

NEWTON's TELECOM DICTIONARY

30th Updated, Expanded, Anniversary Edition

Harry Newton

Steve Schoen, Technical Editor

Gail Saari, Artistic Director

New York

DexCom Exhibit 2002
Abbott v. DexCom
IPR2024-00797

NEWTON'S TELECOM DICTIONARY
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Harry@TechnologyInvestor.com

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Published in the United States by Harry Newton 50 Central Park West New York,
NY 10023

Printed by United Book Press, a division of Ironmark,
1807 Whitehead Road Baltimore, MD 21207-4104
800-726-0120 410-944-4044 Represented by Larry Davis

Distributed by National Book Network (NBN)
4501 Forbes Boulevard, Suite 200 Lanham, MD 20706
Orders 1-800-462-6420 Direct 1-717-794-3800 Fax 1-800-338-4550
custserv@nbnbooks.com

Steve Schoen, Technical Editor
Gail Saari, Artistic Director
Gail Saari and Leigh McLellan, Typesetting

ISBN 13 digit Number 978-0-9793873-8-8

5 a more workable solution. Recently, some have suggested coming up with a new video-only AAL using the still-undefined AAL 2.

audit To conduct an independent review and examination of system records and activities in order to test the adequacy and effectiveness of data security and data integrity procedures, to ensure compliance with established policy and operational procedures, and to recommend any necessary changes.

audit file On some systems, each time a billing file is generated, an audit file is created to record the details of the generation process.

audit log A file or table where an audit trail is stored. See audit trail, auditing.

audit trail A record of all the events that occur when users request and use specific resources. An audit trail gives you the ability to trace who did what and who was responsible for what. An audit trail is a chronological record of system activities that is sufficient to enable the reconstruction, review, and examination of the sequence of environments and activities surrounding or leading to an operation, a procedure or an event in a transaction from its inception to final results. Audit trail may apply to information in an automated information system, to the routing of messages in a communications system, or to material exchange transactions, such as in financial audit trails. Audit trails are great for finding out what activity caused the disaster, the network to crash, etc. Audit trails are great for tracing crooks, i.e. unauthorized break-ins. An audit trail is stored in an audit log.

auditing 1. Checking to see if the phone bill you got from your carrier is accurate. You do this by comparing it to your own telephone system's records.

2. Tracking activities of users by record and selected types of events in the audit log of a server or a workstation.

auditory pattern recognition Auditory pattern recognition is the ability to recognize spoken words.

auf Wiederhoeren Most people know that "goodbye" in German is "auf Wiedersehen," which means "until we see each other again." At the end of a phone conversation, however, "auf Wiederhoeren" is used, which means "until we hear from each other again." "Ischues" is also used, which is equivalent to saying "Bye" — or "K'bye" ("OK bye") if you're a teenager.

auger A type of drill bit typically used to make large, deep holes for passing wire or cable through wood.

augmentation of bandwidth Bandwidth augmentation is the ability to add another communications channel to an already existing communications channel.

augmented product Deployment services. A telecom vendor's installation of a product or service, associated engineering and furnishing activities, customer training, and after-sales service and support. Deployment services are part of what marketers call the augmented product.

AUI Autonomous Unit Interface or Attachment Unit Interface. Most commonly used in reference to the 15 pin D type connector and cables used to connect single and multiple channel equipment to an Ethernet transceiver.

AUI Cable Attachment Unit Interface Cable is usually a four-twisted pair cable that connects an Ethernet device to an Ethernet external receiver (XCVR).

AUP Acceptable Use Policy. The term used to refer to the restrictions placed on use of a network; usually refers to restrictions on use for commercial purposes, most commonly with respect to the Internet.

AUPC Automatic uplink power control. This is a feature of satellite modems. It allows a local modem to adjust its own output power levels in order to maintain Eb/No at the remote modem. Rain does and will affect Ku-bands links.

AUR Access Usage Record.

AURORAGOLD The code name of a reputed covert operation by the National Security Agency (NSA) to intercept emails sent by employees of cellular network operators and their suppliers and trade associations for the purpose of intercepting technical documents and planning papers that may help the NSA identify vulnerabilities in those operators' networks that the NSA can exploit at a future date.

aural Relating to the sense of hearing.

AURP AppleTalk Update-Based Routing Protocol. Method of encapsulating AppleTalk traffic in the header of a foreign protocol, allowing the connection of two or more discontinuous AppleTalk internetworks through a foreign network (such as TCP/IP) to form an AppleTalk WAN. This connection is called an AURP

tunnel. In addition to its encapsulation function, AURP maintains routing tables for the entire AppleTalk WAN by exchanging routing information between exterior routers. See also AURP Tunnel.

AURP Tunnel Connection created in an AURP WAN that functions as a single, virtual data link between AppleTalk internetworks physically separated by a foreign network (a TCP/IP network, for example). See also AURP.

