IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AIP ACQUISITION LLC, Plaintiff, – against – LEVEL 3 COMMUNICATIONS, LLC, Defendant.	C.A. No. 12-617 (GMS)

JOINT CLAIM CONSTRUCTION CHART

Pursuant to the So Ordered Scheduling Order (D.I. 14), the parties in the above-captioned matter submit their Joint Claim Construction Chart setting forth the disputed claim terms in U.S. Patent Nos. 7,724,879; 6,757,275; and 7,486,662. The attached Joint Claim Construction Chart also includes each party's proposed construction of the disputed claim language with citation to the intrinsic evidence in support of their respective proposed constructions. The parties have made a good faith effort to include herein all known support in the intrinsic record for their respective constructions, but reserve their right to supplement the attached Joint Claim Construction Chart with additional evidence and to rely upon additional evidence in their claim construction briefs.

A copy of the Joint Claim Construction Chart is attached as Exhibit A.

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EXHIBIT A

I. Agreed Constructions

Claim Term	Agreed Construction
VoIP platform (U.S. Patent No. 7,486,662, Claims 1, 13)	No construction needed

II. Disputed Terms

A. U.S. Patent No. 7,724,879

Claim Term	Plaintiff's Proposed Construction and Evidence[1]	Defendant's Proposed Construction and Evidence[2]
access device (Claims 1,3)	**A device to access a communications network**	**end-user device that is the ultimate initiator or ultimate destination of the transmission**
	Intrinsic Evidence: AIP000001554, 4:56-60; AIP00001557, 9:42-46; AIP00001558, 11:45-54; AIP00001559, 13:19-24; AIP00001545-1552	**Intrinsic Evidence:** The '879 Patent generally, including by way of example and without limitation: "Access devices are exemplified by telephones, pagers, cellular phones, laptops, facsimile machines, multimedia computer workstations, etc." '879

[1] AIP's understanding of the Scheduling Order is that this submission is to include only citations to intrinsic evidence. If, however, the Court prefers that this submission also include citations to extrinsic evidence, AIP respectfully requests leave to supplement its portion of this submission. Similarly, if the Court prefers excerpts, as opposed to citations, to both the intrinsic and extrinsic evidence, AIP also respectfully requests leave to supplement its portion of this submission accordingly.

[2] Level 3 reserves the right to rely on support specified by any other party, including any of the MSO defendants in related litigation pending before this Court.

	Application No. 08/320,269: AIP00001841	Patent, Col. 13:23-25. "The subscriber access device interface includes communication networks such as digital and analog telephone, paging and cellular, and data. The central local node includes an authorizer, converters for each communication network, a main processor and router, a main data base, compression and coding system and decompressing and decoding system. The global networks of high capacity data networks include the internet, frame relay and digital and analog voice lines." '879 Patent, Col. 13:25-33. "For instance, the calling party may want the acknowledgement or reply to be routed over either cellular or computer network services." '879 Patent, Col. 9:65-67. "The main processor and router also direct the communication to the ultimate destination, i.e., access devices of the called party." '879 Patent, Col 13:61-63. "The called party may include users of phone networks, cellular networks, paging networks, data networks, etc. whose access device on the network serve as the destination to which the transmission or communication is directed from the calling party." '879 Patent, Col. 4:56-60. "FIG. 5 illustrates a technique for gaining access to a greater number of telecommunication networks. The normal transmission from an access device is intercepted by an intercept device, which routes the transmission to a central local node." '879 Patent, Col. 9:26-29 "The network access devices supported at the called party end could be a telecopier, telex, voice telephone, cellular phone, radio phone, data entry terminal, etc. (different types of communication access devices)." '879 Patent, Col. 9:41-46. "FIGS. 7A-7G exemplify different techniques for efficient routing communications in accordance with the invention. Access devices 150 and 156 (FIGS. 7A-7G) and nodes 152 (FIGS. 7A-7C, 7E-7F), 154 (FIGS. 7A-7G) and 160 (FIG. 7C) on a network are shown, but each node may be located in the same or different geographical region or country. The access device 150 may have an intercept capability to render the ensuing routing

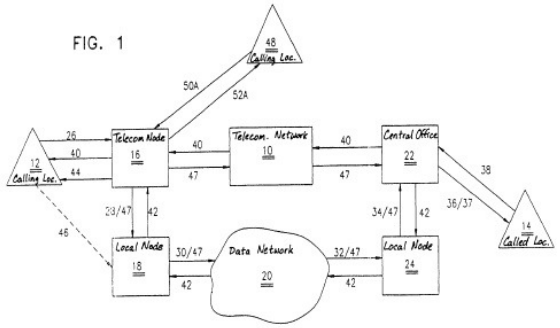
		connections transparent to the users. Node 158 (FIG. 7B) represents an access device on a different network. For purposes of example, links 170 (FIGS. 7A-7G) and 174 (FIGS. 7A-7G) may be considered voice transmission lines and links 172 (FIGS. 7A-7C, 7F) and 173 (FIG. 7D) may be considered data transmission lines. Link 176 (FIG. 7B) may be a paging or cellular line. Links 178 (FIGS. 7E and 7G) and 180 (FIG. 7E) may be data lines. Links 182, 184 and 186 (FIG. 7F) may also be data lines. Each node may perform the function of terminating the call, such as when authorization is not forthcoming for carrying out the transaction. FIG. 7A shows nodes 152 and 154 effecting communication with their respective access devices 150 and 156, as would be done for simultaneous callback Initially, the initiator access device 150, transmits its identification and that of the other access device 156 to node 152. Node 152 requests node 154 to make an inquiry on the availability of access device 156. If available, then callback is made over respective links 170, 174, preferably for simultaneous communication. The two callbacks are bridged over link 172. Nodes 152 and 154 convert voice transmissions into data transmission and vice versa so that data transmissions travel between nodes 152 and 154 and voice transmissions travel from the access devices to the associated nodes 152, 154. Links 170, 172 and 174 may handle voice or data communications. FIG. 7B works in the same way as in FIG. 7A, except that node 154 pages the called party via paging device 158 over paging network 176. Once paged, the called party calls node 154 through access device 156 and communication is established by bridging over link 172. During the interim between paging of the called party and the calling to the node 154 by the called party through the access device 154, the access device 150 may either be waiting for communication to be established with node 152 or be called back by node 152 after node 152 is advised that the access device 156 has contacted the node 154. FIG. 7C is the same as that of FIG. 7A, except that an additional node 160 between nodes 152, 154 is shown to illustrate that the routing between nodes 152, 154 may not be direct, and also showing that access device 150 is communicating directly with node 152 rather than as a result of callback

		as in FIG. 7A and using two different data links 172 and 173. FIG. 7D shows that communication may be through a single node 154, rather than through two nodes as in FIGS. 7A-7C as in case where access device 150 is a computer that has direct access to data link 172. FIG. 7E shows also that communication may be through a single node 152, rather than through two nodes, but also shows that such communication is established after access device 150 communications with node 154 say through E-mail that communication is desired with access device 156. Instead of routing the transmission through node 154, node 154 signals to node 152 to make contact with access devices 150 and 156 directly. FIG. 7F shows a callback type of arrangement in which a request for establishing communication from access device 150 to access device 156 is made through one kind of network, but the actual callback is done over a different kind of network, although both kinds of networks share the same nodes 152, 154. As an example, the request could be through a data network 182, 184, 186 and the callback could be through two voice links 170, 174 from respective access devices 150, 156, with the two voice links being bridged by a data link 172. The nodes 152, 154 convert voice transmissions into data transmissions and vice versa as desired. FIG. 7G is the same as FIG. 7E, except that node 154 also performs the function of node 152 in FIG. 7E and thereby routes the transmissions through itself. In this case, a request for establishing communication with access device 156 from access device 150 is effected over a data link 178, such as through E-mail. In response, node 154 calls both access devices 150, 156, preferably so that each is contacted simultaneously, over a different network such as over voice lines 170, 174." '879 Patent, Col. 11:45-12:60. "In each of these examples of FIGS. 7A-7G, billing is handled transparent to the parties using the access devices 150, 156. Each of the nodes are in contact with a central node (or network of central nodes) that must clear the transaction before the termination nodes take action through a global authorizer. Once the transaction cleared, an authorization code is provided to the node. The authorization code may either be forwarded to some other

