Avaya G350 Media Gateway

Glossary

555-245-301
Issue 1
December 2003

Notice

Every effort was made to ensure that the information in this document was complete and accurate at the time of printing. However, information is subject to change.

Warranty

Avaya Inc. provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language as well as information regarding support for this product, while under warranty, is available through the following Web site: http://www.avaya.com/support.

Preventing Toll Fraud

"Toll fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Fraud Intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, in the United States and Canada, call the Technical Service Center's Toll Fraud Intervention Hotline at 1-800-643-2353.

How to Get Help

For additional support telephone numbers, go to the Avaya support Web site: http://www.avaya.com/support. If you are:

- Within the United States, click the *Escalation Management* link. Then click the appropriate link for the type of support you need.
- Outside the United States, click the *Escalation Management* link. Then click the *International Services* link that includes telephone numbers for the international Centers of Excellence.

Providing Telecommunications Security

Telecommunications security (of voice, data, and/or video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf. Whereas, a "malicious party" is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

Responsibility for Your Company's Telecommunications Security

The final responsibility for securing both this system and its networked equipment rests with you - Avaya's customer system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure:

- Your Avaya-provided telecommunications systems and their interfaces
- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products

TCP/IP Facilities

Customers may experience differences in product performance, reliability and security depending upon network configurations/design and topologies, even when the product performs as warranted.

Standards Compliance

Avaya Inc. is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Avaya Inc. The correction of interference caused by such unauthorized modifications, substitution or attachment will be the responsibility of the user. Pursuant to Part 15 of the Federal Communications Commission (FCC) Rules, the user is cautioned that changes or modifications not expressly approved by Avaya Inc. could void the user's authority to operate this equipment.

Product Safety Standards

This product complies with and conforms to the following international Product Safety standards as applicable:

Safety of Information Technology Equipment, IEC 60950, 3rd Edition including all relevant national deviations as listed in Compliance with IEC for Electrical Equipment (IECEE) CB-96A.

Safety of Information Technology Equipment, CAN/CSA-C22.2 No. 60950-00 / UL 60950, 3rd Edition

Safety Requirements for Customer Equipment, ACA Technical Standard (TS) 001 - 1997

The equipment described in this document may contain Class 1 LASER Device(s). These devices comply with the following standards:

- EN 60825-1, Edition 1.1, 1998-01
- 21 CFR 1040.10 and CFR 1040.11.

The LASER devices operate within the following parameters:

- Maximum power output: -5 dBm to -8 dBm
- Center Wavelength: 1310 nm to 1360 nm

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Klass 1 Laser Apparat

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposures. Contact your Avaya representative for more laser product information.

Electromagnetic Compatibility (EMC) Standards

This product complies with and conforms to the following international EMC standards and all relevant national deviations:

Limits and Methods of Measurement of Radio Interference of Information Technology Equipment, CISPR 22:1997 and EN55022:1998.

Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement, CISPR 24:1997 and EN55024:1998, including:

- Electrostatic Discharge (ESD) IEC 61000-4-2
- Radiated Immunity IEC 61000-4-3
- Electrical Fast Transient IEC 61000-4-4
- Lightning Effects IEC 61000-4-5
- Conducted Immunity IEC 61000-4-6
- Mains Frequency Magnetic Field IEC 61000-4-8
- Voltage Dips and Variations IEC 61000-4-11
- Powerline Harmonics IEC 61000-3-2
- Voltage Fluctuations and Flicker IEC 61000-3-3

Federal Communications Commission Statement

Part 15:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Part 68: Answer-Supervision Signaling

Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 rules. This equipment returns answer-supervision signals to the public switched network when:

- answered by the called station,
- answered by the attendant, or
- routed to a recorded announcement that can be administered by the customer premises equipment (CPE) user.

This equipment returns answer-supervision signals on all direct inward dialed (DID) calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered.
- A busy tone is received.
- A reorder tone is received.

Avaya attests that this registered equipment is capable of providing users access to interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialing codes is a violation of the Telephone Operator Consumers Act of 1990.

REN Number

For MCC1, SCC1, CMC1, G600, and G650 Media Gateways:

This equipment complies with Part 68 of the FCC rules. On either the rear or inside the front cover of this equipment is a label that contains, among other information, the FCC registration number, and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

For G350 and G700 Media Gateways:

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. The digits represented by ## are the ringer equivalence number (REN) without a decimal point (for example, 03 is a REN of 0.3). If requested, this number must be provided to the telephone company.

For all media gateways:

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed 5.0. To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

REN is not required for some types of analog or digital facilities.

Means of Connection

Connection of this equipment to the telephone network is shown in the following tables.

For MCC1, SCC1, CMC1, G600, and G650 Media Gateways:

Manufacturer's Port Identifier	FIC Code	SOC/REN/ A.S. Code	Network Jacks
Off premises station	OL13C	9.0F	RJ2GX, RJ21X, RJ11C
DID trunk	02RV2-T	0.0B	RJ2GX, RJ21X
CO trunk	02GS2	0.3A	RJ21X
	02LS2	0.3A	RJ21X
Tie trunk	TL31M	9.0F	RJ2GX
Basic Rate Interface	02IS5	6.0F, 6.0Y	RJ49C
1.544 digital interface	04DU9-BN	6.0F	RJ48C, RJ48M
	04DU9-IKN	6.0F	RJ48C, RJ48M
	04DU9-ISN	6.0F	RJ48C, RJ48M
120A4 channel service unit	04DU9-DN	6.0Y	RJ48C

For G350 and G700 Media Gateways:

Manufacturer's Port Identifier	FIC Code	SOC/REN/ A.S. Code	Network Jacks
Ground Start CO trunk	02GS2	1.0A	RJ11C
DID trunk	02RV2-T	AS.0	RJ11C
Loop Start CO trunk	02LS2	0.5A	RJ11C
1.544 digital interface	04DU9-BN	6.0Y	RJ48C
	04DU9-DN	6.0Y	RJ48C
	04DU9-IKN	6.0Y	RJ48C
	04DU9-ISN	6.0Y	RJ48C
Basic Rate Interface	02IS5	6.0F	RJ49C

For all media gateways:

If the terminal equipment (for example, the media server or media gateway) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact the Technical Service Center at 1-800-242- 2121 or contact your local Avaya representative. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. It is recommended that repairs be performed by Avaya certified technicians.

The equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

This equipment, if it uses a telephone receiver, is hearing aid compatible.

Canadian Department of Communications (DOC) Interference Information

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

Declarations of Conformity

United States FCC Part 68 Supplier's Declaration of Conformity (SDoC)

Avaya Inc. in the United States of America hereby certifies that the equipment described in this document and bearing a TIA TSB-168 label identification number complies with the FCC's Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments (ACTA) adopted technical criteria.

Avaya further asserts that Avaya handset-equipped terminal equipment described in this document complies with Paragraph 68.316 of the FCC Rules and Regulations defining Hearing Aid Compatibility and is deemed compatible with hearing aids.

Copies of SDoCs signed by the Responsible Party in the U. S. can be obtained by contacting your local sales representative and are available on the following Web site: http://www.avaya.com/support.

All Avaya media servers and media gateways are compliant with FCC Part 68, but many have been registered with the FCC before the SDoC process was available. A list of all Avaya registered products may be found at: http://www.part68.org by conducting a search using "Avaya" as manufacturer.

European Union Declarations of Conformity

CE

Avaya Inc. declares that the equipment specified in this document bearing the "CE" (*Conformité Europeénne*) mark conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (1999/5/EC), including the Electromagnetic Compatibility Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC). This equipment has been certified to meet CTR3 Basic Rate Interface (BRI) and CTR4 Primary Rate Interface (PRI) and subsets thereof in CTR12 and CTR13, as applicable.

Copies of these Declarations of Conformity (DoCs) can be obtained by contacting your local sales representative and are available on the following Web site: http://www.avaya.com/support.

To order copies of this and other documents:

Call: Avaya Publications Center
Voice 1.800.457.1235 or 1.207.866.6701
FAX 1.800.457.1764 or 1.207.626.7269

Write: Globalware Solutions
200 Ward Hill Avenue
Haverhill, MA 01835 USA
Attention: Avaya Account Management

E-mail: totalware@gwsmail.com

For the most current versions of documentation, go to the Avaya support Web site: http://www.avaya.com/support.

Contents

About this book

This glossary defines terms that appear in the Avaya G350 Media Gateway documentation set.

Audience

The information in this book is intended for use by a customer or technician at the G350 installation site.

Downloading this book and updates from the Web

You can download the latest version of *Avaya G350 Media Gateway Glossary* from the Avaya Web site. You must have access to the Internet, and a copy of Acrobat Reader must be installed on your personal computer.

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4. Scroll down to find the latest issue number, and then click the book title that is to the right of the latest issue number.
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   - **PDF Format** to download the book in regular PDF format
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Related resources

For more information on the Avaya G350 Media Gateway and related features, see the following books:

Title	Number
Overview of the Avaya G350 Media Gateway	555-245-201
Installation of the Avaya G350 Media Gateway	555-245-104
Upgrade and Service Guide for the Avaya G350 Media Gateway	555-245-106

Technical assistance

Avaya provides the following resources for technical assistance.

Within the US

For help with:

- Feature administration and system applications, call the Avaya DEFINITY Helpline at 1-800-225-7585
- Maintenance and repair, call the Avaya National Customer Care Support Line at 1-800-242-2121
- Toll fraud, call Avaya Toll Fraud Intervention at 1-800-643-2353

International

For all international resources, contact your local Avaya authorized dealer.

Trademarks

Sending us comments

Avaya welcomes your comments about this book. To reach us by:

- Mail, send your comments to:

  Avaya Inc.

  Product Documentation Group

  Room B3-H13

  1300 W. 120 Ave.

  Westminster, CO 80234 USA
- E-mail, send your comments to:

  document@avaya.com
- Fax, send your comments to:

  1-303-538-1741

Ensure that you mention the name and number of this book, *Avaya G350 Media Gateway Glossary,* 555-245-301.

Glossary

This Glossary provides definitions of networking terms and concepts relevant to the Avaya G350 Media Gateway.