AUSM ATM user service module.

AUSSAT Australian domestic satellite operator (now Optus).

Austin Wireless City Project In Austin, Texas, Less Networks has enabled the Austin Wireless City Project to network together 50 hot spots from City Hall, the Texas State Capitol, a downtown park, to dozens of coffee shops, bookstores, restaurants and bars. Even though the access is free, a common login is required providing the ISPs and the venues the security and logging data they need should someone abuse the free service. Moreover, the authentication logs provide invaluable usage statistics to the venues who foot the monthly bills for the broadband. This from the Wall Street Journal of May 27, 2004.

Australian Radiocommunications Study Group ARSG. Groups of experts (ASRGs) in the terms of reference of their associated ITU-R Study Group; these groups are subordinate to the Australian Communications and Media Authority's (ACMA) Radiocommunications Consultative Committee (RCC). The work of the ARSGs generally mirrors that of the International Telecommunication Union Radiocommunication Sector (ITU-R) Study Groups and their working parties. The activities of the ARSGs are managed by the ACMA, but they do not make technical or policy inputs other than to the ACMA or through the ACMA to the relevant ITU-R Study Group.

Australian Telecommunications Authority See AUSTEL.

Australian Telecommunication Standardisation Committee The ATSC was formerly responsible for managing Australia's input to international and regional telecommunications technical standards. ATSC functions are now performed by the ACIE.

Auth Code IN the language of DNS and the Internet, the "auth code" (sometimes called an "EPP code" or a "transfer code") is a string, usually between 8 and 16 characters long and randomly created at the time of a domain's registration, used to authorize transfers in certain top level domains. The auth code provides an extra layer of security over the normal transfer request procedures.

authenticate To establish, usually by challenge and response, that a transmission attempt is authorized and valid. To verify the identity of a user, device, or other entity in a computer system, or to verify the integrity of data that have been stored, transmitted, or otherwise exposed to possible unauthorized modification. A challenge given by voice or electrical means to attest to the authenticity of a message or transmission.

authenticated SMTP Authentication is means of verifying, or positively identifying, another party, like the sender of an e-mail message. E-mail makes use of SMTP (Simple Message Transfer Protocol), which is an application-layer extension of the TCP/IP (Transmission Control Protocol/Internet Protocol) protocol suite. TCP/IP and its various application-layer extensions form the fundamental protocols used in the Internet, which is an inherently insecure network of networks. One means of imposing a measure of security for e-mail is Authenticated SMTP, which blocks e-mail from other than trusted sources. That way you don't get a lot of spam. You also reduce the likelihood of contracting a computer virus, assuming that your trusted e-mail correspondents are as careful as you are about finding scanning for viruses and killing them. Encryption also is a good idea, as it secures your e-mails as they transverse the Internet. See also Authentication, Encryption, Internet, SMTP, TCP/IP, and Virus.

authentication 1. The process whereby a user, information source, or simply information proves they are who they claim to be. In other words, the process of determining the identity of a user attempting to access a network and/or computer system. I believed that defining authentication was pretty simple until I came across the following definition in a book on cryptography. Here it is: Authentication is any technique enabling the receiver to automatically identify and reject messages that have been altered deliberately or by channel errors. Also, can be used to provide positive identification of the sender of a message although secret (symmetric) key algorithms may be used for some

authentication without the prior sharing of any secrets between the messaging parties. See **authentication token**.

2. The process of establishing a secure connection between two Bluetooth devices. During the authentication process, both devices are asked for a passkey. The same passkey must be entered or confirmed on both devices. Some devices, such as a mouse, create and authenticate their own passkeys, while devices like keyboards or mobile phones will prompt you to authenticate the passkey the first time they pair.

authentication center Part of the home location register (HLR) in third-generation (3G) systems; performs computations to verify and authenticate a mobile phone user. See also **AuC**.

authentication random number A random value used in authentication procedures.

authentication sequence number A sequence count that is incremented for each change of Authentication Random Number (ARN).

authentication server An external server that a computer system uses to authenticate the identity of a user. For example, some Internet service providers have deployed Wi-Fi hot-spots in cities and towns that their paying broadband subscribers can use for free. When a user accesses such a hot-spot, a login page is presented where the user must present his user ID and possibly also a password. After doing so, the hot-spot sends a query to an external authentication server at the ISP's data center to see whether the user's credentials are in the ISP's subscriber database. If they are, the user is granted access to the hot-spot's Internet connection. See **captive portal**.

authentication token A portable device used for authenticating a user. Authentication tokens operate by challenge/response, time-based code sequences, or other techniques. An example is Security Dynamics Technologies Inc.'s SecurID card. See **Authentication**.

