware or other predators.

- Desktop security refers to virus shields, spam control and other protective tools that are resident in PCs and laptops.
- Managed security refers to implementation of security tools that operate within a network to protect data within the network and its connected devices.

Service availability: The presence or absence of network connectivity (wired or wireless) to a particular office or building address. Not every company serves every location, so it’s something to ask early on.

SIP trunk: A high-capacity voice and data line that uses a control method known as session initiation protocol. It's a derivation of Internet Protocol that works well to manage voice calls and related multimedia streams that may include video conferencing and video messaging.

Static IP address: A fixed or permanent Internet-assigned address for a computer or a connected device. In business, a static IP often is used for establishing a VPN (virtual private network) or hosting a website. Its cousin, the dynamic IP address, often changes when you log on to the Internet for a session. Your ISP (Internet service provider) can help you get one static IP address or more.

T1: A technical specification set for a fiber optic network that delivers 1.5 Mbps of data (or 24 voice lines) to connected offices. First popularized commercially in the 1980s, T1 lines increasingly are being supplanted by faster, more nimble and less expensive data networks.

Telecommuting: Working from home, or a remote location, usually with the help of a data connection. (And occasionally in pajamas.)

Trunk: A high-capacity phone line that connects the public phone network to an office PBX, often allowing for cost-savings over the purchase of dedicated individual phone lines.

Upstream: The direction data travels to a connected host or server from an end user. When you send a digital document as an email attachment, it's traveling upstream.

Uptime: A measure, often expressed as a percentage of total time, depicting the uninterrupted availability of data or computing resources.

VOD (video on demand): A way to select and control television programs so that they play, pause, rewind and fast-forward at the user's command. Most VOD platforms store programs on a high-capacity video server that is connected to a receiver and an associated television screen.

Voice mail: A range of options enabling phone users to select, listen to and manage recorded messages. A new twist offered by some phone companies allows users to check and listen to messages online or through any remote or mobile phone.

VPN (Virtual Private Network): When your bookkeeper calls to say his car's on the fritz and he can't make it to the office, you'll be glad you have one. A VPN, that is. It's a way to provide remote users with access to your network, so they can fetch and work on files just as if they were in the office. VPNs usually work over the Internet, but use cryptographic methods to keep data secure.

WAN (Wide Area Network): Any data network that distributes information to and from separate locations across metropolitan or regional geographies. It's the bigger cousin to a local area network, which is confined to a single building or office facility

Web hosting: Storing and serving of data to Internet users from an assigned location. Most websites are hosted from third party data centers that offer reliability, redundancy and consistent uptime.

Wi-Fi: A range of technologies and techniques for distributing data wirelessly within a fixed area. These days, no self-respecting coffee shop is without it.

WiMAX: A protocol for delivering data wirelessly at higher speeds and over larger distances than permitted by Wi-Fi.

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