Numerics

802.1p/802.1Q
IEEE standard for a layer 2 frame structure that supports VLAN identification and a QOS mechanism usually referred to as 802.1p, but the content of 802.1p is now incorporated in 802.1D.

A

Acoustic Echo Cancellation (AEC)
A signal processing technique that significantly reduces the coupling of a received audio signal back into an active microphone.

ACP
See Avaya Call Processing (ACP).

Address Resolution Protocol (ARP)
An Internet protocol (IETF STD 37, RFC 826) that is used to map dynamic Internet addresses to physical addresses on local area networks (LANs).

adjunct
A computer or other device that connects to a second device and performs one or more tasks for the second device. For example, the Avaya Intuity AUDIX system or a Call Management System (CMS) can be adjuncts to an Avaya DEFINITY Server.

Adjunct-Switch Application Interface (ASAI) protocol
A recommendation for interfacing adjuncts and communications systems to extend telephony features to adjuncts. ASAI provides for activities such as event notification and call control. The ASAI protocol is based on the CCITT Q.932 specification for layer 3. *See also* adjunct.

Administration Without Hardware (AWOH)
A feature that is used to administer ports without the need for associated terminals or other hardware.

AEC
See Acoustic Echo Cancellation (AEC).

alarm
A system-generated indication that a fault is present.

ALM
See alarm.

ALRM
See alarm.

American Wire Gauge (AWG)
The US standard to measure the gauge of copper, aluminum, and other nonferrous conductors.

analog telephone
A telephone that receives acoustic voice signals and sends analog electrical signals along the telephone line. Analog telephones are usually served by a single wire pair that is known as *tip and ring*. The model-2500 telephone set is an example of an analog telephone.

announcements
Recorded messages that a telephone system plays for callers.

ARP
See Address Resolution Protocol (ARP).

ASA
Avaya Site Administration.

ASAI
See Adjunct-Switch Application Interface (ASAI) protocol.

ASIC
Application-Specific Integrated Circuit.

attendant
A person who uses an attendant console. *See also* attendant console.

attendant console
A workstation that an attendant uses to originate a call, answer an incoming call, transfer a call to another extension or trunk, put a call on hold, or remove a call from hold. Attendants can also use the console to manage and monitor some system operations. Also called *console*. *See also* attendant.

Attention Dial (ATD)
A command in the Hayes modem command set for asynchronous modems.

Audio Information Exchange (AUDIX)
A fully integrated voice-mail system that can be used with a variety of communication systems to provide call-history data, such as subscriber identification and reason for redirection.

AUDIX
See Audio Information Exchange (AUDIX).

Automatic Number Identification (ANI)
Representation of the calling number, for display or to use to obtain information about the caller.

AUX
Auxiliary.

Avaya Call Management System (CMS)
An application that runs on an adjunct processor, and collects information from an ACD unit. Customers use CMS to generate reports on the status of agents, splits, trunks, trunk groups, vectors, and VDNs. Customers then use this information to monitor and manage telemarketing centers. Customers can also use CMS to partially administer the ACD feature for a communications system.

Avaya Call Processing (ACP)
The call control application at the heart of Avaya's DEFINITY and G350 products, previously called DEFINITY call processing.

Avaya Communication Manager
An open, scalable, highly reliable, and secure telephony application. Avaya Communication Manager provides user and system management functionality, intelligent call routing, application integration and extensibility, and Enterprise Communications networking.

Avaya Media Gateway
A family of application-enabling hardware elements that includes intraswitch connectivity, control interfaces, port interfaces, and cabinets. Avaya Media Gateways support both bearer traffic and signaling traffic that is routed between packet-switched networks and circuit-switched networks to deliver data, voice, fax and messaging capabilities. Avaya Media Gateways provide protocol conversion (IP to ATM to TDM), conferencing, presence (on-hook/off-hook), connectivity (to private and public networks, IP/ATM/TDM) and networking (QSIG/DCS/ISDN). Optional form factors are supported.

Avaya Media Server
A family of application-enabling processing platforms that are based on open CPUs and industry-standard operating systems. Avaya Media Servers provide centralized Enterprise Class call processing that can be distributed across a multiprotocol network that includes, but is not limited to, IP. In addition to supporting a highly diversified network architecture, Avaya Media Servers provide user and system management functionality, intelligent call routing, application integration, mobility, and conferencing.

Avaya MultiService Console
The fault management infrastructure for a data switching environment that interfaces with device management and provides event reporting and alarming.

Avaya MultiService Network Manager
The network management platform that is used with Avaya products.

Avaya Policy Manager
Software that implements policy management for Avaya products.

AWG
See American Wire Gauge (AWG).

AWOH
See Administration Without Hardware (AWOH).

B

Backbone
A high-bandwidth connection between switches. A backbone link normally operates in Full Duplex Mode, sending packets in both directions simultaneously.

bandwidth
The width of a communications channel. In analog communications, bandwidth is measured in cycles per second or *Hertz*. In digital communications, bandwidth is measured in bits per second.

Basic Rate Interface (BRI)
See Integrated Services Digital Network Basic Rate Interface (ISDN-BRI).

baud
A unit of transmission rate equal to the number of signal events per second. *See also* bit rate and bits per second (bps).

BER
See Bit Error Rate (BER).

BGP
See Border Gateway Protocol (BGP).

BHCC
Busy Hour Call Capacity.

Bipolar Eight Zero Substitution (B8ZS)
A line-coding technique that is used in North American T1 circuits and ISDN-PRI circuits. To guarantee ones density, B8ZS removes an octet of all zeros, and replaces the octet with a pattern that contains bipolar line violations in specific bit locations. A B8ZS receiver removes the octet with the substituted pattern, and replaces that octet with the original octet of all zeros.

big endian
A format of storage or transmission of binary data in which the most-significant byte (bit) comes first. The TCP/IP standard network byte order is big endian.

BIST
Built In Self Test. Functions available in some device designs that allow the devices to perform self-tests.

Bit Error Rate (BER)
The percentage of bits that are received in error, compared to the number of bits that are sent.

bits per second (bps)
The number of binary units of information that are transmitted or received per second. *See also* baud and bit rate.

bit rate
The speed at which bits are transmitted, usually expressed in bits per second. The bit rate depends on the speed of the transmission, and thus is not the same as the actual capacity of the channel. Also called *data rate* and *data signaling rate*.

Bit Oriented Signaling (BOS)
This is a signaling method in which one or more bits per trunk are used in the T1 or E1 frame to signal the state of the trunk, such as idle, seized, or flash. CAS is the E1 form of BOS.

BOOTP
Bootstrap Protocol. An Internet protocol that enables a diskless workstation to discover its own IP address, the IP address of a BOOTP server on the network, and a file to be loaded into memory to boot the machine. This enables the workstation to boot without a hard or floppy disk drive.

Border Gateway Protocol (BGP)
A TCP/IP routing protocol for interdomain routing in large networks. BGP is defined by RFC 1163.

BOS
Bit-Oriented Signaling.

BPDU
Bridge Protocol Data Unit. A packet that is transmitted at configurable intervals to exchange information among bridges in the network. Among other things, BPDUs inform the bridges of the topology of the network and detect loops and topology changes.

bps
See bits per second (bps).

BRI
See Integrated Services Digital Network Basic Rate Interface (ISDN-BRI).

bridge
A device that is generally used to connect segments of a local area network (LAN) to other LAN segments or to a Wide Area Network (WAN). A bridge routes traffic on the Level 2 LAN protocol (for example, the Media Access Control address), which occupies the lower sublayer of the LAN Open Systems Interconnect (OSI) data link layer. A bridge can be equipped to provide frame relay support to the LAN devices that the bridge serves. A bridge that provides frame relay support encapsulates LAN frames in frame relay frames. The bridge then feeds those frame relay frames to a frame relay switch for transmission across the network. A bridge that provides frame relay support also receives frame relay frames from the network, strips the frame relay frame off each LAN frame, and passes the LAN frame to the end device. *See also* router.

broadcasting
A common method of information transmission in which a packet is sent to every port on the network.

BSP
Board Support Package.
1. Lowest level of Vxworks Operating system, which interfaces with hardware. Also handles hardware initialization at startup.
2. Firmware used on other DEFINITY based VxWorks circuit boards to boot the board up.

buffer
1. For hardware, a circuit or component that isolates one electrical circuit from another. Usually, a buffer holds data from one circuit or process until another circuit or process is ready to accept the data.
2. For software, an area of memory that is used for temporary storage.

burst
A transmission of data at a faster rate than normal. Data bursts can be carried out in several ways. A burst is always limited in time and can take place only under special conditions.

bus
A multiconductor electrical path that is used to transfer information over a common connection from any of several sources to any of several destinations.

B-channel
A bearer channel over which user voice or data is transported between midpoints.

C

cabinet
A container for racks, shelves, or carriers that hold electronic equipment.

cable
A wire or group of wires used to connect a piece of equipment and a termination field, or to connect two pieces of equipment such as a data terminal and modem.

Cajun
An obsolete term that was previously used to describe Avaya data networking products.

Call Detail Recording (CDR)
A feature that uses software and hardware to record call data. CDR was formerly called Station Message Detail Recording (SMDR).

Caller ID (CID)
See Incoming Call Identifier (ICI).

Caller's Emergency Service Identification (CESID)
A telephone extension that a switch sends to a Public Safety Answering Point (PSAP). A CESID helps to locate callers who require emergency 911 services.

CAM
Content Address Memory. A list kept by each port containing the addresses of all network elements connected to the port. CAM is accessed according to its contents rather than its memory address.

CBR
See Constant Bit Rate (CBR).

CC
See Contact Closure (CC).

CCA
See Contact Closure Adjunct (CCA)

Central Office (CO)
Telephone switching equipment that provides local telephone service and access to toll facilities for long distance calling.

Challenge-Handshake Authentication Protocol (CHAP)
An authentication method for connecting to an Internet Service Provider (ISP). CHAP does not require a user to use a terminal screen to log in to the ISP. Because the user password is not sent in text format, CHAP is more secure than some other authentication methods.

channel
1. A circuit-switched call.
2. A communications path used to transmit voice and data.
3. In wideband transmission, all the contiguous time slots or noncontiguous time slots that are necessary to support a call. For example, an H0-channel uses six 64-kbps time slots.
4. A DS0 on a T1 facility or an E1 facility that is not specifically associated with a logical circuit-switched call.

