IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

COX COMMUNICATIONS INC., et al.,   )
)
            Plaintiffs,   )
)
      v.   )   Civ. No. 12-487-SLR
)
SPRINT COMMUNICATIONS   )
COMPANY L.P., et al.,   )
)
            Defendants.   )

MEMORANDUM ORDER

At Wilmington this ⅃ꝏᵗ day of March, 2016, having heard argument on, and

having reviewed the papers submitted in connection with, the parties' proposed claim

construction;

IT IS ORDERED that the disputed claim language of U.S. Patent Nos. 6,343,084

("the '084 patent"); 6,330,224 ("the '224 patent"); 6,697,340 ("the '340 patent");

6,563,918 ("the '918 patent"); and, 6,262,992 ("the '992 patent") shall be construed

consistent with the tenets of claim construction set forth by the United States Court of

Appeals for the Federal Circuit in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005),

as follows:

1. **"Processing system:"**[1] "A call processing system capable of receiving and

transmitting signaling and processing signaling to select information for routing a call."

Not subject to 35 U.S.C. § 112, ¶ 6. Not indefinite under 35 U.S.C. § 112, ¶ 2. Claim 1

of the '224 patent[2] is directed to a "method for operating a communication system" and

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[1] Found in claim 1 of the '224 patent.
[2] The prosecution history reflects that the limitation "processing system" was added by
the patentee after the examiner rejected claims reciting a "processor," in part because

recites in relevant part "receiving [user communication] information into a processing

system," "selecting a service and a service node," and "generating and transmitting"

messages. The '224 patent specification states that

> the present invention is a method for connecting a call from a first
> communication device through an asynchronous transfer mode system.
> The call has user communications and call signaling. The method
> comprises receiving the call signaling in a signaling processor. The call
> signaling is processed to select a selected first one of a plurality of
> connections to a service platform for the user communications. A
> processor control message is transported from the signaling processor
> designating the selected first connection. The method further comprises
> receiving the user communications and the processor control message in
> an interworking unit. The user communications are converted in the
> interworking unit from the asynchronous transfer mode format to a format
> that is compatible with the service platform in response to the processor
> control message and transported from the interworking unit over the
> selected first connection to the service platform. The user
> communications are received in the service platform and processing the
> user communications.

('224 patent, 2:1-19; see also 2:56-3:20) The specification provides details of the

limitation's operation including details of the "service platforms" and "interworking unit."

('224 patent, 6:33-42; 8:64-9:29) The specification also describes "a signaling

processor[, which] is referred to as a call/connection manager (CCM)." The "CCM

performs many other functions in the context of call processing." ('224 patent, 21:22-

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2. **Extrinsic evidence.** Sprint's expert, Dr. Wicker, describes the '224 patent as

"providing enhanced services beyond basic call routing, including calls being made over

a broadband network such as ATM." He opines that the specification "generally

provide[s] for service call processing based on a call request or service determination

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"any device which processes computer code relating to a layer of an OSI model can be
referred to as a 'processor.'" (D.I. 388, ex. 1)

using information about user communications." (D.I. 216, ex. A at ¶¶ 48-49) Dr. Wicker

further opines that "processing system" "has an understood meaning in the

telecommunications industry by a person of ordinary skill in the art" and "refers to a

system that processes signaling to assist in call control." (*Id.* at ¶ 69); *Williamson v.*

Citrix Online, LLC, 792 F.3d 1339, 1348-49 (Fed. Cir. 2015) (citing *Greenberg v.*

Ethicon Endo–Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996) ("The standard is

whether the words of the claim are understood by persons of ordinary skill in the art to

have a sufficiently definite meaning as the name for structure."); *Media Rights Techs.,*

Inc. v. Capital One Fin. Corp., 800 F.3d 1366, 1372 (Fed. Cir. 2015) (Plaintiff "does not

dispute that 'compliance mechanism' has no commonly understood meaning and is not

generally viewed by one skilled in the art to connote a particular structure.").

3. The claim specifies the functions performed by the processing system. In the

absence of any "means for" language, these functions, together with the disclosures of

the specification, are sufficient to avoid application of 35 U.S.C. § 112, ¶ 6. *Williamson*,

792 F.3d at 1349 (citing *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000))

("When a claim term lacks the word "means," the presumption can be overcome . . . if

the challenger demonstrates that the claim term fails to 'recite sufficiently definite

structure' or else recites 'function without reciting sufficient structure for performing that

function.'"). Moreover, the description provided by the claim and specification is also

sufficient to "inform those skilled in the art about the scope of the invention with

reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, ___ U.S. ___, 134 S.