		node at the time a request is made to establish communication or may be in response for such from that other node." '879 Patent, Col. 12:61-13:3. "The network access devices supported at the called party end could be a telecopier, telex, voice telephone, cellular phone, radio phone, data entry terminal, etc. (different types of communication access devices)." '879 Patent, Col. 9:32-46. "The called party may include users of phone networks, cellular networks, paging networks, data networks, etc. whose access device on the network serve as the destination to which the transmission or communication is directed from the calling party." '879 Patent, Col. 4:56-60. All claims of the '879 Patent and its related patents. **Cited references** U.S. Patents 4,644,351; 5,027,387; 5,042,027; 5,287,202; 5,406,557; 5,412,760; 5,426,643; 5,434,854; 5,502,752; 5,511,111; 5,526,404; 5,534,914; 5,553,271; 5,617,423; 5,699,089; 5,724,406; 5,726,984; 5,742,905; 5,859,984; 5,999,598; 6,104,711; 6,108,704; 6,128,304; 6,137,869; 6,243,373; 6,282,574; 6,298,062; 6,359,880; 6,430,275; 7,269,247; and 7,454,000. U.S. Patent Application No. 2006/0190412. Japanese Patent Publication No. JP7131486A. C. Yang, RFC 1789-INETPhone: Telephone Services and Servers on Internet, University of North Texas, Apr. 1995, pp. 1-6. **Prosecution History:** Notice of Allowance, dated Jan. 11, 2010, examiner comments: "Regarding claim 1, in combination with other limitations of the claims, the prior art of record fails to disclose or specifically suggested performing a first conversion converting the transmission from the first format to a second format, the second format being an internet protocol, sending the converted transmission through a second communication network, the second communication network being a data network, for reception by a

second device and performing a second conversion further converting the converted transmission from the second format to a further format suitable for the second access device, wherein the first access device and the second access device comprise telecommunication nodes and said further format comprises said first format or another telecommunication protocol."

'879 Patent, Figs. 1, 2, 7A-7G, 8, 9.



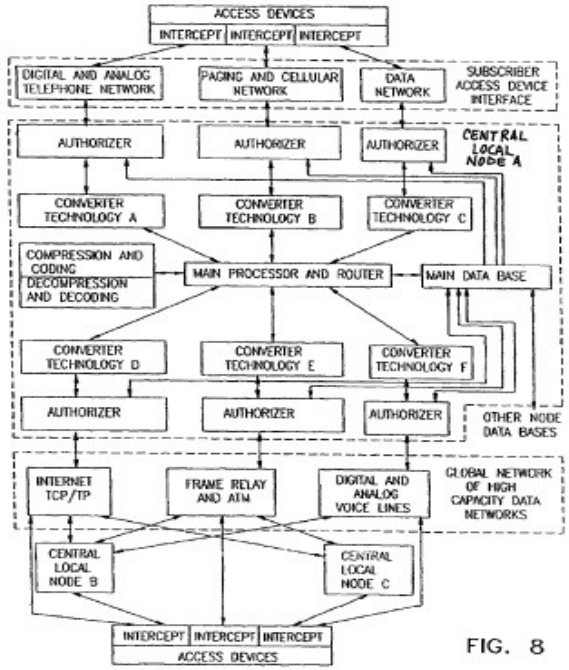


FIG. 8

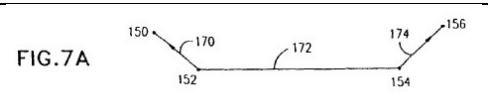


FIG.7A

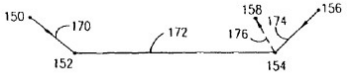


FIG. 7B

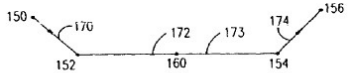


FIG. 7C

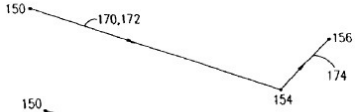


FIG. 7D

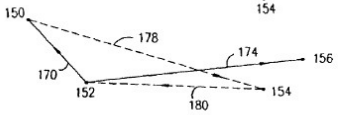


FIG. 7E

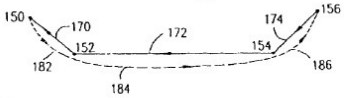


FIG. 7F



FIG. 7G

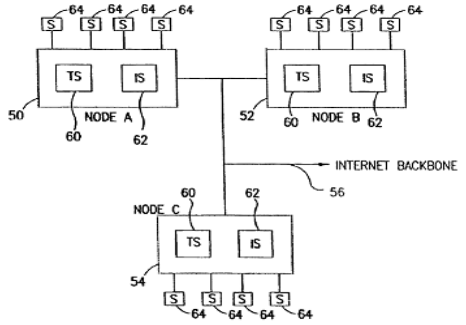
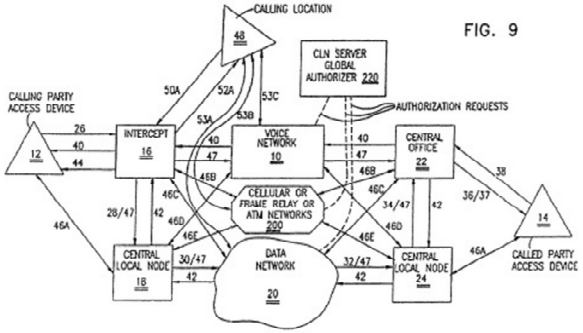


FIG. 2

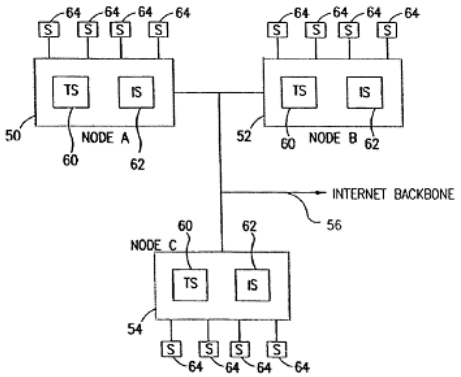
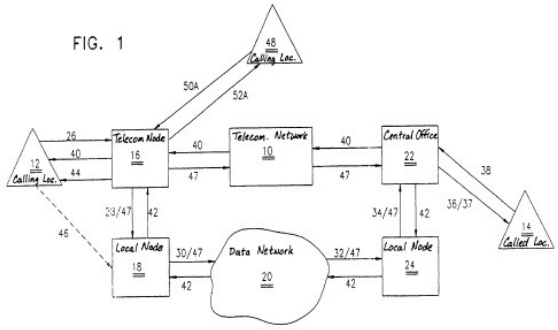
		
an internet protocol (Claim 1)	**A datagram protocol where a datagram is a self-contained, independent entity of data carrying sufficient information to be routed from the source to the destination computer without reliance on earlier exchanges between this source and destination computer and the transporting network**	**a set of protocols to link dissimilar computers across a variety of other networks and protocols**
	Intrinsic Evidence: AIP00001556, 7:34-39; AIP00001556, 7:44-50; AIP00001545-1552 Appl. No. 08/320,269: AIP00001841; AIP00001843; AIP00001845	**Intrinsic Evidence:** The ’879 Patent generally, including by way of example and without limitation: “A method and device that interrogates the availability of a called party before placing a communication from the calling party to the called party. A callback may be initiated so that both communications are completed simultaneously. The routing of communication may take place through any one of a number of different networks and at another time of the day, even if the caller does not otherwise have access to those networks.” ‘879 Patent, Abstract. “Other applications of the invention concern transmissions through

		conventional switched frame relay, conventional switched asynchronous transfer mode and other conventional data networks such as the Internet. Frame relay is an international standard for efficiently handling high-speed data over wide area networks that uses network bandwidth only when there is traffic to send. Asynchronous transfer mode allows users to combine voice, video and data on a single phone line and operates at up to Gigabyte-per-second speeds in which usable capacity is segmented into fixed-size cells each consisting of header and information fields allocated to services on demand. The Internet network differs from frame relay switching and asynchronous transfer mode by using internet protocols such as transmission control protocol/Internet protocol (TCP/IP), which is a set of protocols developed by the Department of Defense to link dissimilar computers across a variety of other networks and protocols. Referring to FIG. 2, several remote nodes 50, 52, 54 are shown on the Internet backbone 56. Each remote node has a telephone server 60 and an Internet server 62, although a common server may be used instead to provide both functions. The Internet server 62 has access to the Internet backbone 56. Both servers 60, 62 are networked using transmission control protocol/Internet protocol TCP/IP, which is a set of protocols that link dissimilar computers across a variety of other networks and protocols as conventionally used on local area networks, minicomputers and mainframes, or are networked with a router in the case of an ATM. Subscribers 64 dial into and are serviced by the telephone server 60, which is a computer based machine with conventional voice and fax processing hardware and software, so as to establish a connection with one of the remote nodes. Subscribers access the servers by using any of the conventional off-the-shelf phone and fax machines." '879 Patent, Col. 7:22-56. "By selecting the appropriate network, it may be ascertained that it is less expensive to transmit the telecopier message in digital form over a data network than to transmit the telecopier message in voice callback format through the long distance carriers. Thus, the data network may be the network of choice for purposes of selecting the least cost between nodes. On the other hand, the central local node should give priority to the customer's