Channel Associated Signaling (CAS)
A method of signaling used with non-ISDN digital trunks. CAS is defined only for E1 trunks, and is bit oriented. Usually for ITU-T-defined E1 trunks, CAS signaling is carried over E1 timeslot 16, and framing is carried over TS0.

Channel Service Unit/Data Service Unit (CSU/DSU)
A hardware device that converts digital data frames from the communications technology used on a Local Area Network (LAN) into frames that are appropriate for a Wide Area Network (WAN), and vice versa. The CSU receives and transmits signals from and to the WAN line, and provides a barrier against electrical interference from either side of the unit. The CSU can also echo loopback signals from the Central Office (CO) for testing. The DSU manages line control, and converts input and output between RS-232C, RS-449, or V.xx frames from the LAN and the time-division multiplexed DSX frames on the T-1 line. The DSU manages timing errors and signal regeneration. The DSU uses a standard (EIA/CCITT) interface to provide a modem-like interface between the Data Terminal Equipment (DTE) and the CSU. The DTE interface of a DSU is usually compatible with the V.xx and RS-232C or a similar serial interface. The DSU also provides testing capabilities.

CHAP
See Challenge-Handshake Authentication Protocol (CHAP).

chassis
A rack-mountable container for circuit packs, media modules, and other components of a media gateway.

Chassis View
Avaya's Network Management System's graphic depiction of a network device.

CLAN (TN799B)
See Controlled Local Area Network (CLAN) circuit pack.

Class of Service (COS)
A feature that uses a number to specify whether telephone users can activate the Automatic Callback, Call Forwarding All Calls, Data Privacy, or Priority Calling features.

Class-Based Queuing (CBQ)
CBQ is a standards compliant technology defined within the IETF. CBQ is an IP feature that classifies traffic according to very granular network policies. It enables explicit policy shaping allowing individual applications or different groups of users to each receive bandwidth tailored to meet their specific requirements. CBQ control is based on the ability to shape traffic on a per application basis, which is much more granular than the per PVC definition of Frame Relay.

CLI
See Command Line Interface (CLI).

CM
Connection Manager.

CO
See Central Office (CO).

codec
A device that converts data from one format to another. A codec, which is an abbreviation for *coder/decoder* or *compressor/decompressor*, is typically implemented in the firmware of a Digital Signal Processor (DSP). *See also* Digital Signal Processor (DSP).

collision
In Ethernet, a collision occurs as the result of two nodes transmitting simultaneously. The frames from each device impact and are damaged from the impact.

COM1
Communications port in PC. *See also* COM port.

Command Line Interface (CLI)
A simple terminal interface that might be provided by way of telnet or a serial port that provides management functions. The SAT and the UNIX shell are examples of a CLI.

Communications Controller (CC)
The server that runs Avaya Communication Manager from the perspective of a G700 media gateway. The Avaya S8300 Media Server is a CC that is also an Avaya media module. The S8300 Media Server can also run Intuity AUDIX and other applications. In the external configuration, the CC is an Avaya S8700 Media Server.

composed
This is a term defined in the H.248 standard, and describes a specific configuration where an H.248 Media Gateway (MG) runs co-resident with its Media Gateway Controller (MGC). Occasionally this term is encountered in G350 documentation to describe the G350 system controlled by an internal Communications Controller (CC), though that usage of the term "composed" is technically incorrect.

COM port
A communications port. UNIX recognizes only COM1 and COM2, and presents COM1 and COM2 to the user as TTY ports. DOS recognizes COM1 and COM2, and also recognizes COM3 an COM4, although there is contention for the interrupt line when all COM ports are in use.

connectivity
The state in which a domain of connected devices all adhere to the same set of connection rules. Connectivity is the property of a network by which dissimilar devices can communicate with each other.

console
See attendant console.

Constant Bit Rate (CBR)
Digital information, such as video and digitized voice, that is represented by a continuous stream of bits. CBR traffic requires guaranteed throughput rates and service levels.

Contact Closure (CC)
A controllable relay that can control auxiliary devices such as automatic door locks or voice recording units.

Contact Closure Adjunct (CCA)
A device connected to the G350 chassis that provides contact closures. *See also* Contact Closure (CC)

Controlled Local Area Network (CLAN) circuit pack
A circuit pack (TN799B) in a DEFINITY Port Network (PN) that provides TCP/IP connectivity to adjuncts over Ethernet or Point-to-Point Protocol (PPP). The CLAN circuit pack serves as the network interface for a DEFINITY server. The CLAN terminates IP (TCP and UDP), and relays those sockets and connections to the DEFINITY server.

COS
See Class of Service (COS).

CPE
See Customer-Premises Equipment (CPE).

CPU
Central Processing Unit.

CRC
See Cyclic Redundancy Check (CRC).

CSMA/CD
Carrier Sense Multiple Access with Collision Detection. A multi-user network allocation procedure in which every station can receive the transmissions of all other stations. Each station waits for the network to be idle before transmitting and can detect collisions by other stations.

CSU/DSU
See Channel Service Unit/Data Service Unit (CSU/DSU).

Customer-Premises Equipment (CPE)
Equipment that is connected to the telephone network and resides at a customer site. CPE can include equipment such as telephones, modems, fax machines, video conferencing devices, and switches.

Cyclic Redundancy Check (CRC)
A method to check the integrity of a transmitted block of data. The transmitting device generates a CRC character, the value of which depends on the number of ones in the data block to be transmitted. The receiving device calculates the value of the data received, including the added character. If the values of the transmitted and received data do not agree, the receiving device requests the transmitting device to send the data again.

D

Data Link Connection Identifier (DLCI)
An identifier that is assigned to each data link in the Link Access Procedure-D (LAPD) protocol. DLCI is used to route data to a certain destination.

data module
An interconnection device between a Basic Rate Interface (BRI) or a Digital Communications Protocol (DCP) interface of the switch, and Data Terminal Equipment (DTE) or Data Communications Equipment (DCE).

data path
The end-to-end connection that is used for a data communications link. A data path is the combination of all elements of an interprocessor communication in a Distributed Communications System (DCS).

Data Service Unit (DSU)
See Channel Service Unit/Data Service Unit (CSU/DSU).

Data Terminal Equipment (DTE)
Equipment that comprises the endpoints in a connection over a data circuit. In a connection between a data terminal and host, the terminal, the host, and the associated modems or data modules comprise the DTE.

dB
Decibel.

D-channel
A data channel over which ISDN messages are transported to control the call setup of one or more B-channels.

DCP
See Digital Communications Protocol (DCP).

DEFINITY
DEFINITY describes both Avaya's flagship PBX product (hardware and software) and sometimes also the software application at the heart of the G350's call control. That software application is now called Avaya Call Processing, though the use of the term DEFINITY is present in many historical documents. In the context of G350, it almost always describes the software application, including call control software as well as maintenance and administration functions that are included with it.

DEFINITY ONE
A version of DEFINITY running in a ProLogics cabinet with an NT processor complex (the RYON card). DEFINITY ONE runs Avaya Call Processing and Intuity messaging on this NT processor.

DEFINITY Wireless Business System (DWBS)
A wireless telecommunications system that integrates wireless capabilities into the DEFINITY Server.

DHCP
See Dynamic Host Configuration Protocol (DHCP).

Differentiated Services (DiffServ)
A protocol that is used to specify and control network traffic by class, so that certain types of traffic get precedence. For example, voice traffic, which requires a relatively uninterrupted flow of data, might get precedence over other kinds of network traffic. DiffServ is the most advanced method for managing traffic by Class of Service. DiffServ avoids simple priority tagging, and depends on more complex policy or rule statements to determine how to forward a given network packet.

DiffServ
See Differentiated Services (DiffServ).

Digital Communications Protocol (DCP)
A proprietary protocol that is used to transmit digitized voice and data over the same communications link. A DCP link consists of two 64-kbps Information (I) channels, and one 8-kbps Signaling (S) channel. The DCP protocol supports two information-bearing channels, and thus two telephones or data modules. The I1 channel is the DCP channel that is assigned on the first page of the 8411 station form. The I2 channel is the DCP channel that is assigned on the analog adjunct page of the 8411 station form, or on the data module page.

Digital Signal-0 (DS0)
See Digital Signal Level n (DS-n).

Digital Signal-1 (DS1)
See Digital Signal Level n (DS-n).

Digital Signal Level *n* (DS-*n*)
A term for the series of standard digital transmission rates or levels that are used to classify the capacities of digital lines and trunks. Signals are based on DS0, and range upward to DS4. DS0 is a transmission rate of 64 Kbps, which is the bandwidth that is normally used for one telephone channel. DS0 is a single 64-kbps channel in a T1 facility or an E1 facility, and consists of 8 bits in a T1 frame or an E1 frame every 125 microseconds. DS1, used as the signal in the T-1 carrier, is 24 DS0 (64 Kbps) signals that are transmitted using pulse-code modulation (PCM) and time-division multiplexing (TDM). DS-2 is four DS1 signals that are multiplexed together to produce a rate of 6.312 Mbps. DS-3, the signal in the T-3 carrier, carries a multiple of 28 DS1 signals or 672 DS0s or 44.736 Mbps. Digital Signal *n* is based on the ANSI T1.107 guidelines.

Digital Signal Processor (DSP)
A specialized microprocessor that processes a stream of bits in real time. In the telecommunications industry, DSPs are used for such things as echo cancellation, call progress monitoring, voice processing, and the compression of voice and video signals. *See also* codec.

Digital-to-Analog Converter (DAC)
A device that converts data in digital form to the corresponding analog signals.

DLCI
See Data Link Connection Identifier (DLCI).

Domain Name System (DNS)
A hierarchical network-naming scheme. DNS servers provide a mapping of domain names to IP addresses.

Dot1Q
Standard for VLAN tagging under the IEEE 802.1Q VLAN standard.

DRAM
See Dynamic Random Access Memory (DRAM).

DS0
See Digital Signal Level n (DS-n).

DS1
See Digital Signal Level n (DS-n).

DS3
See Digital Signal Level n (DS-n).

DSI
Digital Signal Interface.

