IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS

SPRINT COMMUNICATIONS COMPANY L.P.,

Plaintiff,

v. **Case No. 05-2433-JWL**

VONAGE HOLDINGS CORP. and VONAGE AMERICA, INC.,

Defendants.

MEMORANDUM AND ORDER

In this lawsuit plaintiff Sprint Communications Company L.P. alleges that the voice over internet protocol (VoIP) telephony system of defendants Vonage Holdings Corp. and Vonage America, Inc. (Vonage) infringes certain claims of U.S. Patent Numbers 6,304,572, 6,633,561, 6,452,932, 6,473,429, 6,298,064 and 6,665,294 (the '572, '561, '932, '429, '064, and '294 patents) owned by Sprint. This matter is currently before the court on the parties' trial briefs relating to claim construction and limitations on the doctrine of equivalents. The court construes the disputed claim terms to have the meaning and scope set forth below. As to Vonage's arguments concerning limitations on the doctrine of equivalents on the grounds of prosecution history estoppel and the disclosure-dedication rule, the court finds Vonage's arguments to be without merit.

CLAIM CONSTRUCTION

Claim construction is governed by the methodology set forth by the Federal Circuit in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). It is a bedrock principle of patent law that the claims of the patent define the patentee's invention. *Id.* at 1312. Thus, claim construction begins with the words of the claim itself. *Id.* The words of a claim should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art in question at the time of the invention. *Id.* at 1312-13. "[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms." *Id.* at 1314. Both "the context in which a term is used in the asserted claim" and the "[o]ther claims of the patent in question" are useful for understanding the ordinary meaning. *Id.*

The claims do not stand alone, but are part of "a fully integrated written instrument." *Id.* at 1315. Therefore, they "must be read in view of the specification, of which they are a part." *Id.* (quotation omitted). In fact, the specification is "the single best guide to the meaning of a disputed term" and is often dispositive. *Id.* The specification may reveal a special definition given to a claim term, or may reveal the inventor's intentional disclaimer or disavowal of claim scope. *Id.* at 1316. In both instances, the specification serves to express the correct claim scope as dictated by the inventor. *Id.* The fact that the specification includes limited and specific embodiments is insufficient to define a term implicitly, and it is improper to confine the scope of the claims to the embodiments of the specification. *Id.* at 1323. "The construction that stays true to the claim language and most naturally aligns

with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316 (quotation omitted).

The court should also consult the patent's prosecution history, if in evidence. *Id.* at 1317. Like the specification, the prosecution history "provides evidence of how the PTO and the inventor understood the patent." *Id.* "Yet because the prosecution represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.*

Finally, the court may consult extrinsic evidence such as expert and inventor testimony, dictionaries, and learned treatises. *Id.* These have all been recognized as tools that can assist the court in determining the meaning of particular terminology. *Id.* at 1318. Extrinsic evidence may be helpful to the court in understanding the technology or educating itself about the invention. *Id.* In particular, because technical dictionaries collect accepted meanings for terms in various scientific and technical fields, they can be useful in claim construction by providing the court with a better understanding of the underlying technology and the way in which one skilled in the art might use the claim terms. *Id.* at 1318. "However, conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court." *Id.* Extrinsic evidence is less reliable than intrinsic evidence in determining the construction of claim terms, and therefore the court should discount any expert evidence that is at odds with the intrinsic evidence. *Id.*

A. "Route" and "Routing"

Claim 1 of the '561 patent recites the claim term "route" and claim 19 of the '294 patent recites the claim term "routing." Sprint contends that these claim terms should be construed to mean *direct/directing through a communication system*. Vonage contends that they should be construed to mean *deliver/delivering to the destination through a communication system*.

Sprint points out that the specifications disclose routing devices, such as signaling transfer points and switches, that process signaling messages by directing messages through the communication system. Sprint contends that the specifications disclose that these devices do not deliver the routed messages to the end-user or destination, but rather serve to direct such messages from element to element within the network based on an identifier contained in the message. For example, "the route function of the MTP **3** would forward the message to CCM **250**," '294 Patent at 6:34-35; the signal transfer point (STP) "reads portions of the signaling information and either discards or routes the information to a network element," '561 Patent at 2:15-25; and the communication control processor (CCP) "will route calls over the broadband network to another narrowband switch," *id.* at 21:10-11.