Ct. 2120, 2129 (2014).

4. **"Signaling processor:"**[3] "A call signaling device that receives and/or processes signaling associated with a call." Not subject to 35 U.S.C. § 112, ¶ 6. Not indefinite under 35 U.S.C. § 112, ¶ 2. Claim 11 of the '340 patent recites the functions of the signaling processor, namely "receiving and processing Signaling System Seven (SS7) signaling for a call" and then "generating and transferring" messaging. The '340 patent specification states that the system "comprises a signaling processor adapted to receive the call signaling from the first communication device and to process the call signaling to select a first connection to the service platform." ('340 patent, 1:38-41) Claim 1 of the '992 patent requires that the signaling processor "receive signaling," "process the signaling to select an identifier for routing the call," and "transfer a control message indicating the identifier." The '992 patent specification explains that a "signaling processor is included to receive the call signaling from the first communication device, to process the call signaling to select a connection to the second communication device, and to transport a first processor control message designating the selected connection." ('992 patent, 1:65-2:3) The specifications explain that SS7 is "standardized signaling" and describe transporting call signaling and messages. ('340 patent, 4:30-31, 4:63-65; 6:55-63; 10:64-11:6; '992 patent, 5:19-20, 5:53-59, 7:60-64) "The signaling processor is referred to as a call/connection manager (CCM), and it receives and processes telecommunications call signaling and control messages to select connections that establish communication paths for calls. In the preferred embodiment, the CCM processes SS7 signaling to select connections for a call." ('340 patent, 21:28-33; '992 patent, 17:55-65) The specifications also explain that the CCM

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[3] Found in claim 11 of the '340 patent and claim 1 of the '992 patent.

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"controls an ATM interworking multiplexer (mux)" and "may control other communications devices and connections in other embodiments." The CCM "comprises a signaling platform 1104, a control platform 1106, and an application platform 1108." ('340 patent, 21:49-65; '992 patent, 18:9-17)

5. **Extrinsic evidence.** Sprint points to the use and description of "signaling processor" in U.S. Patent No. 5,422,882 and U.S. Patent No. 6,002,689. (D.I. 388, ex. 37 at 25:7-14, 57:15-18; ex. 38 at abstract) Cox points to the testimony of an engineer (from switch manufacturer Genband, the successor to Nortel) stating that "the generic term signaling processor . . . [brings] to . . . mind . . . an analog signaling processor." In response to whether a digital signaling processor is a signaling processor, he stated that a "signaling processor" is "a very generic term. Anything that takes signals and processes those signals, you could call a signal processor." (D.I. 388, ex. 49 at 212:10-213:25, 224:7-20)

6. The claims specify the functions performed by the signaling processor. In the absence of any "means for" language, these functions, together with the disclosures of the specification are sufficient to avoid application of 35 U.S.C. § 112, ¶ 6. *Williamson*, 792 F.3d at 1349. Moreover, the description provided by the claims and specifications are sufficient to "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus*, 134 S. Ct. at 2129.

7. **"Call processor:"**[4] "A call processing device that processes signaling information to set up or route the call." Not subject to 35 U.S.C. § 112, ¶ 6. Not indefinite under 35 U.S.C. § 112, ¶ 2. Claim 11 recites in part: "[I]n a call processor

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[4] Found in claim 11 of the '918 patent.

including the call processor data tables, processing signaling information for a call based on the call routing data in the call processor data tables to transfer a control message for the call indicating a first connection and a second connection." The specification explains that the "[c]all processor 308 receives and processes telecommunications call signaling, control messages, and customer data to select connections that establish communication paths for calls. In the preferred embodiment, the call processor processes SS7 signaling to select connections for a call." ('918 patent, 8:1-5) The specification describes the "call processor" as including "a signaling platform that can receive and process call signaling" and having "data tables which have call connection data and which are used to process the call signaling." ('918 patent, 4:17-20) The court concludes that the recitations of functions performed by the "call processor," along with the description of its components and interactions, are sufficient to avoid application of 35 U.S.C. § 112, ¶ 6 and to "inform those skilled in the art about the scope of the invention with reasonable certainty." *Williamson*, 792 F.3d at 1349; *Nautilus*, 134 S. Ct. at 2129.