DSP
See Digital Signal Processor (DSP).

DSU
See Channel Service Unit/Data Service Unit (CSU/DSU).

DTMF
See Dual-Tone Multifrequency (DTMF).

Dual-Tone Multifrequency (DTMF)
Touchtones that are used for in-band telephone signaling.

duplex mode
The state of the device with regard to simultaneous transmission and reception of information. In full duplex mode, also known as bisynchronous communication, the device or circuit permits simultaneous transmission and reception. In half duplex mode, also known as asynchronous communication, the device or circuit does not permit simultaneous transmission and reception.

Dynamic Host Configuration Protocol (DHCP)
An IETF protocol (RFCs 951, 1534, 1542, 2131, and 2132) that dynamically assigns IP addresses from a pool of addresses.

Dynamic Random Access Memory (DRAM)
Read/write memory that must be continually refreshed to maintain the stored data. *See also* Random Access Memory (RAM).

E

E&M
See Ear and Mouth (E&M) signaling.

E1
E1 is a European digital transmission format that was devised by the ITU-TS and named by the Conference of European Postal and Telecommunication Administration (CEPT). E1 is the equivalent of the North American T-carrier system format. E2 through E5 are carriers in increasing multiples of the E1 format. The E1 signal format carries data at a rate of 2.048 million bits per second, and can carry 32 channels of 64 Kbps each. E1 carries at a somewhat higher data rate than T1, which carries 1.544 million bits per second. The reason for this higher rate is that E1, unlike T1, does not do bit-robbing, and all 8 bits per channel are used to code the signal. E1 and T1 can be interconnected for international use. The E2 signal format carries four multiplexed E1 signals with a data rate of 8.448 million bits per second. The E3 signal format 16 E1 signals with a data rate of 34.368 million bits per second.

Ear and Mouth (E&M) signaling
Trunk supervisory signaling that is used between two communications systems. E&M signaling information is transferred through 2-state voltage conditions (on the E and M leads) for analog applications, and through a single bit for digital applications.

ECC
Error Correct Code.

EIA
See Electronics Industries Association (EIA).

EIA-232

A physical interface specified by the Electronic Industries Association (EIA). EIA-232 transmits and receives asynchronous data at speeds of up to 19.2 kilobits per second over cable distances of up to 50 feet. EIA-232 replaces RS-232 protocol in some Avaya MultiVantage applications.

Electromagnetic Interference (EMI)

Interference in signal transmission that is caused by the radiation of electrical and magnetic fields.

Electronics Industries Association (EIA)

A trade association of the electronics industry that establishes electrical and functional standards for the member companies.

EMC

Electromagnetic Compatibility. A term that typically encompasses radio-frequency and conducted radiation, immunity/susceptibility, power surges and transients, and Electrostatic Discharge (ESD).

Emergency Transfer Relay (ETR)

A feature that provides basic telephone services in the event of a power outage or a failed connection to Avaya Communications Manager. Using ETR, an analog relay can be set up to connect an outside telephone exchange to an analog telephone.

EMI

See Electromagnetic Interference (EMI).

Erlang

A unit of traffic intensity, or load, that is used to express the amount of traffic that is needed to keep one facility busy for one hour. One Erlang equals 36 hundred Call Seconds (CCS).

Ethernet

One of the most widely implemented LAN standards, Ethernet is standardized as IEEE 802.3. Ethernet uses the CSMA/CD access method to handle simultaneous demands, and supports data transfer rates of 10 Mbps. A newer version of Ethernet, called 100Base-T (or Fast Ethernet), supports data transfer rates of 100 Mbps. The newest version, Gigabit Ethernet, supports data rates of 1 gigabit per second.

Ethernet L2 switch

In the Avaya G700 Media Gateway and in the Avaya stackable switch and router family, an Ethernet L2 switch consists of one or more 8-port, wire-speed Application-Specific Integrated Circuit (ASIC) devices.

Ethernet switch

A device that provides for port multiplication by having more than one network segment. An Ethernet switch directs data only to the target device, instead of to all devices that are attached to the Local Area Network (LAN).

ETR

See Emergency Transfer Relay (ETR).

ETSI

See European Telecommunications Standards Institute (ETSI).

EU

European Union. A group of European nations that, among other things, have agreed on common type approval requirements.

European Telecommunications Standards Institute (ETSI)

An organization that works to promote integrated telecommunications in the European community. ETSI can be viewed as the counterpart of the American National Standards Institute (ANSI).

external call
A connection between a user of a communications system and a party who is either on the public network or on another communications system in a private network.

external communications controller
An external processor running the Avaya Call Processing application, i.e. StingRay or G3i/r or IP 600, controlling G350 Media Gateways. *See also* Internal Communications Controller (ICC).

External Media Server (EMS)
An external server that is running Avaya Communication Manager. An Avaya S8700 Media Server that is controlling Avaya G700 Media Gateways is an example of an external server.

F

FAC
Feature Access Code.

FCC
Federal Communications Commission.

FCS
Frame Check Sequence. A field added to a frame for error-control purposes.

FDX
See Full Duplex (FDX).

File Transfer Protocol (FTP)
An Internet protocol standard that is used to copy files from one computer to another. *See also* Trivial File Transfer Protocol (TFTP).

flash memory
Non-volatile memory that can be erased and reprogrammed by the microprocessor to which it is connected.

fractional T1
A fractional T-1 is a T-1 digital phone line in the North American T-carrier system that is leased to a customer at a fraction of its data-carrying capacity and at a correspondingly lower cost. A T-1 line contains 24 channels, each with a data transfer capacity of 64 Kbps. The customer can rent some number of the 24 channels. The transmission method and speed of transfer remain the same. Overhead bits and framing are still used, but the unrented channels simply contain no data.

fragment
Ethernet packet shorter than 576 bits (usually the result of a collision).

frame
A logical grouping of information sent as a Data Link Layer unit over a transmission medium. The word frame often refers to the header and trailer, used for synchronization and error control, that surrounds the user data contained in the unit.

Frame Relay (FR)

Frame Relay is a telecommunication service designed for cost-efficient data transmission for intermittent traffic between Local Area Networks (LANs) and end-points in a Wide Area Network (WAN). Frame Relay puts data in a variable-size unit called a frame and leaves any necessary error correction (retransmission of data) up to the end-points, which speeds up overall data transmission. For most services, the network provides a Permanent Virtual Circuit (PVC). This means that the customer sees a continuous, dedicated connection without having to pay for a full-time leased line, while the service provider figures out the route each frame travels to its destination and can charge based on usage. An enterprise can select a particular level of service quality to prioritize some frames and making others less important. Frame Relay is offered by a number of service providers, including AT&T. Frame Relay is provided on fractional T-1 or full T-carrier system carriers. Frame Relay complements and provides a mid-range service between Integrated Services Digital Network, which offers bandwidth at 128 Kbps, and Asynchronous Transfer Mode (ATM), which operates in somewhat similar fashion to Frame Relay but at speeds from 155.520 Mbps or 622.080 Mbps. Frame Relay is based on the older X.25 packet switching technology, which was designed for transmitting analog data such as voice conversations. Unlike X.25, which was designed for analog signals, Frame Relay is a fast packet technology, which means that the protocol does not attempt to correct errors. When an error is detected in a frame, it is simply “dropped” (thrown away). The end points are responsible for detecting and retransmitting dropped frames. (However, the incidence of error in digital networks is extraordinarily small relative to analog networks.) Frame Relay is often used to connect local area networks with major backbones, as well as on public wide area networks and also in private network environments with leased lines over T-1 lines. Since it requires a dedicated connection during the transmission period, it is not ideally suited for voice or video transmission, which require a steady flow of transmissions. However, under certain circumstances, it can be used for voice and video transmission. Frame Relay relays packets at the Data Link Layer of the Open Systems Interconnection (OSI) model rather than at the network layer. A frame can incorporate packets from different protocols, such as Ethernet and X.25. It is variable in size and can be as large as a thousand bytes or more.

FTP

See File Transfer Protocol (FTP).

Full Duplex (FDX)

A circuit or device permitting simultaneous data transmission between sending and receiving stations. *See also* duplex mode.

G

G.711

A mu-law or an a-law, 64-Kbps codec.

G.723

A 5.3 or 6.3-Kbps audio codec.

G.729

An 8-Kbps audio-codec.

GA

General Availability.

gatekeeper

A term that is defined by the H.323 standard to describe the entity that performs most of the authorization, routing, and feature functionality in an H.323 system.

Gateway (GW)

In networking, a combination of hardware and software that links two different types of networks. In G350, the G350 Media Gateway (CMG) is an entity on the network that links the circuit switched network (analog, DCP phones, and E1/T1 trunks) to the packet based network (LAN). The CMG provides service circuits (tones and audio mixers) and conversion resources for traversing legacy telephony and IP network domains with voice-oriented bearer and signaling information.

GUI

Graphical User Interface.

H

H.248

The ITU standard for communication between a gateway controller and a media gateway.

H.323

An International Telecommunications Union (ITU) standard for switched multimedia communication between a LAN-based multimedia endpoint and a gatekeeper. *See also* gatekeeper; Session Initiated Protocol (SIP).

H0

An ISDN information transfer rate for 384-kbps data that is defined by CCITT and ANSI standards.

H11

An ISDN information transfer rate for 1536-kbps data that is defined by CCITT and ANSI standards.

H12

An ISDN information transfer rate for 1920-kbps data that is defined by CCITT and ANSI standards.

hairpinning

Rerouting the voice channel connecting two IP endpoints so that the voice channel goes through the TN2302AP IP Media Processor circuit pack in IP format instead of through the TDM bus. Communication Manager provides only shallow hairpinning, meaning that only the IP and Real Time Protocol (RTP) packet headers are changed as the voice packets go through the TN2302AP circuit pack. This requires that both endpoints use the same codec (coder/decoder), a circuit that takes a varying-voltage analog signal through a digital conversion algorithm to its digital equivalent or vice-versa (digital to analog).

Half Duplex (HDX)

A circuit or device permitting data transmission in only one direction at a time between sending and receiving stations. *See also* duplex mode.

HDLC

High-level Data-link Control. A bit-oriented, synchronous protocol that applies to the Data-link Layer of the Open Systems Interconnection (OSI) model.

hertz (Hz)

A unit of frequency equal to one cycle per second.