		preferences, which could mean that the transmission be routed through the most secure route which may not be the data network Instead, a secure transmission would be through a different routing and would result in an increase in transmission cost." '879 Patent, Col. 10:40-51. "While such a technique is particularly suited to callback situations that employ a voice network, it is also applicable to employing digital data based networks such as the internet computer network For instance, instead of routing a call direct between locations A and B using technology X, it may be cheaper to use callbacks from location C to location A and from location C to location B using technology Y." '879 Patent, Col. 4:43-49. "At the first central local node 18, the call from the calling location 12 is converted to a data signal which is then sent over a data network such as the data network 20 to the called location or destination 14." '879 Patent, Col. 4:64-67. "In addition, by transmitting voice over a data network, the need for callback over a telephone network to save costs is obviated." '879 Patent, Col. 5:8-10. "One application of the invention that allows the Internet or other data network to function like a telephone and fax machine will now be explained. Callers are allowed to dial anywhere in the world for the price of a local access and service fee and avoid using long distance carriers. Users may make such calls to have voice conversations and to send faxes to remote locations. For making voice calls, a local system is dialed via computer access or regular phone which prompts the users for the called party number or identification and then connects them to the called party over the Internet or other data network, such as by connecting them via a node through a local call or through other networks. For example, a calling party may access a node that converts the transmission into data to support the network that it chooses. For instance, it may connect to another node that converts the transmission into voice and then connects the communication into a local call to the called party with the called party node being operated by an independent service provider located elsewhere such as in another country. Of course, the connection takes place only after authorization is received to complete the local call.

		For sending faxes, the calling party sends a fax into a central local node and the fax is then forwarded to the called party over the Internet or other data network. The fax may be sent in real time or as a store and a forward mode for later sending as part of a subsequent batch transmission, depending upon the preferences of the calling party." '879 Patent, col. 6:36-62. "For sending faxes, the calling party sends a fax into a central local node and the fax is then forwarded to the called party over the Internet or other data network." '879 Patent, Col. 6:57-59. "In addition to having access to a data network, the laptop may have appropriate software/hardware that give it access to a cellular digital packet data and, via a built-in fax modem, to a phone network. Thus, the laptop may be in contact with the node through any of these different communication networks and communicate over any of these communication networks as well, including performing two way voice calls." '879 Patent, Col. 7:15-21. "Other applications of the invention concern transmissions through conventional switched frame relay, conventional switched asynchronous transfer mode and other conventional data networks such as the Internet." '879 Patent, Col. 7:22-25. "If determined to be valid, the calling party is requested to indicate what service is desired so that the communication may be routed accordingly over voice or data networks." '879 Patent, Col. 8:3-5. "FIG. 8 shows a central local node A interacting with a calling party access device interface and a global network of high capacity data networks." '879 Patent, Col. 13:17-19. "The global networks of high capacity data networks include the internet, frame relay and digital and analog voice lines." '879 Patent, Col. 13:30-32. "In routing communications, the control location takes into consideration customer defined preference criteria relating to preferences for particular types of communication network, transmission quality, cost, security, and priority of transmission. For example, if the quality of a transmission is not acceptable, the transmissions may be rerouted to any other available

		network that can transmit with better quality, thereby ensuring that the quality of the transmission satisfies the customer's preference criteria for transmission quality. The calling party access number itself may include a message or protocol containing preference criteria selections." '879 Patent, Col. 3:4-14. "The system effects further routing, which may include converting between different forms of communication networks, compressing voice into data packets or decompressing data packets into voice, coding and decoding transmissions for security reasons, and multiplexing communications over the same lines." '879 Patent, Col. 3:24-29. "In addition to transmitting voice through the telecommunication network 10, the voice may be converted into digital form in a conventional manner, e.g., compressed into data packets or sampled. At the first central local node 18, the call from the calling location 12 is converted to a data signal which is then sent over a data network such as the data network 20 to the called location or destination 14. Prior to reaching the called party, the data signal is reconverted into voice at the central office 22 (or control location) to be transmitted to the destination 14 via a public communications network or other connection line 36. Such a transaction bypasses the use of the international telephone networks and utilizes local calls instead. All internode connections are via the data network." '879 Patent, Col. 4:61-5:7. "A software defined network may be used to maintain quality (e.g., upon detection of degradation in quality, the bandwidth of the transmission may be widened in accordance with or prioritization of transmission instructions). If data packets do not arrive quick enough, then quality may be enhanced by increasing the bandwidth within predetermined bandwidth parameters on account of other voice data users." '879 Patent, Col. 9:51-57. "An example of tracking down the called party will now be described. Assume that the party spends half the year in North America using NACN cellular network and the remainder in Europe using GSM internet network hookup using Laptop computer. Under normal situations, these two forms of networks are not compatible so direct communication is not possible. However, in accordance with the invention, such a situation is rectified by communicating with a node that is programmed with information as to

		which of the possible networks the party may be using. If the node is in contact with the NACN system, it is also in contact with a node that is in contact with the GSM system Both nodes check their respective cellular systems to locate on which the party is or has been accessing or which has been turned off." '879 Patent, Col. 5:59 – 6:3. '879 Patent, Figs. 1, 2, 8, 9.  FIG. 2 

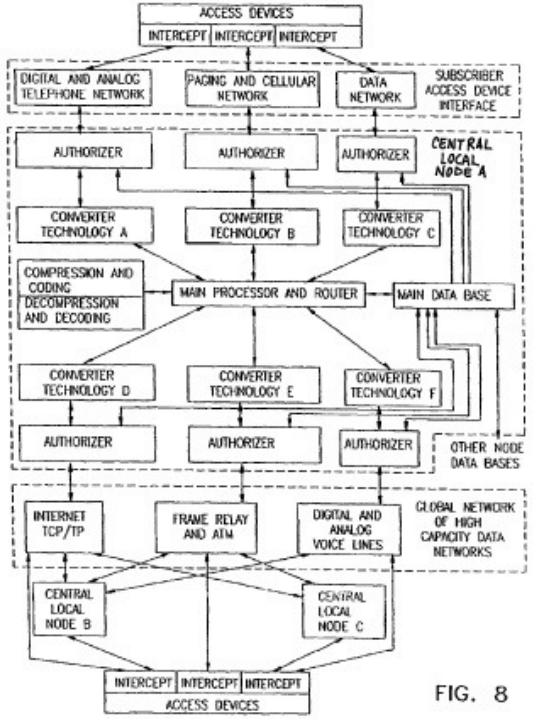
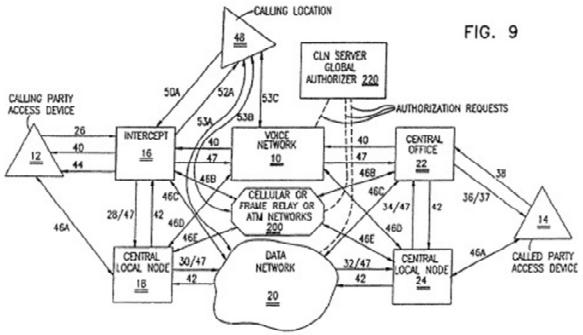

ACCESS DEVICES
INTERCEPT
INTERCEPT
INTERCEPT
DIGITAL AND ANALOG TELEPHONE NETWORK
PAGING AND CELLULAR NETWORK
DATA NETWORK
SUBSCRIBER ACCESS DEVICE INTERFACE
AUTHORIZER
AUTHORIZER
AUTHORIZER
CENTRAL LOCAL NODE A
CONVERTER TECHNOLOGY A
CONVERTER TECHNOLOGY B
CONVERTER TECHNOLOGY C
COMPRESSION AND CODING DECOMPRESSION AND DECODING
MAIN PROCESSOR AND ROUTER
MAIN DATA BASE
CONVERTER TECHNOLOGY D
CONVERTER TECHNOLOGY E
CONVERTER TECHNOLOGY F
AUTHORIZER
AUTHORIZER
AUTHORIZER
OTHER NODE DATA BASES
INTERNET TCP/TP
FRAME RELAY AND ATM
DIGITAL AND ANALOG VOICE LINES
GLOBAL NETWORK OF HIGH CAPACITY DATA NETWORKS
CENTRAL LOCAL NODE B
CENTRAL LOCAL NODE C
INTERCEPT
INTERCEPT
INTERCEPT
ACCESS DEVICES

FIG. 8



All claims of the ’879 Patent and its related patents.

Prosecution History:

Notice of Allowance, dated Jan. 11, 2010, examiner comments:

“Regarding claim 1, in combination with other limitations of the claims, the prior art of record fails to disclose or specifically suggested performing a first conversion converting the transmission from the first format to a second format, the second format being an internet protocol, sending the converted transmission through a second communication network, the second communication network being a data network, for reception by a second device and performing a second conversion further converting the converted transmission from the second format to a further format suitable for the second access device, wherein the first access device and the second access device comprise telecommunication nodes and said further format comprises said first format or another telecommunication protocol.”