8. **"Control system:"**[5] "A network management and administration system configured to store call routing data for transfer to a call processor." Not subject to 35 U.S.C. § 112, ¶ 6. Not indefinite under 35 U.S.C. § 112, ¶ 2. Claim 11 recites in part: "[I]n a control system including control system data tables, receiving and processing call routing data to fill the control system data tables with the call routing data, and transferring the call routing data from the control system data tables to call processor data tables." The '918 patent specification explains that the control system "is a

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[5] Found in claim 11 of the '918 patent.

management and administration system" and "includes a user interface and an external

systems 40 interface into [the] call processor." ('918 patent, 4:38-40) The control

system further "serves as a collection point for call-associated data" and "accepts data"

from the "operations systems" and "updates the data in the tables in call processor."

('918 patent, 4:40-46) The court concludes that the claim language and supporting

description in the specification suffice to avoid application of 35 U.S.C. § 112, ¶ 6 and to

"inform those skilled in the art about the scope of the invention with reasonable

certainty." *Williamson*, 792 F.3d at 1349; *Nautilus*, 134 S. Ct. at 2129.

9. **"Interworking unit:"**[6] "ATM interworking multiplexer." The '084 patent

specification describes a system that "comprises an ATM interworking multiplexer and a

signaling processor linked to the ATM interworking multiplexer." ('084 patent, 2:11-14,

29, 46) The '224 and '340 patent specifications state that the "present invention

comprises a system for providing services for a call from a first communication device in

an asynchronous transfer mode format." ('224 patent, 1:26-28; '340 patent, 1:31-33)

The '918 patent specification states that "[t]he present invention relates to the field of

telecommunications call switching and transport in a system that provides

asynchronous transfer mode connections." ('918 patent, 1:19-21) The "present

invention further comprises a method for connecting a call through an asynchronous

transfer mode system . . . ." ('918 patent, 2:11-13) The '992 patent specification

similarly states that "[t]he present invention is directed to a system for transporting a call

through an asynchronous transfer mode system." ('992 patent, 1:58-60) Each of the

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[6] Found in claim 1 of the '084 patent, claim 1 of the '224 patent, claim 11 of the '918
patent, claim 1 of the '992 patent.

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specifications repeatedly and consistently references and provides examples of ATM technology. ('084 patent, 1:20-27, 1:45-2:3, 2:5-67, 22:65-23:13; '224 patent, 1:25-28, 2:1-3, 2:39-41, 2:56-58, 3:7-9, 6:25-27; '918 patent at 1:17-21, 2:11-15, 4:52-67, 5:64-6:6, 7:62-67, 15:36-16:21; '992 patent, 1:58-60, 2:4-12, 2:27-30, 2:48-50, 3:5-7, 3:27-29, 3:41-42, 3:51-52, 3:65-67) The court concludes that this limitation should be limited to ATM technology. *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (explaining that "we have held that disclaimer applies when the patentee makes statements such as 'the present invention requires . . .' or 'the present invention is . . .' or 'all embodiments of the present invention are . . .'"); *see also SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1203 (Fed. Cir. 2013) (finding that patentee "disclaimed a potential embodiment from the ordinary scope of a claim term through clear, repeated, and consistent statements in the specification . . . .").

10. **"First communication format / second communication format"[7] and "first format / second format:"[8]** "Two formats, one of which is ATM." **"[Second communication format is a] connectionless communication format:"[9]** "Wherein the second communication format is a connectionless communication format, and the first communication format is ATM." Claim 1 of the '224 patent recites converting the format "in the interworking unit." Claim 12 of the '224 patent depends from claim 1. Claim 11 of the '918 patent also recites converting the format "in the interworking unit." As each of the "format" limitations relates to a function performed in the "interworking

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[7] Found in claim 1 of the '224 patent.
[8] Found in claim 11 of the '918 patent.
[9] Found in claim 12 of the '224 patent.

unit" that the court has limited to ATM technology, the court adopts Cox's claim construction of these limitations reflecting such technology.

11. **"Converting the communications between a time division multiplex format and another format:"**[10] "Converting voice between a time division multiplexed format and ATM." The '340 patent specification explains that the "interworking unit interworks the user communications from the time division multiplex format to asynchronous transfer mode formatted cells that identify the selected first connection to the service platform." ('340 patent, 2:1-5) The court adopts Cox's claim construction reflecting the "ATM" technology.