HSSI

High Speed Serial Interface. A short-distance communications interface that is commonly used to interconnect routing and switching devices on Local Area Networks (LANs) with the higher-speed lines of a Wide Area Network (WAN). HSSI is used between devices that are within fifty feet of each other, and achieves data rates of up to 52 Mbps. Typically, HSSI is used to connect a router to a T-carrier system line. HSSI can be used to interconnect devices on token ring and Ethernet LANs with devices that operate at Synchronous Optical Network Optical Carrier levels (SONET OCx) speeds or on T-carrier system lines. HSSI is also used for host-to-host linking, image processing, and disaster recovery applications. Like Integrated Services Digital Network (ISDN) and Asymmetric Digital Subscriber Line (ADSL), HSSI operates at the physical layer of a network, using the standard Open Systems Interconnection (OSI) model. The electrical connection uses a 50-pin connector. The HSSI transmission technology uses differential Emitter coupled Logic (ECL) and gapped timing. Gapped timing allows a Data Communications Equipment (DCE) device to control the flow of data being transmitted from a Data Terminating Equipment (DTE) device, such as a terminal or computer, by adjusting the clock speed or deleting clock impulses. For diagnosing problems, HSSI offers four loopback tests. The first loopback tests the cable by looping the signal back after it reaches the DTE port. The second and third loopbacks test the line ports of the local DCE and the remote DTE. The fourth tests the DTE's DCE port. HSSI requires two control signals (“DTE available” and “DCE available”) before the data circuit is valid. The HSSI cable uses the same number of pins and wires as a Small Computer System Interface (SCSI-2) cable, but uses the HSSI electrical interface.

hub

A common connection point for devices in a network. Hubs are commonly used to connect segments of a LAN.

hunt group

A group of extensions that are assigned the Station Hunting feature so that a call to a busy extension is rerouted to an idle extension in the group.

Hz

See hertz (Hz).

I

I1

The first information channel of the Digital Communications Protocol (DCP). *See also* Digital Communications Protocol (DCP).

I2

The second information channel of the Digital Communications Protocol (DCP). *See also* Digital Communications Protocol (DCP).

ICC

See Internal Communications Controller (ICC)

ICMP

Internet Control Message Protocol. An extension to the Internet Protocol (IP). ICMP supports packets containing error, control, and informational messages.

IE

See Information Element (IE).

IEEE

See Institute of Electrical and Electronics Engineers (IEEE).

IEEE 802.3

IEEE standard for Ethernet LANs.

IETF
See Internet Engineering Task Force (IETF).

IGMP
Internet Group Multicasting Protocol, IETF STD 5: RFC 1112.

In-Band
Transmission of auxiliary information, such as management messages, using the same frequencies or channels normally used for information transfer.

Incoming Call Identifier (ICI)
A feature that is used to send the name, telephone number, or both name and telephone number of the caller over analog lines to an analog telephone set that is equipped with a display. Also called *Caller ID (CID)* and *Incoming Caller ID (ICLID)*.

Information Element (IE)
The name for the data fields within an ISDN layer 3 message.

Inline error
An error which is detected by trunk firmware during normal operation and is immediately reported to switch software via an uplink inline error CCMS message.

Institute of Electrical and Electronics Engineers (IEEE)
An organization that, among other things, produces standards for Local Area Network (LAN) equipment.

Integrated Services Digital Network (ISDN)
A public or private network that provides end-to-end digital communications for all services to which users have access. An ISDN uses a limited set of standard multipurpose user-network interfaces that are defined by the CCITT. Through internationally accepted standard interfaces, an ISDN provides digital circuit-switched communications or packet-switched communications within the network. An ISDN provides links to other ISDNs to provide national digital communications and international digital communications. *See also* Integrated Services Digital Network Basic Rate Interface (ISDN-BRI); Integrated Services Digital Network Primary Rate Interface (ISDN-PRI).

Integrated Services Digital Network Basic Rate Interface (ISDN-BRI)
The interface between a communications system and terminal includes two 64-kbps B-channels for transmitting voice or data, and one 16-kbps D-channel for transmitting associated B-channel call control and out-of-band signaling information. ISDN-BRI also includes 48 kbps for transmitting framing and D-channel contention information, for a total interface speed of 192 kbps. ISDN-BRI serves ISDN terminals and digital terminals that are fitted with ISDN terminal adapters. *See also* Integrated Services Digital Network (ISDN); Integrated Services Digital Network Primary Rate Interface (ISDN-PRI).

Integrated Services Digital Network Primary Rate Interface (ISDN-PRI)
The interface between multiple communications systems that in North America includes 24 64-kbps channels that correspond to the North American Digital Signal Level-1 (DS1) standard rate of 1.544 Mbps. The most common arrangement of channels in ISDN-PRI is 23 64-kbps B-channels for transmitting voice and data, and one 64-kbps D-channel for transmitting associated B-channel call control and out-of-band signaling information. With Nonfacility-Associated Signaling (NFAS), ISDN-PRI can include 24 B-channels and no D-channel. *See also* Integrated Services Digital Network (ISDN); Integrated Services Digital Network Basic Rate Interface (ISDN-BRI).

Internal Communications Controller (ICC)
Also known as the Internal G350 Processor, Internal G350 Controller, or Integrated Communications Controller., it is the Pentium processor running Linux built on a media module which runs the G350 applications for call control (Avaya Call Processing), and, optionally, messaging (INTUITY), DHCP, TFTP, and HTTP. This processor is used to control G350 in its small configurations.

International Telecommunications Union (ITU)
An international organization that sets universal standards for data communications, including ISDN. ITU was formerly known as International Telegraph and Telephone Consultative Committee (CCITT).

International Telegraph and Telephone Consultative Committee
See International Telecommunications Union (ITU).

Internet
A collection of networks and gateways that use the TCP/IP suite of protocols. An internet is two or more networks connected by an internal or external router. The word “internet” is a generic term. “The Internet” is the world’s largest internet.

Internet Engineering Task Force (IETF)
One of two technical working bodies of the Internet Activities Board. The IETF develops new Transmission Control Protocol/Internet Protocol (TCP/IP) standards for the Internet.

Internet Protocol (IP)
A connectionless protocol that operates at layer 3 of the Open Systems Interconnect (OSI0 model. IP protocol is used for Internet addressing and routing packets over multiple networks to a final destination. IP protocol works in conjunction with Transmission Control Protocol (TCP), and is usually identified as TCP/IP. *See also* Transmission Control Protocol (TCP).

Internet Protocol Security (IPSec)
A developing standard for security at the packet processing or network layer of network communication. Earlier security approaches inserted security at the application layer of the communications model. IPSec will be especially useful for implementing virtual private networks (VPNs), and for remote user access through dial-up connection to private networks. One advantage of IPSec is that security arrangements can be handled without requiring changes to the computers of individual users. IPSec provides two choices of security service, Authentication Header (AH) and Encapsulating Security Payload (ESP). AH allows authentication of the sender of data. ESP supports both authentication of the sender and encryption of data. The specific information that is associated with each of these services is inserted into the packet in a header that follows the IP packet header. Separate key protocols can be selected, such as the ISAKMP/Oakley protocol.

INTUITY
INTUITY describes both Avaya's flagship messaging product (hardware and software) and also the software at the heart of the G350’s messaging solution. In the context of G350, it almost always describes the software application.

in-use lamp
A red light on a multiappearance telephone that lights to show which call appearance will be selected when the handset is lifted, or which call appearance is active when a user is off-hook.

IP
See Internet Protocol (IP).

IP600
A version of Avaya Call Processing and INTUITY messaging running on an NT processor in a 4U high 19" rack mount configuration (data form factor). This configuration supports standard DEFINITY line cards and is driven by the same software as DEFINITY ONE.

IP Address
A 32-bit address assigned to hosts using TCP/IP. An IP address is written as 4 octets separated by periods (dotted decimal format). Each address consists of a network number, an optional subnetwork number, and a host number. The network and subnetwork numbers together are used for routing, while the host number is used to address an individual host within the network or subnetwork. A subnet mask is used to extract network and subnetwork information from the IP address.

IP Media Processor (TN2302AP)
A circuit pack that provides Voice over IP (VoIP) audio access to the switch for local stations and outside trunks. The IP Media Processor performs echo cancellation, silence suppression, fax relay service, and DTMF detection. *See also* Voice over IP (VoIP).

IP Server Interface (IPSI)
A circuit pack that provides for clock generation and clock synchronization, as well as tone generation and detection in S8700 Media Server configurations.

IPSec
See Internet Protocol Security (IPSec).

IPSI
IP Server Interface (DEFINITY TN 2312 Circuit Pack). Provides for clock generation and synchronization, tone generation and detection, and Port Network AA functionality.

IPX
Internetwork Packet Exchange. A network layer protocol used for transferring data from servers to workstations. IPX is primarily used in Novell NetWare operating systems.

ISDN
See Integrated Services Digital Network (ISDN).

ISDN-BRI
See Integrated Services Digital Network Basic Rate Interface (ISDN-BRI).

ISDN facility
See ISDN trunk.

ISDN Gateway (IG)
A feature that uses a link to a gateway adjunct to integrate the switch and a host-based telemarketing application. The gateway adjunct is a 3B-based product that notifies the host-based telemarketing application of call events.

ISDN-PRI
See Integrated Services Digital Network Primary Rate Interface (ISDN-PRI).

ISDN trunk
A trunk that is administered for use with ISDN-PRI. Also called an *ISDN facility.*

ISDN-PRI terminal adapter
An interface between endpoint applications and an ISDN-PRI facility. ISDN-PRI terminal adapters are currently available from other vendors and are primarily designed for video conferencing applications. Accordingly, currently available terminal adapters adapt the two pairs of video codec data (V.35) and dialing (RS-366) ports to an ISDN-PRI facility.

ISO
International Standards Organization.

IT
Information Technology. A term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms, including those not yet conceived). IT is a convenient term for including both telephony and computer technology in the same word. It is the technology that is driving what has often been called “the information revolution.”

ITU
See International Telecommunications Union (ITU).

IVR
Avaya Interactive Voice Response.

IXC
Interexchange Carrier.