Prosecution History of related U.S. Patent No. 7,269,247

“Advantageously, one embodiment of the present invention allows the Internet or other data network to function like a telephone system

		(paragraph [0041] in the publication of the present application). In that specific embodiment of the present application, callers are allowed to dial anywhere in the world for the price of a local access and service fee, thereby avoiding the use of long distance carriers and thus usage charges typically associated with long distance calls (paragraph [0041] in the publication of the present application). Claims 39, 41, 44, 59, 62, 70, and 71 are directed to aspects of the embodiment of the present invention described in paragraph [0041] in the publication of the present application as each of these claims require (1) that the transmission from the first device comprises voice communication or is related to establishing a phone call; and (2) that the transmission is converted to Internet protocol and sent using Internet protocol." Amendment, dated February 14, 2007 at 7-8. **Cited references** U.S. Patents 4,644,351; 5,027,387; 5,042,027; 5,287,202; 5,406,557; 5,412,760; 5,426,643; 5,434,854; 5,502,752; 5,511,111; 5,526,404; 5,534,914; 5,553,271; 5,617,423; 5,699,089; 5,724,406; 5,726,984; 5,742,905; 5,859,984; 5,999,598; 6,104,711; 6,108,704; 6,128,304; 6,137,869; 6,243,373; 6,282,574; 6,298,062; 6,359,880; 6,430,275; 7,269,247; and 7,454,000. U.S. Patent Application No. 2006/0190412. Japanese Patent Publication No. JP7131486A. C. Yang, RFC 1789-INETPhone: Telephone Services and Servers on Internet, University of North Texas, Apr. 1995, pp. 1-6. "These protocols are commonly referred to as TCP/IP. The TCP/IP protocols were originally developed for use only through ARPANET but have subsequently become widely used in the industry. TCP/IP is flexible and robust. TCP takes care of the integrity, and IP moves the data." Patent No. 6,359,880, Col. 2:33-37. "The control program 103 also controls or administers TCP/IP addressing functions and initiates certain necessary signaling communications through the network 31, as will be discussed more latter. The software running on

		the computer of the packet service gateway 69 also includes routines 101 for TCP/IP processing of the compressed voice channel information. Typically, there is a single program or routine for this TCP/IP processing function stored in disc drive system 75, but this routine may be called repeatedly and running from RAM 79 as a number of separate copies for simultaneous processing of voice data for a number of concurrent telephone calls. Each running TCP/IP processing routine 101 performs the two-way protocol processing to send and receive compressed, digitized voice data in TCP/IP packet form over the packet network 31. Each routine 101 supplies outgoing TCP/IP packets to a MUX/DEMUX routine 102. For outgoing traffic, the routine 102 serves as a multiplexer which aggregates and frames the TCP/IP packets for transmission over the T1 circuit. For incoming packets, the routine 102 serves as a demultiplexer. The routine 102 strips the T1 framing, separates out the packets relating to each two-way voice communication and routes the packets to the appropriate TCP/IP processing routine 101." U.S. Patent No. 6,359,880, Col. 14:46-15:3. "A dedicated communication line to a remote computer or hub, using a communication protocol which is compatible with the electronic messaging format shared by one of the hub's external communications modules and the remote computer or hub; examples of such communication protocols are DECnet, TCP/IP, or SNA." U.S. Patent No. 5,406,557, Col. 9:55-10:2. "Further, a protocol which is often employed in connection oriented protocols typically used on connectionless networks for data packet delivery is known as Transmission Control Protocol (TCP) and is particularly useful over complex communication networks. The standard for data formats and procedures in a TCP is specified in part of the TCP/IP suite of communications protocols and is defined in RFC 793, RFC 761, RFC 675 and other RFC's (Request For Comments) available from the Network Information Center at SRI International." U.S. Patent No. 5,426,643, Col. 1:34-43. "Depending on the nature of the hardwired link 5598, however, such assistance may not be sufficient if the hardwired link 5598 also operates pursuant to another protocol, such as a packet-based TCP/IP, for example,

which may or may not require the sharing of the hardwired link 5598 with other network devices." U.S. Patent No. 5,726,984, Col. 85:52-55.

The communications protocols used by computers on the Internet to communicate information include TCP (Transmission Control Protocol) and UDP (User Datagram Protocol). TCP is a connection-oriented protocol that provides a reliable data path between two communicating entities. In contrast, UDP is a connectionless protocol that does not guarantee delivery of messages. Although messages are typically delivered successfully in UDP, this may not be the case in the event of network failure or congestion. Both the TCP and UDP protocols are built on top of a lower layer protocol known as the IP (Internet Protocol). IP is used to format and route TCP and UDP messages. TCP/IP and UDP/IP have become worldwide de facto standards for interprocess communication and provide the underlying transport mechanism in use on the Internet. *A detailed description of the principles and protocol of TCP/IP communication is set forth in Douglas E. Comer, Internetworking with TCP/IP Volume 1 Principle Protocols and Architecture, (Prentice Hall 1991).*" U.S. Patent No. 6,243,373, Col. 3:48-4:4.

Douglas E. Comer, Internetworking with TCP/IP Volume 1 Principle Protocols and Architecture, (Prentice Hall 1991) ("*Comer*"):

"All Networks Are Equal

We have described an internet as a collection of cooperative, interconnected networks. It is now important to understand a fundamental concept: from the internet point of view, any communication system capable of transferring packets counts as a single network, independent of its delay and throughput characteristics, maximum packet size, or geographic scale. In particular, Figure 3.3b uses the same small cloud to depict all physical networks because TCP/IP treats them equally despite their differences. The point is:

The TCP/IP internet protocols treat all networks equally. A local area network like an Ethernet, a wide area network like the NSFNET backbone,

or a point-to-point link between two machines each count as one network.

The TCP/Readers unaccustomed to internet architecture may find it difficult to accept such a simplistic view of networks; we will learn that such abstractions help make TCP/IP extremely powerful." Comer, Pg. 56-57; Fig. 3.3.

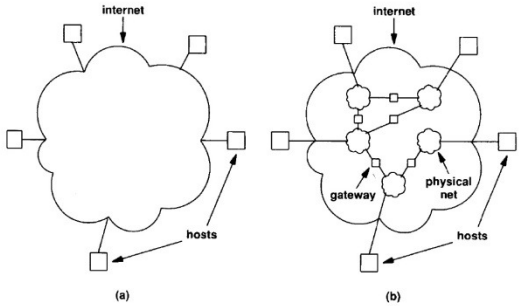


Figure 3.3 (a) The user's view of a TCP/IP internet in which each computer appears to attach to a single large network, and (b) the structure of physical networks and gateways that provide interconnection.

Conceptual Layering

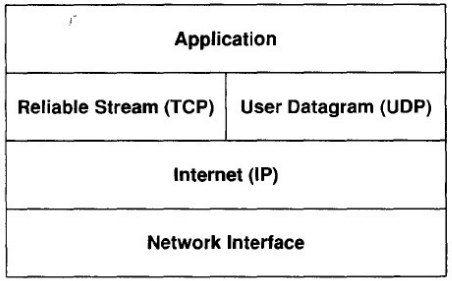


Figure 12.5 The conceptual layering of UDP and TCP above IP. TCP provides a reliable stream service, while UDP provides an unreliable datagram delivery service. Application programs use both.

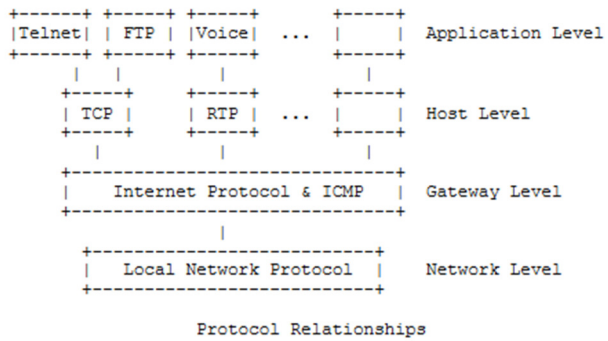
"12.7 Ports, Connections And Endpoints

TCP ports are much more complex because a given port number does not correspond to a single object. Instead, TCP has been built on the connection abstraction, in which the objects to be identified are virtual

		circuit connections, not individual ports. Understanding that TCP uses the notion of connections is crucial because it helps explain the meaning and use of TCP port numbers: *TCP uses the connection, not the protocol port, as its fundamental abstraction; connections are identified by a pair of endpoints*. Exactly what are the "endpoints" of a connection? We have said that a connection consists of a virtual circuit between two application programs, so it might be natural to assume that an application program serves as the connection "endpoint." It is not. Instead, TCP defines an endpoint to be a pair of integers (host, port), where host is the IP address for a host and port is a TCP port on that host." Comer, Pg. 179. "12.8 Passive and Active Opens Unlike UDP, TCP is a connection oriented protocol that requires both endpoints to agree to participate. That is, before TCP traffic can pass across an internet, application programs at both ends of the connection must agree that the connection is desired. To do so, the application program on one end performs a passive open function by contacting its operating system and indicating that it will accept an incoming connection. At that time, the operating system assigns a TCP port number for its end of the connection. The application program at the other end must then contact its operating system using an active open request to establish a connection. The two TCP software modules communicate to establish and verify a connection. Once a connection has been created, application programs can begin to pass data; the TCP software modules at each end exchange messages that guarantee reliable delivery." Comer, Pg. 180. U.S. Patent No. 6,243,373 and *Comer* direct a person of ordinary skill in the art to numerous Requests for Comments (RFCs) as background information for the technology discussed. We have included excerpts from select RFCs that are relevant to the understanding of the claim term in the art:

		IEN 119: ST - A Proposed Internet Stream Protocol, by James W. Forgie, M. I. T. Lincoln Laboratory (7 September 1979) Page 2 1.0 Introduction The internet stream protocol (ST) described in this document has been developed to support efficient delivery of streams of packets to either single or multiple destinations in applications requiring guaranteed data rates and controlled delay characteristics. The principal applications with these requirements are point-to-point speech communication and voice conferencing. While ST has been developed as a part of the ARPA Internet Program and has been formulated as an extension to the presently defined Internet Protocol (IP), it is not likely to find useful application in the current ARPA internet environment where the networks and gateways lack the capacity to handle significant speech communication. Instead, ST is aimed at application in wideband networks, in particular those intended to carry a large fraction of packet voice in their traffic mixes. Work is currently underway on such networks both for local access and long haul use. Page 7 ST is intended to operate as an extension of the presently defined internet protocol (IP). ST provides a different kind of service than the datagram service offered by IP. ST must operate on the same level as IP in order to access local net resources such as SATNET streams and to be able to take advantage of any available local net multi-address delivery capabilities to support conferencing applications. *See also* pg. 4 **RFC 793: TRANSMISSION CONTROL PROTOCOL, DARPA INTERNET PROGRAM, PROTOCOL SPECIFICATION (September 1981)** Page iii TCP is a connection-oriented, end-to-end reliable protocol designed to fit into a layered hierarchy of protocols which support multi-network applications. The

		TCP provides for reliable inter-process communication between pairs of processes in host computers attached to distinct but interconnected computer communication networks. Very few assumptions are made as to the reliability of the communication protocols below the TCP layer. TCP assumes it can obtain a simple, potentially unreliable datagram service from the lower level protocols. In principle, the TCP should be able to operate above a wide spectrum of communication systems ranging from hard-wired connections to packet-switched or circuit-switched networks. Page 1 Introduction TCP is based on concepts first described by Cerf and Kahn in [1]. The TCP fits into a layered protocol architecture just above a basic Internet Protocol [2] which provides a way for the TCP to send and receive variable-length segments of information enclosed in internet datagram "envelopes". Page 2 1.5 Operation As noted above, the primary purpose of the TCP is to provide reliable, securable logical circuit or connection service between pairs of processes. To provide this service on top of a less reliable internet communication system requires facilities in the following areas: Basic Data Transfer Reliability Flow Control Multiplexing Connections Precedence and Security

		Page 4 Connections: The reliability and flow control mechanisms described above require that TCPs initialize and maintain certain status information for each data stream. The combination of this information, including sockets, sequence numbers, and window sizes, is called a connection. Each connection is uniquely specified by a pair of sockets identifying its two sides. When two processes wish to communicate, their TCP's must first establish a connection (initialize the status information on each side). When their communication is complete, the connection is terminated or closed to free the resources for other uses. Since connections must be established between unreliable hosts and over the unreliable internet communication system, a handshake mechanism with clock-based sequence numbers is used to avoid erroneous initialization of connections. Page 8  Protocol Relationships Figure 2. *See also* pg. 1, Sec. 1.2 Scope; *See* pg. 6; *See* pg. 9, Sec. 2.7 Connection Establishment & Clearing; *See* pg. 29, Sec. 3.4 Establishing a Connection

		RFC 1594: FYI on Questions and Answers, Answers to Commonly Asked "New Internet User" Questions, by A. Marine – NASA NAIC, J. Reynolds – ISI, G. Malkin – Xylogics (Network Working Group - March 1994) Page 3 Note: You will often see "internet" with a small "i". This could refer to any network built based on TCP/IP, or might refer to networks using other protocol families that are composites built of smaller networks. *See* pg. 5, Sec. 4 Questions About TCP/IP, Sec. 4.1 What is TCP/IP, Sec. 4.2 What are the other well-known standard protocols in the TCP/IP family? **RFC 1540: INTERNET OFFICIAL PROTOCOL STANDARDS, Internet Architecture Board, J. Postel, Editor (Network Working Group - October 1993)** *See* pg. 19, Sec. 6.2 Standard Protocols; *See* pg. 22, Sec. 6.4 Draft Standard Protocol; See pg. 27, Sec. 6.7 Experimental Protocols. **RFC 1190: Experimental Internet Stream Protocol, Version 2 (ST-II), CIP Working Group, C. Topolcic (Editor) (Network Working Group - October 1990)** Page 6

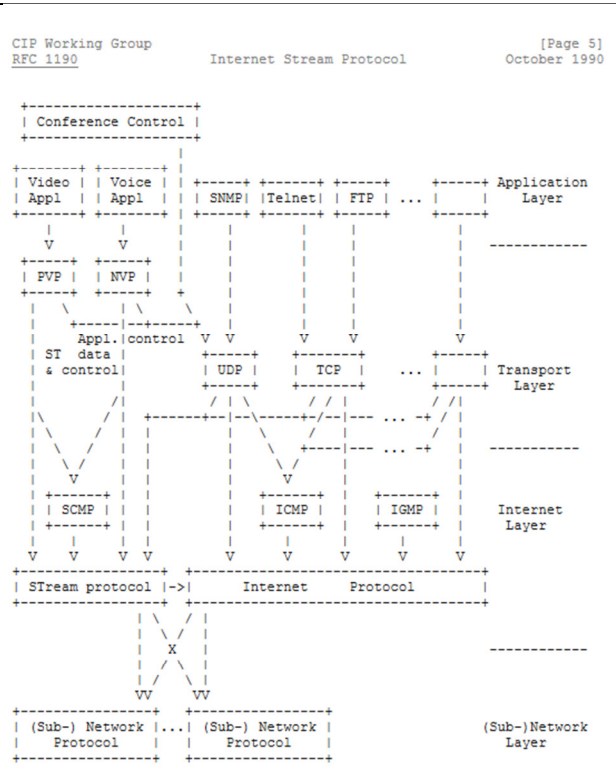


Figure 1. Protocol Relationships

See also pg. 7, Introduction

RFC 1463: FYI on Introducing the Internet, A Short Bibliography of Introductory Internetworking Readings for the Network Novice, by E. Hoffman – Merit Network, Inc., L. Jackson – NASA (Network Working Group May 1993)

Page 3

4. Introducing the Internet Protocols

Comer, Douglas E. (1991) Internetworking With TCP/IP: Volume I,

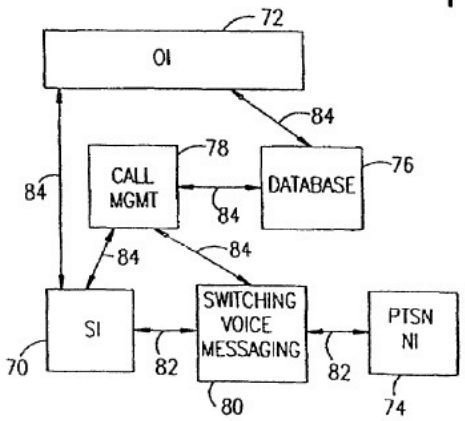
		Principles, Protocols, and Architecture, (second edition). 547 p. Prentice Hall, Englewood Cliffs, NJ **A Network Voice Protocol NVP-II, by Danny Cohen, Stephen Casner, James W. Forgie, Lincoln Laboratory, Massachusetts Institute of Technology (April 1, 1981)** Page 3 (B) THE MODEL NVP-II supports communication between users, where each user is a process with some capabilities somewhere in the internetwork environment, capable of using both IP datagrams and the internet stream protocol (ST) [FORGIE]. Before establishing an ST-connection, only control information may be communicated. This is done by the IP.ST mechanism. After establishing the ST-connection, data (with or without control) is communicated by the ST.ST mechanism, but control with no data may also be communicated by the ST.DG mechanism. For more details please refer to the example in the "Sample NVP/ST Scenarios" documents and to the ST document [FORGIE]. *See also* pg. 4, NVP II diagram **RFC 761: DOD STANDARD TRANSMISSION CONTROL PROTOCOL (January 1980)**
signaling messages (Claim 15)	**Control information exchanged between two points in a network to establish, maintain and/or remove a phone call as distinguished from conversation information exchanged between a caller and a call recipient over an already established phone call.**	**information related to the establishment and control of a connection to facilitate telecommunications**

