

**G.703/G.704**

ITU-T electrical and mechanical specifications for connections between telephone company equipment and DTE using BNC connectors and operating at E1 data rates.

G.711

Describes the 64-kbps PCM voice coding technique. In G.711, encoded voice is already in the correct format for digital voice delivery in the PSTN or through PBXs. Described in the ITU-T standard in its G-series recommendations.

G.723.1

Describes a compression technique that can be used for compressing speech or audio signal components at a very low bit rate as part of the H.324 family of standards. This CODEC has two bit rates associated with it: 5.3 and 6.3 kbps. The higher bit rate is based on ML-MLQ technology and provides a somewhat higher quality of sound. The lower bit rate is based on CELP and provides system designers with additional flexibility. Described in the ITU-T standard in its G-series recommendations.

G.726

Describes ADPCM coding at 40, 32, 24, and 16 kbps. ADPCM-encoded voice can be interchanged between packet voice, PSTN, and PBX networks if the PBX networks are configured to support ADPCM. Described in the ITU-T standard in its G-series recommendations.

G.728

Describes a 16-kbps low-delay variation of CELP voice compression. CELP voice coding must be translated into a public telephony format for delivery to or through the PSTN. Described in the ITU-T standard in its G-series recommendations.

G.729

Describes CELP compression where voice is coded into 8-kbps streams. There are two variations of this standard (G.729 and G.729 Annex A) that differ mainly in computational complexity; both provide speech quality similar to 32-kbps ADPCM. Described in the ITU-T standard in its G-series recommendations.

G.804

The ITU-T framing standard that defines the mapping of ATM cells into the physical medium.

gain

The ratio of the output amplitude of a signal to the input amplitude of a signal. This ratio typically is expressed in dBs. The higher the gain, the better the antenna receives or transmits but also the more noise it includes.

gatekeeper

1. The component of an H.323 conferencing system that performs call address resolution, admission control, and subnet bandwidth management.

2. Telecommunications: H.323 entity on a LAN that provides address translation and control access to the LAN for H.323 terminals and gateways. The gatekeeper can provide other services to the H.323 terminals and gateways, such as bandwidth management and locating gateways. A gatekeeper maintains a registry of devices in the multimedia network. The devices register with the gatekeeper at startup and request admission to a call from the gatekeeper.

gateway

In the IP community, an older term referring to a routing device. Today, the term *router* is used to describe nodes that perform this function, and *gateway* refers to a special-purpose device that performs an application-layer conversion of information from one protocol stack to another. Compare with *router*.

Gateway Discovery Protocol

See *GDP* in the “Cisco Systems Terms and Acronyms” section.

gateway host

In SNA, a host node that contains a gateway SSCP.

gateway NCP

NCP that connects two or more SNA networks and performs address translation to allow cross-network session traffic.

Gateway-to-Gateway Protocol

See *GGP*.

Gb

gigabit. Approximately 1,000,000,000 bits.

GB

gigabyte. Approximately 1,000,000,000 bytes.

Gbps

gigabits per second.

GBps

gigabytes per second.

GCAC

generic connection admission control. In ATM, a PNNI algorithm designed for CBR and VBR connections. Any node can use GCAC to calculate the expected CAC behavior of another node given that node’s advertised link metrics and the QoS of a connection setup request. See also *CAC*.

GCRA

generic cell rate algorithm. In ATM, an algorithm that defines conformance with respect to the traffic contract of the connection. For each cell arrival, the GCRA determines whether the cell conforms to the traffic contract.

GDP

See *GDP* in the “Cisco Systems Terms and Acronyms” section.

generic connection admission control

See *GCAC*.

generic routing encapsulation

See *GRE* in the “Cisco Systems Terms and Acronyms” section.

Get Nearest Server

See *Gn interface*.

GGP

Gateway-to-Gateway Protocol. MILNET protocol specifying how core routers (gateways) should exchange reachability and routing information. GGP uses a distributed shortest-path algorithm.

GGSN

gateway GPRS support node. A wireless gateway that allows mobile cell phone users to access the public data network (PDN) or specified private IP networks.

GHz

gigahertz.

Gi interface

Reference point between a GPRS network and an external packet data network.

gigabit

Abbreviated Gb.

Gigabit Ethernet

Standard for a high-speed Ethernet, approved by the IEEE (Institute of Electrical and Electronics Engineers) 802.3z standards committee in 1996.

gigabits per second

Abbreviated Gbps.

gigabyte

Abbreviated GB.

gigabytes per second

Abbreviated GBps.

gigahertz

Abbreviated GHz.