Vonage relies on other portions of the written specifications which use the term "route" in the context of delivering the signaling message to its final destination: "CCM **250** would be identified by its own signaling point code. STP **260** would route signaling messages addressed to this point code to CCM **250**." '294 Patent at 6:23-26; *see also id.* at 9:55-56 ("STP **520** would be configured to route the IAM to CCIM **534**."). The '294 patent

specification also uses "route" in terms of delivering voice to a destination, stating that "[t]he LAM would indicate that a call was being routed to user **516** and would identify the selected virtual connection being used to reach mux **530**." *Id.* at 10:5-7. Additionally, the '561 patent specification states that STP "routes the signal to CCP **350**." '561 Patent at 11:38-39. Thus, Vonage contends that the specifications clearly use "routing" to mean delivering to a destination.

Upon consideration of the parties' arguments, the court believes that both parties are partly correct as to the proper construction of the disputed claim terms "route" and "routing." The intrinsic record concerning use of these claim terms comports with the widely accepted meaning of these commonly understood words. *See Phillips*, 415 F.3d at 1314 ("In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words."). On the one hand, "route" means to "direct" or "send." Webster's Third New International Dictionary 1981 (unabridged ed. 1993) (listing "direct" and "send" as synonyms for "route"). But, to "route" something does not mean to direct or send it aimlessly. Rather, it means to send it by a selected route, or in a specified direction, or by selecting a course to be followed for final delivery, or by dispatching it to its appropriate destination. *Id.* (listing various definitions for the term "route"). In this sense, the term "route" is consistent with the specification language relied on by Vonage, in which various items are routed for delivery to their destinations. At the same time, however, neither the

plain meaning of the word nor the specification indicates that "routing" requires that the item actually be delivered to its final destination.

Accordingly, the court construes the claim terms "route" and "routing" consistently with their commonly understood meaning, which is also consistent with the intrinsic record, to mean *direct/directing through a communication system by a selected route or in a specified direction*.

B. "Generate a Message" or "Generating a Message"

Claim 38 of the '572 patent, claim 1 of the '561 patent, claim 18 of the '932 patent, claim 1 of the '429 patent, and claim 1 of the '064 patent each recite the claim phrase "generate a message" or "generating a message." Sprint contends that these claim terms should be construed to mean *assemble/assembling information into a message for the first time in connection with setting up a call*. Vonage contends that they should be construed to mean *create/creating for the first time*.

Sprint correctly points out that the language of the various claims demonstrates that the messages are generated by assembling information because each of the claims requires the generation of a message that includes some particular content. For example, claim 38 of the '572 patent claims a processor to process signaling to select the second connection, and to "generate" first and second control messages that indicate that second connection. Claim 1 of the '561 patent claims a method for processing a signaling message to select a network code, and "generating" a control message indicating that code. Claim 18 of the '932 patent claims a communication system wherein the processing system is configured to receive and

process the first message to select a narrowband switch, and to "generate" and transmit a second message based on the selected narrowband switch. Claim 1 of the '429 patent claims a method for processing information to select an identifier, and "generating" a message containing the identifier. And, claim 1 of the '064 patent claims a method for processing set-up signaling to select a DS0 connection, and "generating" a message identifying the DS0 connection.

Vonage relies on language contained in the specifications which states that the signaling processor "generates new signaling." *See* '429 Patent at 2:14-17; '572 Patent at 4:18-20. This language introduces the concept that the generated message, or signaling, must be "new." This is not inconsistent with the generally accepted meaning of the term "generate." *See* Webster's, *supra*, at 945 (defining "generate" to include, for example, to bring into existence and/or to originate). Importantly, however, this language from the specification does not indicate that the content of the message must be new, but rather that the signaling itself must be new.

Ultimately, the court believes that the overall thrust of Sprint's proposed claim construction is essentially correct. Sprint has attempted to include the concept that the message itself must be new by incorporating the language "for the first time in connection with setting up the call." But, the "for the first time" language and its proposed placement within the properly construed claim term is confusing. Additionally, the language proposed by Vonage "create/creating for the first time" is redundant and confusing as to what, precisely, must be created for the first time. In an attempt to give more clarity to the term

"generate," the claim term "message" must be modified to clarify that the message is what is being newly generated based on assembled information. Accordingly, the court construes the claim terms "generate a message" and "generating a message" to mean *assemble/assembling information to create a message*.