	Intrinsic Evidence: AIP00001553, 2:4-12; AIP00001545-1552 Appl. No. 08/320,269: AIP00001838; AIP00001839; AIP00001841; AIP00001843; AIP00001844; AIP00001845	**Intrinsic Evidence:** The '879 Patent generally, including by way of example and without limitation: "For establishing a call, the following steps may take place: The dialogic hardware answers the call. The switching voice messaging 80 sends a message to the answered call via the voice processing unit requesting entry of a called party access number, which after its entry is received and stored. The call management 78 checks the data base 76 for the user's billing status. If invalid, the voice processing unit plays a message and the call is disconnected. Otherwise, for valid callers, the call management 78 initiates the subscriber interface 70 to send a request packet over the Internet other data or voice line; the request packet consists of the called party number or identification and may include an authorization code. Upon receipt of the packet at a remote central local node, the remote central local node will dial the called party number or enter its address, perform a call analysis and send the result back to the subscriber interface at the origination node. Call management 78 checks the analysis result. If a connection link was established, then the call begins. Otherwise, the switching voice messaging 80 prompts the user via the voice processing unit with a message and options, such as dial another number or leave a message in a voice mailbox. Upon completion of the call, billing information will be stored in the data base 76 for further processing by the operator interface 72." '879 Patent, Col. 9:1-25. "The calling party may dial into the subscriber interface 70 through voice or data lines, for instance, with a computer or laptop. The PSTN interface 74 has lines that are used for inbound calls and lines that are used for outbound calls. These lines for inbound calls lead to industry standard dialogic hardware or a modem such that when a particular number is called, the identification or password of the calling party is checked for validity of identity. If determined to be valid, the calling party is requested to indicate what service is desired so that the communication may be routed accordingly over voice or data networks. The called party is contacted to determine availability for receiving the communication. If available, communication is established over the desired service. Otherwise, if real

		time communication is desired, the calling party is notified that contact is unavailable." '879 Patent, Col. 7:62-8:10. "Once the availability becomes known, an appropriate signal may be sent directly back to the central local node 18 either backtracking through the same route or through the second central . . . ." '879 Patent, Col. 14:39-41. "After receiving these access numbers, the system initiates an inquiry to the called party from the control location and waits for a status signal as to the called party location's availability to take incoming calls. If the status signal indicates an available status, a first communication is initiated to the called party access number from the control location and a second communication is initiated to the calling party access number from the control location. Thereafter, the first and second communications are bridged using the same or different networks." '879 Patent, Col. 2:38-47. "The reference numbers in FIG. 1 of the '269 application are the same as those in FIG. 1 of the present application, i.e., a telecommunications network 10, calling location 12, called location 14, transparent telecommunications node or intercept 16, first central local node 18, data network 20, central office 22, second central local node 24, phonecall 26, link 28 to central local node 18, link 30 to the external channel 20, link 32 to the second central local node 24, line 36 over which a first phonecall 27 is made to interrogate the called location 14 and over which is sent back a call supervision status signal 38, a callback 40, an uncompleted call signal 42, a message 44, a reverse answer supervision signal 47 and a calling location 48 that places a call 50A or receives a callback 52A." '879 Patent, Col. 4:20-33. "At the first central local node 18, the call from the calling location 12 is converted to a data signal which is then sent over a data network such as the data network 20 to the called location or destination 14. Prior to reaching the called party, the data signal is reconverted into voice at the central office 22 (or control location) to be transmitted to the destination 14 via a public communications network or other connection line 36." '879 Patent, Col. 4:64-5:4. "After the called party node receives the authorization code and

		authenticates it for billing purposes, communication may be established to the party through the identified communication network that was tracked down and found to be accessible all transparent to the end user. An appropriate signal is transmitted to the requesting node that communication may commence between the parties." '879 Patent, Col. 5:51-58. For making voice calls, a local system is dialed via computer access or regular phone which prompts the users for the called party number or identification and then connects them to the called party over the Internet or other data network, such as by connecting them via a node through a local call or through other networks. For example, a calling party may access a node that converts the transmission into data to support the network that it chooses. For instance, it may connect to another node that converts the transmission into voice and then connects the communication into a local call to the called party with the called party node being operated by an independent service provider located elsewhere such as in another country. Of course, the connection takes place only after authorization is received to complete the local call." '879 Patent, Col. 6:43-56. "Instead of routing the transmission through node 154, node 154 signals to node 152 to make contact with access devices 150 and 156 directly." '879 Patent, Col. 12:38-40. "Once the availability becomes known, an appropriate signal may be sent directly back to the central local node 18 either backtracking through the same route or through the second central local node 24 to either the communications network 10 or the data network 20 to thereafter reach the local access node 18, Note that the second central local node 24 may be considered a local access node for the called party access device 14." '879 Patent, Col. 14:38-45. '879 Patent, Fig. 4.

FIG. 4



All claims of the '879 Patent and its related patents.

Cited references:

U.S. Patents 4,644,351; 5,027,387; 5,042,027; 5,287,202; 5,406,557; 5,412,760; 5,426,643; 5,434,854; 5,502,752; 5,511,111; 5,526,404; 5,534,914; 5,553,271; 5,617,423; 5,699,089; 5,724,406; 5,726,984; 5,742,905; 5,859,984; 5,999,598; 6,104,711; 6,108,704; 6,128,304; 6,137,869; 6,243,373; 6,282,574; 6,298,062; 6,359,880; 6,430,275; 7,269,247; and 7,454,000.

U.S. Patent Application No. 2006/0190412.

Japanese Patent Publication No. JP7131486A.

C. Yang, RFC 1789-INETPhone: Telephone Services and Servers on Internet, University of North Texas, Apr. 1995, pp. 1-6.

Prosecution History:

Notice of Allowance, dated Jan. 11, 2010, examiner comments:

"Regarding claim 1, in combination with other limitations of the claims, the prior art of record fails to disclose or specifically suggested performing a first conversion converting the transmission from the first format to a second format, the second format being an internet protocol, sending the

		converted transmission through a second communication network, the second communication network being a data network, for reception by a second device and performing a second conversion further converting the converted transmission from the second format to a further format suitable for the second access device, wherein the first access device and the second access device comprise telecommunication nodes and said further format comprises said first format or another telecommunication protocol."

B. U.S. Patent No. 6,757,275

Claim Term	Plaintiff's Proposed Construction and Evidence	Defendant's Proposed Construction and Evidence
customer identifier (Claims 8, 14)	**No construction needed**	**a unique code identifying a customer**
	Intrinsic Evidence: AIP00001044-1055; AIP00001043; AIP00001056, 1:60-2:9, 2:10-26; AIP0001057, 4:54-64; AIP00001058, 5:3-7, 5:14-20, 5:29-33, 6:7-24, 6:39-4-60, 6:64-67; AIP00001059, 7:1-25, 8:1-23; AIP00001317 Application No. 10/745,318: AIP00001529-1530; AIP00001517 Application No. 60/231,645: AIP0001807-1828	**Intrinsic Evidence:** The '275 Patent generally, including by way of example and without limitation: "Once the switch 53 has made the decision that the call must be sent to a VOIP route, the switch 53 searches the internal routing tables of the platform 50 and prefixes a unique 4-digit customer identification ID to the DNIS or inserts the unique ID in the ANI field (see FIG. 10)." '275 Patent, Col. 5:29-33. "The routing table includes one or more routes specified for each customer, each of the routes being identified with a customer identifier. The system associates identifying information of each packet-switched network with a customer identifier and receives from a packet-switched network telecommunications traffic including information identifying the packet-switched network. The system also identifies the customer identifier associated with the packet-switched network identifying information and selects by the network switch one of the plurality of circuit-switched networks for receiving the telecommunications traffic based on the routing table and the identified customer identifier." '275 Patent, Abstract. "The Domain Identification Table assigns a unique 4-digit identifier to each

domain." '275 Patent, Fig. 4.