authoring Authoring is the process of using multimedia applications to create multimedia materials (including Web pages) for others to view. Multimedia authoring uses many tools, from the more familiar text editor or desktop publishing application, to tools for capturing and manipulating video images or editing audio files. Authors might include specialized creators of training, sales, or corporate applications such as insurance claims processing. Or, they might be creators of everyday business communications like voice-annotated email. Over time, everyone involved in business communications will probably have some level of multimedia authoring capability.

authoring system Software which helps developers design interactive courseware easily, without heavy computer programming. A specialized, high-level, plain-English computer language which permits non-programmers to perform the programming function of courseware development. The program logic and program content are combined. See **Authoring**.

authoritative nameserver A nameserver which has been configured to provide answers for a specific domain, rather than simply getting and caching data about domains from other nameservers. See **nameserver**.

authority zone Associated with DNS, an authority zone is a section of the domain-name tree for which one name server is the authority. See also **DNS**.

authorization Think of charging things on your MasterCard, Visa, or American Express card. If the store cannot authorize the amount of your purchase, your Visa card will not allow you to make the purchase. Authorization is needed for many long distance calls, especially those made using credit cards, telephone company calling card, etc. Authorization is done by the operator's computer checking with the remote validation database service. See **BVA**, **BVS** and **Validation**.

authorization code A code in numbers and/or letters employed by a user to gain access to a system or service. If you are making a call out on a restricted line, the PBX will ask you for an authorization code. If you have one, your call will go through. If not, your call will be denied (i.e. not go through). Authorization codes come in various flavors. Some can be used for making long distance calls. Some can be used also for international calls, etc. See **Authorized User**.

authorized agent Also called **Authorized Sales Agent**. A term chosen by some of the Bell operating companies and many of the cellular phone companies to refer to companies which sell their network services on commission. Some of

these companies have specific industry knowledge and have written specialized software. The idea is to work with businesses to arm them with the absolute best package of telecommunications hardware, software and services.

authorized bandwidth The necessary bandwidth required for transmission and reception of intelligence. This definition does not include allowance for transmitter drift or Doppler shift.

authorized dealer See **Dealer**.

authorized frequency A frequency that is allocated and assigned by an authority to a specific user for a specific purpose.

authorized user A person, firm, corporation or any other legal entity authorized by the provider of the service to use the service being provided.

auto answer The capability of a phone, a terminal, a video phone, a modem or a computer to answer an incoming call and to set up a connection without anyone actually doing anything to physically answer the call. I have auto answer on my video phone. When it rings, my phone answers and I see who's calling. It's nice.

auto attendant A shortened name for an automated attendant, a device which answers a company's phones, encourages you to touchtone in the extension you want, and rings that extension. If that extension doesn't answer, it may send the call to voice mail or back to the attendant. It may also allow you to punch in digits and hear information, e.g. the company's hours of business, addresses of local branches, etc. See also **Automated Attendant**.

auto available An ACD feature whereby the ACD is programmed to automatically put agents into Available after they finish Talk Time and disconnect calls. If they need to go into After-Call Work, they have to manually put themselves there. See **Auto Wrap-up**.

auto baud Automatic speed recognition. The ability of a device to adapt to the data rate of a companion device at the other end of the link.

auto baud detect See **Auto Baud**.

auto busy redial A feature of a phone or phone system where the phone has the ability to keep trying a busy number until answered. The circuit actually recognizes the busy tone, hangs up, and dials again. One of the greatest time-savers ever invented.

auto call Automatic Calling; a machine feature that allows a transmission control unit or a station to automatically initiate access to (i.e. dial) a remote system over a switched line.

auto changer A jukebox-style optical media system that permits the storage and playback multiple discs. Autochangers are available for both 5-, 8-, and 12-inch optical discs.

auto dial A feature of phone systems and modems which allows them to dial a long phone number (usually long distance) by punching fewer buttons than there are numbers to dial. One button auto dial on electronic phones is very common these days. Most communications software programs will allow you to auto dial a string of 35 to 40 digits, which you may need if you're dialing through a complex network.

auto dial auto answer A modem feature. Auto Dial lets you dial a phone number through your modem, using your personal computer or data terminal keyboard. Auto Answer permits the modem to automatically answer the incoming call without anybody having to be there.

auto dialer See **Automatic Dialer**.

auto discovery Process by which a network device automatically searches through a range of network addresses and discovers all known types of devices present in that range. Auto discovery is what takes place when a new device is added to a network. That device (e.g. an Ethernet board, a modem, a router) communicates to the network management system that it is online and defines its key characteristics. Auto discovery is also the process by which MPOA (MultiProtocol Over ATM) edge devices automatically find each other through the ATM network. See **MPOA**.

auto fax tone Also called **CNG**, or **Calling Tone**. This tone is the sound produced by virtually all Group 3 fax machines when they dial another fax machine. CNG is a medium pitch tone (1100 Hz) that lasts 1/2 second and repeats every 3 1/2 seconds. A fax machine will produce CNG for about 45 seconds after it dials. See also **CNG**.