GIX

Global Internet eXchange. Common routing exchange point that allows pairs of networks to implement agreed-upon routing policies. The GIX is intended to allow maximum connectivity to the Internet for networks all over the world. See also *CIX*, *FIX*, and *MAE*.

gleaning

The process by which a router automatically derives AARP table entries from incoming packets. Gleaning speeds up the process of populating the AARP table. See also *AARP*.

Gn interface

An interface between GSNs within the same PLMN in a GPRS network. GTP is a protocol defined on both the Gn and Gp interfaces between GSNs in a GPRS network.

GNS

Get Nearest Server. A request packet sent by a client on an IPX network to locate the nearest active server of a particular type. An IPX network client issues a GNS request to solicit either a direct response from a connected server or a response from a router that tells it where on the internetwork the service can be located. GNS is part of the IPX SAP. See also *IPX* and *Service Advertisement Protocol (SAP)*.

goodput

Generally refers to the measurement of actual data successfully transmitted from the sender(s) to the receiver(s). This is often a more useful measurement than the number of ATM cells per second throughput of an ATM switch if that switch is experiencing cell loss that results in many incomplete, and therefore unusable, frames arriving at the recipient.

Gopher

The Internet Gopher allows a neophyte user to access various types of data residing on multiple hosts in a seamless fashion.

GOSIP

Government OSI Profile. U.S. government procurement specification for OSI protocols. Through GOSIP, the government mandates that all federal agencies standardize on OSI and implement OSI-based systems as they become commercially available.

Government OSI Profile

See *GOSIP*.

Gp interface

Interface between GSNs within different PLMNs in a GPRS network. GTP is a protocol defined on both the Gp and Gn interfaces between GSNs in a GPRS network.

GPRS

general packet radio service. A service defined and standardized by the European Telecommunication Standards Institute (ETSI). GPRS is an IP packet-based data service for Global System for Mobile Communications (GSM) networks.

grade of service

A measure of telephone service quality based on the probability that a call will encounter a busy signal during the busiest hours of the day.

graphical user interface

See *GUI*.

GRE

See *GRE* in the “Cisco Systems Terms and Acronyms” section.

GRJ

A RAS message sent as a gatekeeper rejection.

Ground Start

A method of signaling used primarily on CO trunk lines to PBXs. A ground is placed on one side of the two-wire line to indicate that it is in use so the other side of the two-wire interface does not attempt to use the line.

ground station

The collection of communications equipment designed to receive signals from (and usually transmit signals to) satellites. Also called a *downlink station*.

ground-start trunk

A phone line that uses a ground instead of a short (loop-start trunks use a short between tip and ring) to signal the central office for a dial tone.

Group 3

The standard created by the ITU-T relating to fax devices. A Group 3 fax device is a digital machine containing a 14400 baud modem that can transmit an 8 1/2 by 11 inch page in approximately 20 seconds with a resolution of either 203 by 98 dots per inch (dpi) or 203 by 196 dpi (fine), using Huffman code to compress fax data. Group 3 faxes use a standard dial-up telephone line for transmission.

group address

See *multicast address*.

group delay

See *distortion delay*.

Group Matrix Card unit

This unit, located in the Line bay, selects one of the two optical signals and routes the signal to the Matrix Card (MC) units in the Matrix bay.

GRQ

A RAS message sent as a gatekeeper request.

GSM

global system for mobile communication. A second generation (2G) mobile wireless networking standard defined by ETSI, GSM is deployed widely throughout the world. GSM uses TDMA technology and operates in the 900-MHz radio band.

GSN

GPRS support node. GSN (or GSNs) refers to the general functions of a group of both GGSNs and SGSNs in a GPRS network.

GSS

generic service state.

GTP

GPRS tunneling protocol. GTP handles the flow of user packet data and signaling information between the SGSN and GGSN in a GPRS network. GTP is defined on both the Gn and Gp interfaces of a GPRS network.

GTP tunnel

Used to communicate between an external packet data network and a mobile station in a GPRS network. A GTP tunnel is referenced by an identifier called a *TID* and is defined by two associated PDP contexts residing in different GSNs. A tunnel is created whenever an SGSN sends a Create PDP Context Request in a GPRS network.

GTT

Global Title Translation. A function usually performed in an STP, GTT is the procedure by which the destination signaling point and the subsystem number (SSN) is determined from digits (that is, the global title) present in the signaling message.

guard band

An unused frequency band between two communications channels that provides separation of the channels to prevent mutual interference.

GUI

graphical user interface. A user environment that uses pictorial as well as textual representations of the input and the output of applications and the hierarchical or other data structure in which information is stored. Such conventions as buttons, icons, and windows are typical, and many actions are performed using a pointing device (such as a mouse). Microsoft Windows and the Apple Macintosh are prominent examples of platforms using a GUI.