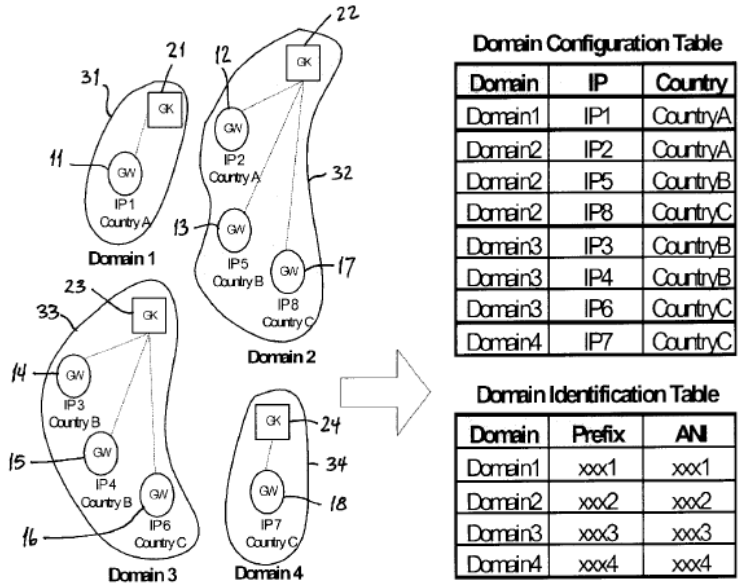


Figure 4

Defining look-up tables to correctly identify each network element. The *Domain Configuration Table* groups each gateway into a specific domain. The *Domain Identification Table* assigns a unique 4-digit identifier to each domain.

"The platform's switch pre-fixes a unique 4-digit identifier to the DNIS and sends the call to the VOIP gateway." '275 Patent, Fig. 10.

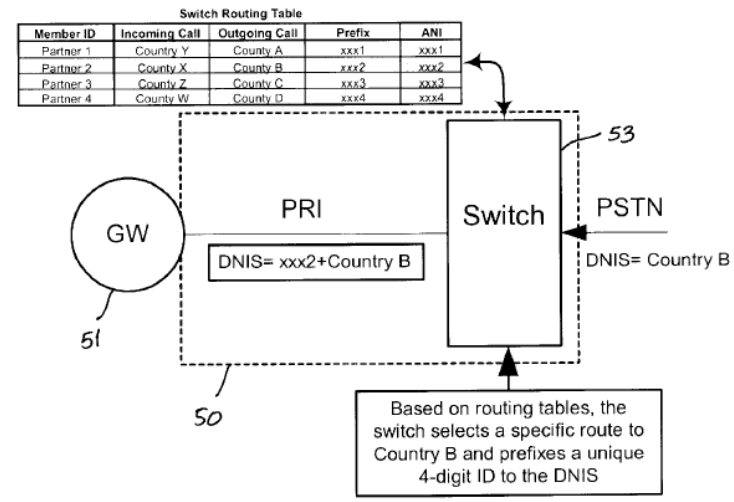


Figure 10

The platform's switch pre-fixes a unique 4-digit identifier to the DNIS and sends the call to the VOIP gateway.

"The system associates identifying information of each packet-switched network with a customer identifier and receives from a packet-switched network telecommunications traffic including information identifying the packet-switched network. The system also identifies the customer identifier associated with the packet-switched network identifying information and selects by the network switch one of the plurality of circuit-switched networks for receiving the telecommunications traffic based on the routing table and the identified customer identifier." '275 Patent, Col. 1:67-2:10.

"The routing table includes one or more routes specified for each customer, each of the routes being associated with a customer identifier. The method also includes the steps of associating each packet-switched network with a customer identifier and receiving by a network switch from a circuit-

		switched network telecommunications traffic including a customer identifier. The method then identifies the packet-switched network associated with the customer identifier included in the telecommunications traffic from the network switch." '275 Patent, Col. 2:15-24. As shown in the embodiment of FIG. 4, we have "mapped" the partners' networks into two user-defined look-up tables: the Domain Configuration Table which groups each gateway 11-18 in our partners' networks into a specific domain, and the Domain Identification Table which assigns a unique 4-digit identifier to each domain 31, 32, 33, 34 which in effect assigns a unique identifier to every partner. '275 Patent, Col. 4:20-27. Note that the concept of DNIS prefixing can also be applied to ANI. The gateway may choose to insert the unique 4-digit customer identifier ID in the ANI field based on mode 5 that the operator has selected--e.g., prefixing DNIS, inserting ANI or both. '275 Patent, Col. 5:3-7. '275 Patent, Figs. 4-12.

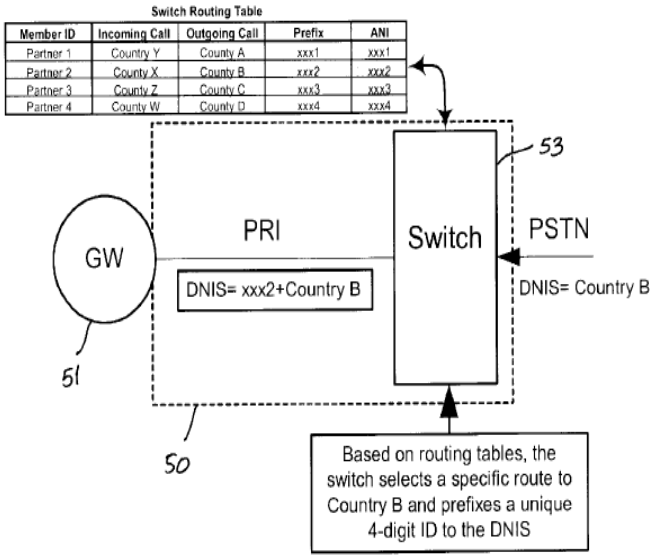


Figure 10

The platform's switch pre-fixes a unique 4-digit identifier to the DNIS and sends the call to the VOIP gateway.

All claims of the '275 Patent and its related patents.

Cited references, including U.S. Patents 5,894,478; 6,005,926; 6,198,738; 6,205,135; 6,215,783; 6,282,192; 6,292,553; and 6,463,052.

Prosecution history

Prosecution history of '662 Patent, Amendment dated June 3, 2008; Office Action dated March 5, 2008.

"routing table" (Claims 8, 14)	**No construction needed**	**a table that includes one or more routes specified for each customer, each of the routes being identified with a customer identifier**
	Intrinsic Evidence: AIP00001044-1055; AIP00001043; AIP00001056, 1:54-57, 1:60-2:17; AIP00001057, 3:18-28, 3:46-51; AIP00001057-1058, 4:65-5:13; AIP00001058, 5:29-34, 6:7-24, 6:43-60; AIP00001059, 7:5-25, 8:1-23; AIP00001317 Application No. 10/745,318: AIP00001529-1530 Application No. 60/231,645: AIP0001807-1828	**Intrinsic Evidence:**: The '275 Patent generally, including by way of example and without limitation: "A system for transmitting telecommunications traffic for one or more customers between packet-switched and circuit switched networks generates a routing table for routing the telecommunications traffic. The routing table includes one or more routes specified for each customer, each of the routes being identified with a customer identifier. The system associates identifying information of each packet-switched network with a customer identifier and receives from a packet-switched network telecommunications traffic including information identifying the packet-switched network. The system also identifies the customer identifier associated with the packet-switched network identifying information and selects by the network switch one of the plurality of circuit-switched networks for receiving the telecommunications traffic based on the routing table and the identified customer identifier." '275 Patent, Abstract. "The routing table includes one or more routes specified for each customer, each of the routes being associated with a customer identifier." '275 Patent, Col. 1:65-67. "The routing table includes one or more routes specified for each customer, each of the routes being associated with a customer identifier." '275 Patent, Col. 2:15-17. "The platform dynamically routes each outbound VOIP call originated from a PSTN network to a destination gateway by identifying the prefix preceding the DNIS and/or by detecting an ANI based on a user configurable routing table." '275 Patent, Col. 3:46-50. "Finally, the platform's telecommunications switch 53 detects the prefix, generates a Call Data Record (CDR) and selects the best PSTN route based on the caller's identity (or routing table), strips the prefix and routes the call to the

		destination country-Country X in our example." '275 Patent, Col. 4:65-5:2. "The same tables that we have created for Domain identification and Domain configuration for inbound VOIP traffic 10 can also be used for outbound VOIP traffic. These tables will serve as routing tables to direct the VOIP call to a specific gateway within a particular partner's network." '275 Patent, Col. 5:9-13. All claims of the '275 Patent and its related patents. **Cited references:** U.S. Patents 5,894,478; 6,005,926; 6,198,738; 6,205,135; 6,215,783; 6,282,192; 6,292,553; and 6,463,052.