12. **"First connection / second connection"**[11] **and "connection:"**[12] "A first and second connection at least one of which is an ATM connection, wherein connection is transmission media that may be used to carry user communications between elements of a communication system and/or other devices." The '918 patent specification defines "connection" as "transmission media that may be used to carry user communications between elements of architecture system 102 and to other devices. For example, a connection could carry a user's voice, computer data, or other communication device data." ('918 patent, 4:6-12) As claim 11 of the '918 patent requires that the functions of "receiving . . . from a first connection" and "transferring . . . over the second connection" occur in the interworking unit, the court adopts Cox's construction requiring one of the connections to be an "ATM connection."

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[10] Found in claim 14 of the '340 patent.

[11] Found in claim 11 of the '918 patent.

[12] Found in claim 11 of the '918 patent.

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13. **"Asynchronous communication:"**[13] "ATM communication." This language is not used in the specifications. Claim 1 of the '084 patent and claim 1 of the '992 patent use the limitation in the context of the interworking unit, therefore, the court adopts Cox's construction reflecting the ATM technology of the claim.

14. **"Communication system:"**[14] "ATM network." This language is found only in the preamble of the claims and is not used in the specification.[15] Consistent with the "ATM" centric nature of the claims, the court adopts Cox's construction.

15. **"Routing:"**[16] "Directing through a communication system by a selected path or connection." **"Identifier(s):"**[17] Data identifying the selected path or connection." Claim 1 of the '084 patent recites in part, "transferring the asynchronous communications from the interworking unit for subsequent routing based on the identifiers." Claim 1 of the '992 patent recites in part, "in the signaling processor, processing the signaling to select an identifier for routing the call." Claim 11 of the '340 patent recites in part, "in a signaling processor, receiving and processing . . . signaling for a call, and in response, generating and transferring control messaging indicating identifiers that are used for routing."

16. The '084 patent specification describes the method as comprising "generating new signaling to identify the particular connection and the selected virtual

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[13] Found in claim 1 of the '084 patent and claim 1 of the '992 patent.
[14] Found in claim 1 of the '224, claim 11 of the '340 patent, claim 11 of the '918 patent, and claim 1 of the '992 patent.
[15] There are examples of "European communication systems." ('340 patent, 4:52; '224 patent, 4:44; '992 patent, 5:42)
[16] Found in claim 1 of the '084 patent, claim 11 of the '340 patent, and claim 1 of the '992 patent.
[17] Found in claim 1 of the '084 patent, claim 11 of the '340 patent, claim 1 of the '992 patent.

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connection." ('084 patent, 2:16-18) The specification explains that a connection "could

be any virtual connection . . . and [a]s virtual connections are logical paths, many

physical paths can be used based on the pre-provisioning of [the] ATM cross-connect

system." ('084 patent, 4:8-16) The specification further explains:

> It can be seen that a communications path through connections 280-283
> could be established to carry user information. Although the
> communications path has been described from connection 280 to
> connection 283, the invention contemplates components that are also
> operational to perform reciprocal processing in the reverse direction. If the
> communications path is bidirectional, user information in ATM cells
> arriving on connection 283 would be processed for output on connection
> 280 in the appropriate format. Those skilled in the art will appreciate that
> separate connections could also be set up in each direction, or that only a
> connection in one direction may be required.

('084 patent, 6:6-17) The specification only use of "identifier" describes that the ATM

adaption layer ("AAL") "obtains the virtual path identifier (VPI) and virtual channel

identifier (VCI) for each call from assignment 240." The AAL "also obtains the identity of

the DSO for each call . . . [and] then converts user information between the identified

DSO and the identified ATM virtual connection." ('084 patent, 5:47, 6:60-65)

17. The '340 and '992 patent specifications describe these limitations in a similar

fashion. For example, the '340 patent specification states that "[t]he converted user

communications are transported in real time from the interworking unit over the selected

connection to the service platform." ('340 patent, 3:22-25; see also 5:31-35, 19:13-19,

20:51-56 (referencing the virtual path identifier and virtual channel identifier) The '992

patent specification states that the "system comprises a first communication device

adapted to transport the call over a first connection [and] a second communication

device adapted to receive the user communications from the first communication device

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over a second connection." ('992 patent, 3:7-11; *see also* 6:20-24, 15:47-53