J

jabber
An error condition in which a network device continually transmits random, meaningless data onto the network. In IEEE 802.3, jabber refers to a data packet, the length of which exceeds the maximum length prescribed in the standard.

K

kbps
Kilobits per second.

kbyte
Kilobyte.

kg
Kilogram.

kHz
Kilohertz.

L

L2TP
See Layer 2 Tunneling Protocol (L2TP).

LAG
Link Aggregation Groups provide a method for creating a high-bandwidth link. A LAG, also known as a hunt group, consists of a group of ports acting as a single logical port. All participating ports must have the same configuration. *See also* hunt group.

LAN
See Local Area Network (LAN).

layer 2 switch
An IP component that statically reroutes packets and streams to another port on the layer 2 switch based on the destination Media Access Control (MAC) address.

Layer 2 Tunneling Protocol (L2TP)
A standard for layer 2 tunneling for remote access, established by the Internet Engineering Task Force (IETF).

leaky bucket
This is the process of setting a threshold, and depending upon the inflow rate of errors versus the outflow (the leaking out over time), set or remove a status, typically an alarm. In other words, if errors are coming faster than the leak out, a threshold will be reached and an alarm is set. If, over time, the inflow rate of errors is less then the outflow (removal of the error over time), the alarm is removed.

Light-Emitting Diode (LED)

A semiconductor device that produces light when voltage is applied. LEDs provide a visual indication of the operational status of hardware components, the results of maintenance tests, the alarm status of circuit packs, and the activation of telephone features.

line

A transmission path between a communications system or a Central Office (CO) and a telephone or other terminal.

Link Access Procedure-d (LAPD)

A link-layer protocol on the ISDN-BRI data-link layer (level 2) and the ISDN-PRI data-link layer (level 2). LAPD provides data transfer between two devices, and error and flow control on multiple logical links. LAPD is used for signaling and low-speed packet data (X.25 and mode 3) on the signaling (D) channel, and mode 3 data communications on a Bearer (B) channel. Also called *Link Level Protocol for the D-Channel*.

Linux

One operating system that runs DEFINITY® as an application.

little endian

A format of storage or transmission of binary data in which the least-significant byte comes first.

Local Area Network (LAN)

A networking arrangement that is designed for a limited geographical area. Generally, a LAN is limited in range to a maximum of 6.2 miles, and provides high-speed carrier service with low error rates. Common configurations include daisy chain, star (including circuit-switched), ring, and bus.

Local Exchange Carrier (LEC)

A local telephone company.

Local Survivable Processor (LSP)

A configuration of the S8300 Media Server that is used to provide redundancy in Avaya Communication Manager. In the LSP configuration, the server acts as an alternate server or gatekeeper for IP entities such as IP telephones and Avaya G700 Media Gateways. These IP entities use the LSP when the entities lose connectivity to the primary server. Also called *survivable cc*.

logical link

The communications path between a processor and a Basic Rate Interface (BRI) terminal.

M

MAC

See Media Access Control (MAC).

MAC address

Media Access Control Address. The MAC Address is a hardware address that uniquely identifies each node of a network.

MAC layer

In IEEE 802 networks, the MAC layer is a sublayer of the Data Link Control (DLC) layer. The MAC layer interfaces directly with the network media. Each different type of network media therefore requires a different MAC layer.

MAC list

A list of MAC addresses of devices that are allowed to access the network through the selected port. Each port can have a MAC list. If the port's security option is enabled, no device can access the port unless the device's address is on the port's MAC list.

maintenance
Activities to keep a telecommunications system in proper working condition. Maintenance activities include the detection and isolation of software and hardware faults, as well as automatic and manual recovery from these faults.

major alarm
An indication of a failure that caused critical degradation of service, and that requires immediate attention. Major alarms are automatically displayed on LEDs on maintenance or alarming circuit packs and the attendant console. Major alarms are then logged to the alarm log and reported to a remote maintenance facility, if applicable.

MAN
Metropolitan Area Network. A data communications network designed for a town or city, usually characterized by high-speed connections using fiber optical cable or other digital media.

Mbps
Megabits per second.

Mbyte
Megabyte.

Media Access Control (MAC)
A general reference to the low-level hardware protocols that are used to access a particular network. The term *MAC address* is often used as a synonym for physical address.

Media Gateway
See Avaya Media Gateway.

Media Gateway Control Protocol (MGCP)
A protocol that gatekeepers use to control gateways. In the Internet Engineering Task Force (IETF), MGCP was superseded by the Megaco protocol, which was unified with the ITU H.248 standard of the ITU (formerly H.gcp). *See also* gatekeeper.

Media Gateway Controller (MGC)
Controls the parts of the call state that pertain to connection control for media channels in an MG. This is the controlling entity in an H.248 relationship.

media module
In the G350, this refers to a removable, hot-pluggable circuit pack that can be inserted into one of the slots on the chassis.

media module slots
Four positions in the Avaya G700 Media Gateway that contain various telephony interface circuits or an integrated Avaya S8300 Media Server. Each slot has access to one of the eight L2 switch ports, the TDM bus, and various control signals from the gateway server. The media module slots support hot board swap.

media server
See Avaya Media Server.

message center
An answering service that supplies agents to take messages, and stores messages for later retrieval.

message center agent
A member of a message center hunt group who takes and retrieves messages for telephone users.

Message Waiting Lamp (MWL)
A light on a telephone that indicates the presence of a message for the telephone user.

MGCP
See Media Gateway Control Protocol (MGCP).

MGP
Media Gateway Processor.

MIB
Management Information Base. A database of network management information that can be monitored by a Network Management System. Both SNMP and RMON use standardized MIB formats that enable any SNMP and RMON tool to monitor any device defined by an MIB.

minor alarm
An indication of a failure that could affect customer service. Minor alarms are automatically displayed on LEDs on maintenance or alarming circuit packs and the attendant console. Minor alarms are then sent to the alarm log, and reported to a remote maintenance facility, if applicable.

modem
A device that converts digital data signals to analog signals for transmission over telephone circuits. The analog signals are converted back to the original digital data signals by another modem at the other end of the circuit.

module
A self-contained communications unit that may be used in combination with other units. Examples include individual Avaya P330 units and cards that slot into the Avaya P580/P882 device.

ms
Millisecond.

multiappearance telephone
A telephone equipped with several call appearance buttons for the same extension, enabling the user to handle more than one call on that extension at the same time.

Multifrequency Compelled Release 2 (MFC R2) signaling
A method of signaling in which a signal consists of two frequency components. With MFC R2 signaling, a switch that transmits a signal receives a second signal that acknowledges the transmitted signal. MFC R2 signaling is used in the US and other countries.

Multipoint Control Unit (MCU)
A bridging or switching device that is used to support multipoint video conferencing. An MCU can support 28 conference sites.

MWI
Message Waiting Indicator. *See* Message Waiting Lamp (MWL).

N

N x DS0
An emerging standard for wideband calls separate from H0, H11, and H12 ISDN channels. The N x DS0 ISDN multirate circuit mode bearer service provides circuit-switched calls with data-rate multiples of 64 kbps up to 1536 kbps on a T1 facility, or up to 1920 kbps on an E1 facility. In the switch, N x DS0 channels range up to 1984 kbps using nonfacility-associated signaling (NFAS) E1 interfaces. Also known as *N x 64 kbps*.

NAT
See Network Address Translation (NAT).

NetBIOS
Network Basic Input/Output System. A Microsoft protocol.

netmask
A portion of an IP address that identifies the bits that denote the network number.

Network Address Translation (NAT)
A feature that enables a LAN to use one set of IP addresses for internal traffic, and a second set of IP addresses for external traffic. This enables the use of many internal IP addresses within an intranet without causing collisions with public IP addresses on the Internet. The NAT device allocates a public IP address only when IP entities require service outside the firewall.

network mask
A portion of an IP address that identifies the bits that denote the network number.

network region
A group of IP endpoints and switch IP interfaces that are interconnected by an IP network.

NIC
Network Interface Card. Hardware that provides access from a computer to a LAN.

NMS
Network Management System.

node
A switching or control point for a network. Nodes are either tandem or terminal. Tandem nodes receive signals and pass the signals on, whereas terminal nodes originate or terminate a transmission path.

Nonfacility-Associated Signaling (NFAS)
A method of signaling in which multiple T1 and/or E1 facilities share a single D-channel to form an ISDN-PRI. If D-channel backup is not used, one facility is configured with a D-channel. The other facilities that share the D-channel are configured without D-channels. If D-channel backup is used, two facilities are configured with D-channels, with one D-channel on each facility. The other facilities that share the D-channels are configured without D-channels.

null modem cable
Special wiring of an RS-232-C cable that a computer can use to signal a printer or another computer without the need for a modem.

O

OAM
Operations, administration, and maintenance. A range of diverse management functions, including fault and performance management (operations); addressing, data collection, and usage monitoring (administration); and analysis, diagnosis, and repair of network faults (maintenance).

OC-3
See Optical Carrier level-3 (OC3).

OID
Object Identifier. Used in SNMP to identify managed objects. In the SNMP Manager/Agent Network Management Paradigm, each managed object must be identified by a unique OID.

Open Systems Interconnect (OSI)
A system of seven independent communication protocols defined by the International Standards Organization (ISO). Each of the seven layers enhances the communications services of the layer below, and shields the layer above from the implementation details of the lower layer. In theory, this structure can be used to build communication systems from independently developed layers.

Optical Carrier level-3 (OC3)

The Synchronous Optical Network (SONET) includes a set of signal rate multiples for transmitting digital signals on optical fiber. The base rate (OC-1) is 51.84 Mbps. OC-2 runs at twice the base rate, OC-3 runs at three times the base rate, and so on. Planned rates include OC-1, OC-3 (155.52 Mbps), OC-12 (622.08 Mbps), and OC-48 (2.488 Gbps). Asynchronous transfer mode uses some of the Optical Carrier levels. *See also* Synchronous Optical Network (SONET).

Out-of-Band

Transmission of auxiliary information, such as management messages, using frequencies or channels outside the frequencies or channels normally used for information transfer. Out-of-band signaling is often used for error reporting in situations in which in-band signaling can be affected by whatever problems the network might be experiencing.

