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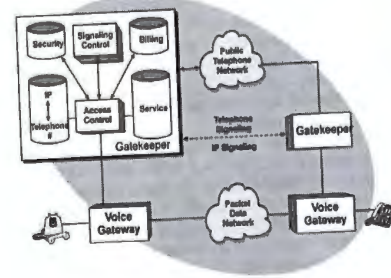
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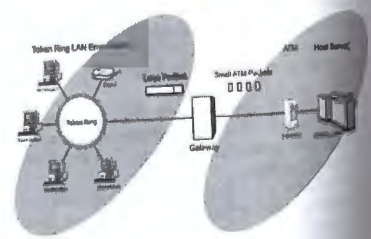
Gatekeeper Cluster

This figure shows how a gatekeeper sets up connections between Internet telephones and telephone gateways. The gatekeeper receives registration messages from an Internet telephone when it is first connected to the Internet. This registration message indicates the current Internet address (IP address) of the Internet telephone. When the Internet telephone desires to make a call, it sends a message to the ITSP that includes the destination telephone number it wants to talk to. The ITSP reviews the destination telephone number with a list of authorized gateways. This list identifies to the ITSP one or more gateways that are located near the destination number and that can deliver the call. The ITSP sends a setup message to the gateway that includes the destination telephone number, the parameters of the call (bandwidth and type of speech compression), along with the current Internet address of the calling Internet telephone. The gatekeeper then sends the address of the destination gateway to the calling Internet telephone. The Internet telephone then can send packets directly to the gateway and the gateway initiates a local call to the destination telephone. If the destination telephone answers, two audio paths between the gateway and the Internet telephone are created. One for each direction and the call operates as a telephone call.



Voice Gatekeeper Operation

Gatekeeper Cluster-A group of gatekeepers that are linked together (possibly using GUP) to increase the reliability of a system.
Gatekeeper Update Protocol (GUP)-A proprietary protocol developed by Cisco to provide gatekeeper redundancy and load sharing. GUP can provide information about a gatekeeper's memory, CPU usage, number of endpoints that are registered, and available bandwidth. GUP is based on TCP.
Gateway-A gateway is a communications device or assembly that transforms data that is received from one network into a format that can be used by a different network. A gateway usually has more intelligence (processing function) than a bridge as it can adjust the protocols and timing between two dissimilar computer systems or data networks. A gateway can also be a router when its key function is to switch data between network points.
 This figure shows how a gateway can convert large packets from a FDDI into very small packets in an ATM network. Not only does the gateway have to divide the packets, it must also convert the addresses and control messages into formats that can be understood on both networks.



Gateway Operation

General Packet Radio Service (GPRS)

Gateway D-Gateway Daemon
Gateway GPRS Support Node (GGSN)-A packet switching system that is used to connect a GSM mobile communication network (GPRS Support Nodes) to other packet networks such as the Internet.
Gateway Location Protocol (GLP)-A protocol that was initially developed by a working group within the IETF to allow the gateway selection process in telephone and multimedia networks. This protocol is now called telephony routing over Internet protocol (TRIP).
Gateway Mobile Switching Center (GMSC)-A switching system that is used in a mobile communications network that also connects to other networks such as the public switched telephone network (PSTN).
Gating Pulse-A pulse that operates a logic gate.
Gaussian Distribution-A statistical distribution that is used to represent occurrences of specific events that follow a relatively even distribution around their center reference point. Gaussian distribution is a bell-shaped curve and it is also called normal distribution. Also called white noise.
Gaussian Frequency Shift Keying (GFSK)-Gaussian frequency shift keying is a form of frequency modulation in which the modulating signal shifts the output frequency between predetermined values to represent a digital signal and that information signal (data) is passed through a Gaussian filter prior to modulation to minimize the rapid changes to the carrier signal. Typically, one frequency shift is used to represent a digital one (sometimes called a mark) and the other frequency shift represents a digital zero (sometimes called a space).
Gaussian Minimum Shift Keying (GMSK)-A form of frequency modulation in which the modulating signal shifts the output frequency between predetermined values. A form of MSK that uses Gaussian low pass filtering of the binary data to reduce sideband energy.
GA-VDP-General Audio Video Distribution Profile
GAZPACHO-Generation, Alignment, Zero (suppression), Polar, Alarm, Clock, Hunt, Office
GB-Gigabyte
GBH-Group Busy Hour
GBN-GPRS Backbone Network
Gbps-Gigabits Per Second
GCAC-Gate Controller

GCAC-Generic Connection Admission Control
GCF-Gatekeeper Confirm
GCIDs-Global Call Identifiers
GCR-Group Call Register
GCRA-Generic Cell Rate Algorithm
GD-Graceful Discard
GDDM-Graphical Data Display Manager
GDF-Group Distribution Frame
GDI-Graphics Device Interface
GDMF-Generic Data Message Format
GDOI-Group Domain of Interpretation
GDOP-Geometric Dilution of Precision
GDP-PI-GDP Price Index
GDS-Global Directory Service
GED-Global Engineering Documents
Geek-A geek is a person who is focused on technology, typically computers who does not tend to conform to mainstream habits such as dressing for success and/or regular bathing.
General Mobile Radio Service (GMRS)-General mobile radio service is a licensed FM radio service that operates at on channels in the 462 MHz and 467 MHz UHF band.
General Packet Radio Service (GPRS)-General packet radio service is a packet data communication system that uses the global system for mobile (GSM) radio system packet radio transmission. The GPRS system modifies the GSM channel allocation and time slot control processes to allow for the dynamic assignment of time slots to individual users. GPRS provides a maximum radio channel data transmission rate of 171.2 kbps.
 This figure shows some of the key GPRS network elements that include a gateway GPRS support node (GGSN), a serving GPRS support node (SGSN) and a GPRS backbone network (the Internet in this example.) This example shows that the GPRS system adds dynamic time slot control to the standard GSM radio system. To provide packet data service, the GPRS system, the SGSN provides the processes of switching and access control that is similar to a mobile switching center (MSC) and a visitor location register (VLR). However, the SGSN provides for switching and access control (authorization and tracking) based on packets of data rather than continuous connections. The SGSN registers and maintains a list of active packet data radios in its network and coordinates the packet transfer between the mobile radios. The GGSN is a packet switching system that is used to connect a GSM mobile communication network (GPRS Support Nodes) to other packet networks such as the Internet.