(referencing the virtual path identifier and virtual channel identifier)

18. **"In the processing system;"**[18] **"in the signaling processor;"**[19] **"in the**

call processor;"[20] **and "in the control system."**[21] Consistent with Sprint's proposal,

the court does not construe these limitations.[22] Specifically, the court declines to narrow

the limitations as proposed by Cox, e.g., "the function is performed entirely within the

processing system." Such a proposal invites confusion as to the meaning of "performed

entirely." For example, the '224 patent specification explains that the signaling

processor "sends a processor control message to the selected host computer 342

designating the application that is to process the user communications" and "based on

the processed call signaling . . . selects a connection from the interworking mux 340 to

the media processor 344 . . . to process the user communications." ('224 patent, 13:20-

26) Such explanation is at odds with Cox's proposed construction.

19. **"Processing . . . to select:"**[23] "Processing ... to participate in the

selecting." **"Processing . . . to transfer:"**[24] "Processing ... to participate in the

transferring." For the reasons discussed above regarding the limitations "in the

signaling processor" and "in the call processor," the court declines to require the

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[18] Found in claim 1 of the '224 patent.

[19] Found in claim 11 of the '340 patent and claim 1 of the '992 patent.

[20] Found in claim 11 of the '918 patent.

[21] Found in claim 11 of the '918 patent.

[22] The court does not usually apply a plain and ordinary meaning to disputed claim limitations. However, in the case at bar, the parties' disagreements are not disputes as to the meaning of the claim language, rather an apparent attempt by Cox to add narrowing language.

[23] Found in claim 1 of the '992 patent.

[24] Found in claim 11 of the '918 patent.

functions to be performed "entirely within" the signaling processor or call processor as proposed by Cox.

20. **"Selecting a service and a service node:"**[25] Consistent with Sprint's proposal, the court does not construe this limitation. Claim 1 of the '224 patent recites in part, "selecting a service and a service node to provide the service based on the information." The '224 patent specification describes that "the service database 338 has service subscription data and processing options which denote the services to which a particular call or communication device has access." ('224 patent, 11:26-37) In light of the claim language and specification, the court declines to limit "selecting" to "choosing among several available options."[26]

21. **"Generating [a message] / [messaging]:"**[27] "Assembling information to create [a message] / [messaging]." Claim 1 of the '224 patent recites in part: "[I]n the processing system, generating and transmitting a first message from the processing system" and "generating and transmitting a second message from the processing system to the service node wherein the second message indicates the selected service and a user." Sprint's construction reflects the claim language requiring that the message include certain information. Cox's proposed construction adds the concept of "choosing" information and is not supported by the claim language.

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[25] Found in claim 1 of the '224 patent.

[26] Cox's proposal is "choosing one service from among several available services, and also chooses one service node from among several available services nodes that are capable of providing that service." (D.I. 358 at 24)

[27] Found in claim 1 of the '224 patent and claim 11 of the '340 patent.

22. **"Transmitting ... [a first message] / [a second message]"[28] and**

"transferring ... [a message] / [messaging]:"[29] "Sending ... [the claimed] message

across a broadband network." **"Receiving messages:"[30]** "Accepting messages from a

broadband network." **"Message(s)"[31] and "control [message] / [messaging]:"[32]**

"Information formatted for transmission on a broadband network." The court adopts

Cox's proposed construction, which is consistent with the claims, specifications, and the

construction of "interworking unit" provided above as limited to ATM technology. ('224

patent, 4:64-67 ("ATM is one technology that is being used in conjunction with SONET

and SDH to provide broadband call switching and call transport for telecommunication

services."))

23. **"Service."[33]** Consistent with Sprint's proposal, the court does not construe

this limitation. The '224 patent specification states that "[t]hese enhanced services often

provide interactive calling features that require a caller to interact with

telecommunication network equipment in order to achieve an enhanced service." ('224

patent, 6:5-8; '340 patent, 6:13-16) Cox's construction, "a feature provided to the calling

or called party," would confuse "service" with "feature" in light of the specifications'

disclosures.

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[28] Found in claim 1 of the '224 patent.
[29] Found in claim 11 of the '340 patent, claim 11 of the '918 patent, and claim 1 of the '992 patent.
[30] Found in claim 1 of the '084 patent.
[31] Found in claim 1 of the '084 patent and claim 1 of the '224 patent.
[32] Found in claim 11 of the '340 patent, claim 11 of the '918 patent; and claim 1 of the '992 patent.
[33] Found in claim 1 of the '224 patent and claim 11 of the '340 patent.