C. U.S. Patent No. 7,486,662

Claim Term	Plaintiff's Proposed Construction and Evidence	Defendant's Proposed Construction and Evidence
identifier (Claims 1, 13)	**No construction needed**	**a unique code identifying a customer**
	Intrinsic Evidence: AIP00001362-1373; AIP00001360; AIP00001374, 1:60-2:26; AIP00001375, 4:52-62; AIP00001376, 5:1-5, 5:13-19, 5:27-31, 6:6-40, 6:45-67; AIP00001377, 7:1-12, 7:16-8:38; AIP00001525-1530, AIP00001517 Application No. 09/952,352: AIP00001317 Application No. 60/231,645: AIP00001807-1828	**Intrinsic Evidence:** The '662 Patent generally, including by way of example and without limitation: "Once the switch 53 has made the decision that the call must be sent to a VOIP route, the switch 53 searches the internal routing tables of the platform 50 and prefixes a unique 4-digit customer identification ID to the DNIS or inserts the unique ID in the ANI field (see FIG. 10)." '662 Patent, Col. 5:26-30. "The routing table includes one or more routes specified for each customer, each of the routes being identified with a customer identifier. The system associates identifying information of each packet-switched network with a customer identifier and receives from a packet-switched network telecommunications traffic including information identifying the packet-switched network. The system also identifies the customer identifier associated with the packet-switched network identifying information and

		selects by the network switch one of the plurality of circuit-switched networks for receiving the telecommunications traffic based on the routing table and the identified customer identifier." '662 Patent, Abstract. "The Domain Identification Table assigns a unique 4-digit identifier to each domain." '662 Patent, Fig. 4. "The platform's switch pre-fixes a unique 4-digit identifier to the DNIS and sends the call to the VOIP gateway." '662 Patent, Fig. 10. "The system associates identifying information of each packet-switched network with a customer identifier and receives from a packet-switched network telecommunications traffic including information identifying the packet-switched network. The system also identifies the customer identifier associated with the packet-switched network identifying information and selects by the network switch one of the plurality of circuit-switched networks for receiving the telecommunications traffic based on the routing table and the identified customer identifier." '662 Patent, Col. 1:67-2:10. "The routing table includes one or more routes specified for each customer, each of the routes being associated with a customer identifier. The method also includes the steps of associating each packet-switched network with a customer identifier and receiving by a network switch from a circuit-switched network telecommunications traffic including a customer identifier. The method then identifies the packet-switched network associated with the customer identifier included in the telecommunications traffic from the network switch." '662 Patent, Col. 2:15-24. As shown in the embodiment of FIG. 4, we have "mapped" the partners' networks into two user-defined look-up tables: the Domain Configuration Table which groups each gateway 11-18 in our partners' networks into a specific domain, and the Domain Identification Table which assigns a unique 4-digit identifier to each domain 31, 32, 33, 34 which in effect assigns a unique identifier to every partner. '662 Patent, Col. 4:18-24. Note that the concept of DNIS prefixing can also be applied to ANI. The gateway may choose to insert the unique 4-digit customer identifier ID in the ANI field based on mode 5 that the operator has selected--e.g., prefixing

DNIS, inserting ANI or both. ’662 Patent, Col. 5:1-5.

’662 Patent, Figs. 4-12.

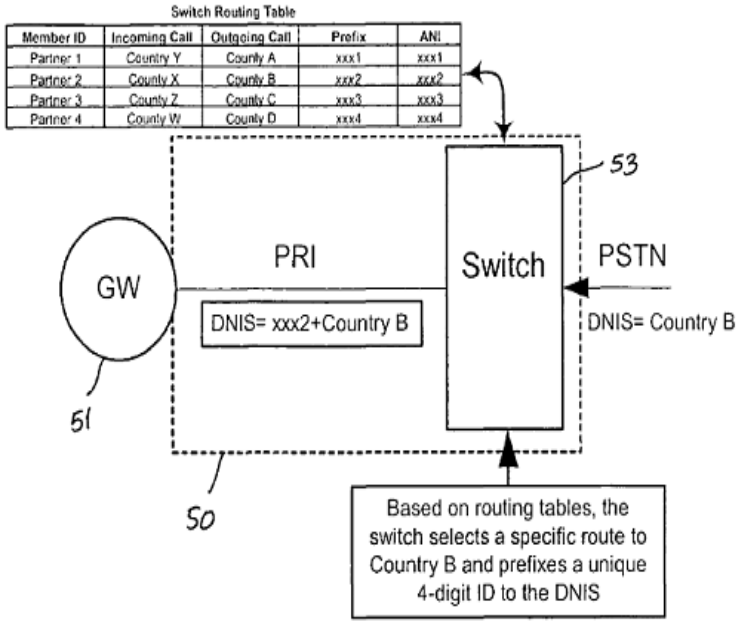


Figure 10

The platform’s switch pre-fixes a unique 4-digit identifier to the DNIS and sends the call to the VOIP gateway.

All claims of the ’662 Patent and its related patents.

Cited references, including U.S. Patents 4,608,685; 5,093,827; 5,781,547; 6,005,926; 6,243,373; 6,282,192; 6,477,164; 6,628,652; 6,657,989; 6,791,988; 6,798,766; 7,123,608; 7,209,473; 7,286,521.

U.S. Patent Applications US20020097708, US20020176403, US20030123438, US20050232222, and US20080013531.

		PCT Application No. WO2000051395A2. "A Performance Monitoring System For VOLP Gateways," Adrain E. Conway Infolibria, Inc. 411 Waverly Oaks Road Waltham, MA 02452 pp. 38-43 (2000). "Packet Routing Algorithms For Integrated Switching Networks," Reed et al. Department of Computer Science University of Illinois Urbana, Illinois 61801 pp. 7-15 (1987). "Routing as a Flow Control Strategy in an Integrated Circuit/Packet Switched Communications Network," Hebert et al., Department of Computer Science Texas A & M University pp. 786-794 (1986). **Prosecution history** Prosecution history of '662 Patent, Amendment dated June 3, 2008; Office Action dated March 5, 2008.
routing table	**No construction needed**	**a table that includes one or more routes specified for each customer, each of the routes being identified with a customer identifier**
	Intrinsic Evidence: AIP00001362-1373; AIP00001374, 1:55-57, 1:60-2:9; AIP00001375, 3:15-25, 3:43-48; AIP00001375-1376, 4:63-5:12; AIP00001376, 5:27-30, 6:6-28, 6:45-67; AIP00001376-1377, 6:16-8:2; AIP00001377, 8:9-32; AIP00001529-1530 Application No. 09/952, 352: AIP00001317 Application No. 60/231,645: AIP0001807-1828	**Intrinsic Evidence:**: The '662 Patent generally, including by way of example and without limitation: "A system for transmitting telecommunications traffic for one or more customers between packet-switched and circuit switched networks generates a routing table for routing the telecommunications traffic. The routing table includes one or more routes specified for each customer, each of the routes being identified with a customer identifier. The system associates identifying information of each packet-switched network with a customer identifier and receives from a packet-switched network telecommunications traffic including information identifying the packet-switched network. The system also identifies the customer identifier associated with the packet-switched network identifying information and selects by the network switch one of the plurality of circuit-switched networks for receiving the telecommunications traffic based on the routing

		table and the identified customer identifier." '662 Patent, Abstract. "The routing table includes one or more routes specified for each customer, each of the routes being associated with a customer identifier." '662 Patent, Col 1:64-67. "The routing table includes one or more routes specified for each customer, each of the routes being associated with a customer identifier." '662 Patent, Col. 2:15-17. "The platform dynamically routes each outbound VOIP call originated from a PSTN network to a destination gateway by identifying the prefix preceding the DNIS and/or by detecting an ANI based on a user configurable routing table." '662 Patent, Col. 3:43-46. "Finally, the platform's telecommunications switch 53 detects the prefix, generates a Call Data Record (CDR) and selects the best PSTN route based on the caller's identity (or routing table), strips the prefix and routes the call to the destination country-Country X in our example." '662 Patent, Col. 4:63-67. "The same tables that we have created for Domain identification and Domain configuration for inbound VOIP traffic 10 can also be used for outbound VOIP traffic. These tables will serve as routing tables to direct the VOIP call to a specific gateway within a particular partner's network." '662 Patent, Col. 5:7-11. All claims of the '662 Patent and its related patents. **Cited references:** U.S. Patents 4,608,685; 5,093,827; 5,781,547; 6,005,926; 6,243,373; 6,282,192; 6,477,164; 6,628,652; 6,657,989; 6,791,988; 6,798,766; 7,123,608; 7,209,473; 7,286,521. U.S. Patent Applications 20020097708, 20020176403, 20030123438, 20050232222, and 20080013531. PCT Application No. WO2000051395A2. "A Performance Monitoring System For VOIP Gateways," Adrain E. Conway Infolibria, Inc. 411 Waverly Oaks Road Waltham, MA 02452 pp. 38-43 (2000).

		"Packet Routing Algorithms For Integrated Switching Networks," Reed et al. Department of Computer Science University of Illinois Urbana, Illinois 61801 pp. 7-15 (1987). "Routing as a Flow Control Strategy in an Integrated Circuit/Packet Switched Communications Network," Hebert et al., Department of Computer Science Texas A & M University pp. 786-794 (1986).