P

packet

A group of bits used in packet switching that are transmitted as a discrete unit. A packet includes both a message element containing the data and a control Information Element (IE) containing the header. In each packet, the message element and the control IE are arranged in a specified format. *See also* Information Element (IE).

PAP/CHAP

Password Authentication Protocol/Challenge Handshake Authentication Protocol. Remote access protocols that identify the remote end-user so that the router or access server can determine if access is allowed.

PBX

Private Branch Exchange.

PING

Packet Internet Groper. Determines whether a specific IP address is accessible by sending a packet to the specified address and waiting for a reply.

PN

See Port Network (PN).

PNI

Port Network Interface.

PoE

Power-over-Ethernet.

Point Of Presence (POP)

A physical location where a carrier has presence for network access. A POP is usually a switch or a router. *See also* router; switch.

Point-to-Point Protocol (PPP)

A connection-oriented, packet-data protocol that is commonly used in support of dial-up access from a personal computer to an Internet Service Provider (ISP). PPP uses an analog line through the Public Switched Telephone Network (PSTN), but provides many of the benefits of a direct connection.

POP

See Point Of Presence (POP).

port interfaces

Interfaces that connect to trunks, voice links, data links, and communications equipment.

Port Network (PN)
A cabinet that contains a Time-Division Multiplex (TDM) bus and a packet bus to which port circuit packs, control circuit packs, service circuit packs, and power converter circuit packs can be connected. Each PN is controlled either locally or remotely by a Switch Processing Element (SPE). *See also* Time-Division Multiplex (TDM) bus.

POST Code
Power-On Self Test codes are transmitted by the SPE processor's BIOS to report the status of the diagnostics as the system powers up.

power failure transfer
See Emergency Transfer Relay (ETR).

PPP
See Point-to-Point Protocol (PPP).

PRI
Primary Rate Interface. *See* Integrated Services Digital Network Primary Rate Interface (ISDN-PRI).

PRI Endpoint (PE)
The wideband switching capability introduces PRI endpoints on switch line-side interfaces. A PRI endpoint consists of one or more contiguous B-channels on a line-side T1 or E1 ISDN PRI facility, and has an extension. Endpoint applications have call-control capabilities over PRI endpoints.

Primary Rate Interface (PRI)
See Integrated Services Digital Network Primary Rate Interface (ISDN-PRI).

protocol stack
A layered set of protocols that work together to provide a set of network functions. Each intermediate layer uses the layer below it to provide a service to the layer above.

PSTN
See Public Switched Telephone Network (PSTN).

public network
A network to which all customers have open access for local and long distance calling.

Public Switched Telephone Network (PSTN)
The public worldwide voice telephone network.

Q

Q.931
The D-channel layer 3 specification for use in an ISDN recommended by the ITUT for basic telecommunications call control.

Q.932
A D-channel specification for the operation of supplementary services. Adjunct-Switch Application Interface (ASAI) uses Q.932 as the basis for providing CTI services.

QoS
See Quality of Service (QoS).

QSIG
Q.931 Signaling.

quadrant
A group of six contiguous DS0s in fixed locations on an ISDN-PRI facility. The term comes from T1 terminology, where *quadrant* means one-fourth of a T1, but an E1 ISDN-PRI facility (30B + D) has five quadrants. *See also* Digital Signal Level n (DS-n).

Quality of Service (QoS)
The measurement of transmission rates, error rates, and other characteristics to define the quality of the service that is provided to telephone subscribers or users of a network. QoS is of particular concern for the continuous transmission of high-bandwidth video and multimedia information.

queue
An ordered sequence of calls that are waiting to be processed.

queuing
The process of holding calls in order of arrival to await connection to an attendant, answering group, or idle trunk. Calls that are in a queue are automatically connected in a first-in, first-out sequence.

R

RAM
See Random Access Memory (RAM).

RADIUS
See Remote Authentication Dial-In User Service (RADIUS).

Random Access Memory (RAM)
A storage arrangement in which information is retrieved at a speed that is independent of the location of the stored information. *See also* Dynamic Random Access Memory (DRAM).

Rapid Spanning Tree Protocol (RSTP)
A new version of Spanning Tree Protocol (STP) featuring faster convergence time. *See also* Spanning Tree Protocol (STP)

RBS
See Robbed-Bit Signaling (RBS).

RBVD
Robbed-Bit AVD.

Read-Only Memory (ROM)
A storage arrangement primarily for information-retrieval applications.

Real Time Transfer Protocol (RTP)
An Internet Engineering Task Force (IETF) protocol (RFC 1889) that addresses the problems that occur when video and other exchanges with real-time properties are delivered over Local Area Networks (LANs) that are designed for data. RTP gives higher priority to video and other real-time interactive exchanges than to connectionless data.

Red Hat Package Manager (RPM)
RPM is a powerful package manager, which can be used to build, install, query, verify, update, and uninstall individual software packages. A package consists of an archive of files, along with package information, including name, version, and description. Stingray and G350 use RPM as a tool for delivering software executables.

redundancy
A duplication of devices, services, or connections, so that, in the event of a failure, the redundant device, service, or connection can take over for the one that failed.

Registered Jack 45 (RJ45)

A single-line jack for digital transmission over 4-pair ordinary telephone wire. RJ telephone jacks and data plugs are registered with the Federal Communications Commission (FCC).

Remote Authentication Dial-In User Service (RADIUS)

A client/server protocol and software with which remote access servers communicate with a central server to authenticate a dial-in user, and authorize user access to the requested system or service. Companies that use RADIUS can maintain user profiles in a central database that all remote servers can share, and set up a policy that can be applied at a single administered network point. RADIUS improves security, and facilitates usage tracking for billing and keeping network statistics.

Remote Monitoring (RMON)

A standard monitoring specification for shared Ethernet and token ring media that is defined in RFC 1757. With RMON, various network monitors and console systems can exchange network-monitoring data. The RMON specification defines a set of statistics and functions that can be exchanged between console managers and network probes that are RMON compliant. As such, RMON provides network administrators with comprehensive network-fault diagnosis, planning, and performance-tuning information. RMON has two levels: RMON-I analyzes the MAC layer, and RMON-II analyzes the upper layers 3 and above. *See also* Switched Monitoring (SMON).

Resource Reservation Protocol (RSVP)

A protocol that allows channels or paths on the Internet to be reserved for the multicast (one source to many receivers) transmission of video and other high-bandwidth messages. With RSVP, users can reserve bandwidth through the Internet in advance, and be able to receive data at a higher rate and in a more dependable flow than usual. The higher rate and more dependable flow are possible because a user's quality of service requests are propagated to all routers along the data path, and the network reconfigures itself to meet the desired levels of service. *See also* Quality of Service (QoS).

RIP

Routing Information Protocol. Specifies how routers exchange routing table information. RIP is gradually being replaced by a newer protocol called OSPF (Open Shortest Path First).

RJ45

See Registered Jack 45 (RJ45).

RMON

See Remote Monitoring (RMON).

Robbed-Bit Signaling (RBS)

A signaling method used in T1. With RBS, each side of a T1 termination sends two bits of data, which are usually called the A and B bits. These two bits of data are buried in the voice data of each voice channel in the T1 circuit. Thus the bits are "stolen" from the voice data, and hence the name "robbed bit."

ROM

See Read-Only Memory (ROM).

router

A device that supports communications between Local Area Networks (LANs). Routers can be equipped to provide frame relay support to the LAN devices that they serve. A router that is frame relay capable encapsulates LAN frames in frame relay frames and feeds those frame relay frames to a frame relay switch for transmission across the network. A router that is frame relay capable also receives frame relay frames from the network, strips the frame relay frame off each frame to produce the original LAN frame, and passes the LAN frame on to the end device. Routers connect multiple LAN segments to each other or to a Wide Area Network (WAN). Routers route traffic on the Level 3 LAN protocol, for example, the Internet Protocol (IP) address. *See also* bridge.

RSTP
See Rapid Spanning Tree Protocol (RSTP)

RSVP
See Resource Reservation Protocol (RSVP).

RS-232
An Electronic Industries Association (EIA) standard for the interface between data equipment employing serial binary data interchange.

RS-232C
A physical interface that is specified by the Electronic Industries Association (EIA). RS-232C transmits and receives asynchronous data at speeds of up to 19.2 kbps over cable distances of up to 50 feet (15.25 meters). Also called *EIA/TIA 232E*.

RTCP
Real Time Control Protocol.

RTP
See Real Time Transfer Protocol (RTP).

S

S1
The first logical signaling channel of the Digital Communications Protocol (DCP). The S1 channel is used to provide signaling information for the I1 channel of DCP. *See also* Digital Communications Protocol (DCP).

S2
The second logical signaling channel of the Digital Communications Protocol (DCP). The S2 channel is used to provide signaling information for the I2 channel of DCP. *See also* Digital Communications Protocol (DCP).

SAT
See System Access Terminal (SAT).

segmentation
Segmentation is a common solution to LAN bandwidth limitations. The LAN is divided into separate LAN segments using bridges and routers. If segmented correctly, most network traffic will remain within a single segment, using the full 10 Mbps bandwidth. Hubs and switches are used to connect each segment to the rest of the LAN.

Service Level Agreement (SLA)
A contract between a service provider and a user that defines the nature of the service provided, and establishes a set of measurements to measure the level of service that is provided against the level of service that was promised.

Session Initiated Protocol (SIP)
One of the leading Voice Over IP (VoIP) signaling protocols. *See also* H.323; Voice over IP (VoIP).

shuffling
Rerouting a voice channel away from the usual TDM bus connection and creating a direct IP-to-IP connection.

Side-Band
Transmission of auxiliary information, such as management messages, by means of a direct connection that bypasses the frequencies and channels normally used for information transfer. Unlike out-of-band transmission, side-band transmission does not require a modem.

Simple Management Network Protocol (SNMP)
The industry-standard protocol that governs network management and the monitoring of network devices and their functions. The use of SNMP is not necessarily limited to TCP/IP networks, but can also be implemented over Ethernet and Open Systems Interconnect (OSI) transports. *See also* Remote Monitoring (RMON).

SIP
See Session Initiated Protocol (SIP).

SLA
See Service Level Agreement (SLA).