24. **"Service node"**[34] **and "service platform system."**[35] Consistent with

Sprint's proposal, the court does not construe these limitations. Cox's proposal seeks

to constrain these limitations to specific equipment. Such a proposal is not supported

by the claim language or the specifications.

25. **"Receiving and processing call routing data to fill . . . data tables with**

the call routing data"[36] **and "control system data tables" / "call processor data**

tables."[37] Consistent with Sprint's proposal, the court does not construe these

limitations. Cox's proposal seeks to limit the location of the data tables. This is

duplicative of the claim language which recites in pertinent part, "in a control system

including control system data tables" and "in a call processor including the call

processor data tables." ('918 patent, claim 11) The '918 patent specification also

specifies the location of the tables as needed, for example, "CPCS 108 accepts data,

such as the translations, from operations systems 116 and updates the data in the

tables in call processor 104." ('918 patent, 4:44-46)

26. **"Transferring the call routing data from the control system data tables**

to call processor routing tables"[38] **and "formatting the call routing data for the**

call processor data tables."[39] Consistent with Sprint's proposal, the court does not

construe these limitations. The specification describes using a "human-machine

interface" "to manage data tables or to review data tables." ('918 patent, 7:57-60) In

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[34] Found in claim 1 of the '224 patent.
[35] Found in claim 11 of the '340 patent.
[36] Found in claim 11 of the '918 patent.
[37] Found in claim 11 of the '918 patent.
[38] Found in claim 11 of the '918 patent.
[39] Found in claim 12 of the '918 patent.

contrast, Cox's proposal more narrowly requires that this limitation be performed "automatically."

27. **"User communications."**[40] Consistent with Sprint's proposal, the court does not construe these limitations. The parties agree that these are voice communications or data communications. A user communication may include a call trigger ('992 patent, 2:12-13), which the parties have agreed is "an event or signal that causes some call processing, call translation, or call routing to occur when trigger criteria is satisfied." The court does not find support for Cox's additional limitation that user communications be "distinct from signaling."

28. **"Compression instruction."**[41] Consistent with Sprint's proposal, the court does not construe this limitation. The '084 patent specification states that "[c]ompression algorithms can be applied." ('084 patent, 8:39) Cox's construction "instructions regarding the amount of compressions to apply" is confusing and not supported by either the claim language[42] or the specification.[43]

29. **"Compressing:"**[44] "Reducing the bandwidth or number of bits needed to encode information or encode a signal." Sprint's proposed construction, "applying the

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[40] Found in claim 1 of the '084 patent, claim 1 of the '224 patent, claim 11 of the '918 patent, and claim 1 of the '992 patent.
[41] Found in claim 4 of the '084 patent.
[42] Claim 4 recites: "The method of claim 1 further comprising receiving compression instructions into the interworking unit on a call-by-call basis and compressing the user communications in response to the compression instructions."
[43] **Extrinsic evidence.** "Compression algorithm" is defined as "[t]he arithmetic formulae which convert a signal into smaller bandwidth or fewer bits." (D.I. 388, ex. 23, Newton, Harry, *Newton's Telecom Dictionary* (11th ed. 1996)) Such evidence does not support Cox's construction.
[44] Found in claim 4 of the '084 patent.

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compression algorithm to the user communications," is not helpful to a jury. The court adopts Cox's proposal.[45]

30. **"DSO connection:"**[46] "A channel over which DS0 Communication Signals (a term of art meaning Digital Signal Level 0) are transmitted or received." Claim 7 recites in part "receiving the user communications from DSO connections indicated in the messages." The parties agree that DSO is a term of art meaning "Digital Signal Level 0." The court concludes that Sprint's construction would be helpful to a jury.

31. The court has provided a construction in quotes for the claim limitations at issue. The parties are expected to present the claim construction consistently with any explanation or clarification herein provided by the court, even if such language is not included within the quotes.

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United States District Judge

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[45] **Extrinsic evidence.** "Compression" is defined as "[r]educing the representation of the information, but not the information itself. Reducing the bandwidth or number of bits needed to encode information or encode a signal . . . ." (D.I. 388, ex. 23, *Newton's Telecom Dictionary*)
[46] Found in claim 7 of the '084 patent.