SLIP
Serial Line Internet Protocol. SLIP is the standard protocol for point-to-point serial connections, using a variation of TCP/IP.

SMON
See Switched Monitoring (SMON).

SNMP
See Simple Management Network Protocol (SNMP).

socket
An addressable entity within a node connected to an AppleTalk network. Sockets are owned by software processes known as socket clients. An AppleTalk socket is similar in concept to a TCP/IP port.

Spanning Tree Protocol (STP)
A bridge protocol that enables a learning bridge to dynamically work around loops in a network topology by creating a spanning tree. Bridges exchange BPDU messages with other bridges to detect loops, and then remove the loops by shutting down selected bridge interfaces.

status lamp
A green light that indicates the status of a call appearance or a feature button. A status lamp can be lit, unlit, flashing, or fluttering, depending on the status of the call appearance or the feature button.

STD
Standard. A type of document produced by the IETF.

subnet
Short for subnetwork. A portion of a network that shares a common address component. On TCP/IP networks, a subnet includes all devices whose IP addresses have the same prefix. For example, all devices with IP addresses that start with 133.100.100 are part of the same subnet.

subnet mask
A 32-bit address mask used in IP to indicate the bits of an IP address that are being used for the subnet address.

switch
Any kind of telephone switching system.

Switched Monitoring (SMON)

An extension of the Remote Monitoring (RMON) standard. Device SMON is an extension of RMON-I that provides additional tools and features for monitoring in a local switch environment. AnyLayer SMON is an extension of RMON-II that provides a global view of traffic flow in a network with multiple switches. SMON collects and displays data in real time. SMON can provide a global view of the traffic for all switches on the network, an overall view of the traffic that passes through a specific switch, detailed data about the hosts that transmit packets through a switch, an analysis of the traffic that passes through each port that is connected through a switch, and a view of traffic between the various hosts that are connected to a switch. *See also* Remote Monitoring (RMON).

Synchronous Digital Hierarchy (SDH)

An ITU standard for transmission in synchronous optical networks. SDH is used outside the US.

Synchronous Optical Network (SONET)

A system of fiber optic transmission rates for speeds from 51 Mbps to 30 Gbps and higher. SONET defines a standard that allows for the interworking of transmission products from multiple vendors. *See also* Optical Carrier level-3 (OC3).

System Access Terminal (SAT)

An interface into the DEFINITY Server and DEFINITY media server configurations for administrative and maintenance functions.

system administrator

A person who maintains overall customer responsibility for administration of a communications system.

T

T1

A digital transmission standard in North America that carries traffic at the DS1 rate of 1.544 Mbps. A T1 facility is divided into 24 channels (DS0s) of 64 kbps. These 24 channels, with an overall digital rate of 1.536 Mbps and an 8-kbps framing and synchronization channel, make up the 1.544-Mbps transmission. When a D-channel is present, it occupies channel 24. T1 facilities are also used in Japan and some Middle-Eastern countries. *See also* Time-Division Multiplexing (TDM).

T3

The North American standard for Digital Signal Level 3 (DS-3). T3 operates at a signaling rate of 44.736 megabits per second. *See also* Digital Signal Level n (DS-n).

TCP

See Transmission Control Protocol (TCP).

TCP/IP

See Transmission Control Protocol (TCP); Internet Protocol (IP).

TDM

See Time-Division Multiplexing (TDM).

TDM bus

See Time-Division Multiplex (TDM) bus.

Teletypewriter (TTY)

A data terminal that works with a telephone. A TTY sends and receives special audio tones that are known as Baudot code. The TTY then translates this code into text, and sends the text to an alphanumeric display. TTYs are helpful for people with communication disabilities.

Telnet
A terminal emulation protocol for TCP/IP networks. Telnet is used for remote terminal connection, enabling users to log in to remote systems and use these resources as if they were connected to a local system.

termination
A logical entity on an MG that sources and/or sinks media and/or control streams.

TFTP
See Trivial File Transfer Protocol (TFTP).

Time-Division Multiplex (TDM) bus
A bus that is time-shared regularly by preallocating short time slots to each transmitter. In a switch, all port circuits are connected to the TDM bus, and any port can send a signal to any other port. *See also* Time-Division Multiplexing (TDM).

Time-Division Multiplexing (TDM)
A form of multiplexing that divides a transmission channel into successive time slots. *See also* Time-Division Multiplex (TDM) bus.

time slot
In the switch, a time slot refers to either a DS0 on a T1 facility or an E1 facility, or a 64-kbps unit on the Time Division Multiplex (TDM) bus or fiber connection between port networks that is structured as 8 bits every 125 microseconds. *See also* Digital Signal Level n (DS-n); E1; T1; Time-Division Multiplex (TDM) bus.

tones
Tone telephony signals for human or machine-to-machine indications of call progress or dialing. Examples include touch-tones, busy tone, dial tone, etc. Telephony applications generally require both generation and detection of these tones.

TOS
See Type Of Service (TOS).

transceiver
A device that both transmits and receives analog or digital signals. Usually used to describe the LAN component that applies signals onto the network wire and detects signals passing through the wire.

transcoding
Conversion between mu-law PCM coding (used in North America) and A law coding. More generally in IP, the conversion from one voice coding algorithm to another.

Transmission Control Protocol (TCP)
A connection-oriented transport-layer protocol, IETF STD 7. RFC 793, that governs the exchange of sequential data. Whereas the IP protocol deals only with packets, TCP enables two hosts to establish a connection and exchange streams of data. TCP guarantees delivery of data, and also guarantees that packets are delivered in the same order in which the packets are sent. *See also* Internet Protocol (IP).

trap
Message sent by an SNMP agent to an NMS, console, or terminal to indicate the occurrence of a significant event, such as a specifically defined condition or a threshold that was reached. Similar to an alarm.

Trivial File Transfer Protocol (TFTP)
A simplified version of File Transfer Protocol (FTP). TFTP transfers files, but does not provide password protection or user-directory capability. *See also* File Transfer Protocol (FTP).

trunk
A dedicated telecommunications channel between two communications systems or Central Offices (COs).

trunk group
Telecommunication channels that are assigned as a group for certain functions, and that can be used interchangeably between two communication systems or Central Offices (COs).

TTY
See Teletypewriter (TTY).

tunneling
The use of the Internet as part of a private secure network. The tunnel is the particular path that a given message or file travels through the Internet.

Type Of Service (TOS)
One of the fields in an IP packet header. TOS is also used by DiffServ.

U

UDP
See User Datagram Protocol (UDP).

Uniform Resource Locator (URL)
An Internet address that specifies the location of Web pages, files, and scripts.

Universal Asynchronous Receiver/Transmitter (UART)
A device that converts outgoing parallel data from a computer for serial transmission, and converts incoming serial data to parallel data for reception.

Universal Serial Bus (USB)
A serial interface that is used to add a peripheral device to the G350 chassis.

UPS
Uninterruptible Power Supply.

URL
See Uniform Resource Locator (URL).

USB
See Universal Serial Bus (USB).

User Datagram Protocol (UDP)
A packet format that is included in the TCP/IP suite of protocols. UDP is used for the unacknowledged transmission of short user messages and control messages. *See also* Internet Protocol (IP).

V

V.35
The trunk interface between a network access device and a packet network that defines signaling for data rates that are greater than 19.2 kilobytes per second. V.35 can use the bandwidths of several telephone circuits as a group.

VAL
Voice Announcements over the LAN.

Virtual Local Area Network (VLAN)

A network whose traffic can be segregated independent of physical LAN connectivity. While VLAN computers are on different physical segments of a LAN, the computers work as if they were located on the same physical LAN. A VLAN is configured by software, instead of hardware. 802.1Q framing can support VLAN operation.

Virtual Private Network (VPN)

A private data network that uses the public telecommunication infrastructure with a tunneling protocol and security procedures to maintain privacy. On a VPN, data is encrypted before the data is sent through the public network. The data is then decrypted at the receiving end. An additional level of security encrypts not only the data, but also the originating network address and the receiving network address. VPN software is usually installed as part of a company's firewall server. *See also* tunneling.

VLAN

See Virtual Local Area Network (VLAN).

VMON

Voice over Internet Protocol Monitoring Manager.

Voice over IP (VoIP)

A set of facilities that use the Internet Protocol (IP) to manage the delivery of voice information. In general, VoIP means to send voice information in digital form in discrete packets instead of in the traditional circuit-committed protocols of the Public Switched Telephone Network (PSTN). Users of VoIP and Internet telephony avoid the tolls that are charged for ordinary telephone service. *See also* Internet Protocol (IP).

VoIP Monitoring Manager

VoIP Monitoring Manager adds to the RMON and SMON capabilities for VoIP call level monitoring. VoIP Monitoring Manager is capable of displaying both real-time data and historical data. *See also* Remote Monitoring (RMON); Switched Monitoring (SMON); Voice over IP (VoIP).

VPN

See Virtual Private Network (VPN).

VRRP

Virtual Router Redundancy Protocol. An Internet protocol that provides a way to have one or more backup routers when using a statically configured router on a Local Area Network (LAN). Although there are other alternatives, the most common arrangement is to specify one router to serve as the router for forwarding packets from a group of hosts on a LAN. If that router fails, however, there is no way to use another router as a backup. Using VRRP, a virtual IP address can be specified (manually or with Dynamic Host Configuration Protocol) as a default. A virtual IP address is shared among the routers, with one designated as the master router and the others as backups. In case the master fails, the virtual IP address is mapped to a backup router's IP address. VRRP can also be used for load balancing. VRRP is part of both IPv4 (the version of IP that most networks currently use) and IPv6.

W

WAN

See Wide Area Network (WAN).

WFQ

Weighted Fair Queuing. A QoS method that puts higher priority traffic in the front of buffer queues and shares remaining bandwidth fairly between different types of lower priority traffic.

Wide Area Network (WAN)
A computer network that spans a relatively large geographic area. A WAN usually consists of two or more Local Area Networks (LANs). Computers that are connected to a WAN are often connected through public networks, such as the telephone system. They can also be connected through leased lines or satellites. *See also* Local Area Network (LAN).

WRED
Weighted Random Early Detection. A method of traffic management.

WRR
Weighted Round Robin. A method of traffic management.