C. "In-Band Telecommunications Signaling" and "Out-of-Band Telecommunications Signaling"

Claim 38 of the '572 patent recites the term "in-band telecommunications signaling." Sprint contends that this is a term of art that should be construed to mean *signaling that is sent on the same channel as that used for voice or data*, whereas Vonage contends that it should be construed to mean *signaling transmitted on the actual communications path*. This claim also recites the term "out-of-band telecommunications signaling." Again, Sprint contends that this is a term of art which should be construed to mean *signaling that is sent on a distinct channel from that used for voice or data*, whereas Vonage contends that it should be construed to mean *signaling message that is not transmitted on the actual communications path*. The crux of the parties' dispute is whether characterization of signaling as in-band or out-of-band is determined by whether that signaling is transmitted on the same or separate channels (Sprint) or by whether it is transmitted on the same or separate communication paths (Vonage).

Vonage relies on language included in the specification which addresses the nature of in-band and out-of-band signaling, as follows:

> As is known in the art, in-band signaling is typically used in many user to network connections, such as the local loop. This is because only one

> connection or link is typically provided to the user premises and thus, the signaling must be placed on the actual communications path. The initial network switch typically removes the signaling from the communications path and transfers it to an out-of-band signaling system. The current invention is fully operational in this context. Although the switch may receive the signaling initially, it will only route the signaling to the CCP for processing. Even if in-band signaling is used within the network, the switches could remove signaling from the communications path and route it to the CCP for processing in accord with the present invention.

'572 Patent at 7:50-63. Sprint, on the other hand, relies on Vonage's experts' understanding of the terms "in-band" and "out-of-band." Frank Koperda, Vonage's invalidity expert, stated in his expert report that "'in-band' signaling is the exchange of signaling information . . . within the same channel that the telephone call itself is using" and that "'[o]ut-of-band' signaling is telecommunication signaling that is done on a channel that is dedicated for the purpose and separate from the channels used for the telephone call." Also, Joel M. Halpern, Vonage's noninfringement expert, testified in his deposition that out-of-band signaling "has to be in a separate band, a separate recognizable channel."

The evidence from Vonage's experts clearly views the terms "in-band" and "out-of-band" as being distinguished with respect to a channel, which leads the court to believe that these might be terms of art, as Sprint contends. In an attempt to understand the distinction between a "channel" and a "communications path," the court has consulted a technical dictionary to determine the meanings of the relevant terms as they would have been understood by a person of ordinary skill in the art at the time of the invention. "In-band signaling" means "[s]ignaling made up of tones which pass within the voice frequency band and are carried along the same circuit as the talk path that is being established by the

signals." Harry Newton, Newton's Telecom Dictionary 537 (7th ed. 1994). "Path" means "[t]he route a telecommunications signal follows." *Id.* at 773. "Out-of-band signaling" means "[s]ignaling that is separated from the channel carrying the information — the voice, data, video, etc." *Id.* at 756. "Channel" means "a voice-grade transmission facility with defined frequency response, gain, and bandwidth. Also a path of communication, either electrical or electromagnetic, between two or more points." *Id.* at 217.

The common and ordinary meanings of these words can be harmonized with the excerpt from the specification. In discussing "in-band signaling," the specification explains that only one connection or link is typically provided to the user premises and therefore the signaling "must be placed on the actual communications path." '572 Patent at 7:52-53. The initial network switch typically "removes the signaling from the communications path." *Id.* at 7:55-56. The specification further explains that even if in-band signaling is used within the network, the switches "could remove signaling from the communications path." *Id.* at 7:60-61. The technical definition of in-band signaling refers to the "talk path," and the term "path" means the route a telecommunications signal follows. With respect to the claim term "in-band," then, the intrinsic record establishes that its meaning is defined with respect to the communications path. There is no suggestion in the intrinsic record that it should be defined in terms of a channel. Consequently, the court must discount the expert opinions that are at odds with this intrinsic evidence. Accordingly, the court construes the claim term "in-band telecommunications signal" to mean *signaling that is sent on the same communications path as that used for voice and/or data*.

The specification does not, however, indicate that the claim term "out-of-band telecommunications signaling" must necessarily be construed as the counterpart to in-band telecommunications signaling. The specification sheds light on the meaning of the claim term "out-of-band telecommunication system," in that the network switch removes the "signaling from the communications path and transfers it to an out-of-band system." Certainly, this indicates that out-of-band means removing the signaling from the communications path. This is not inconsistent with what appears from the record to be the generally accepted meaning of the term within the telecommunications industry, which is that out-of-band signaling is signaling that is separated from the channel carrying the voice and/or data. And, defining out-of-band signaling in terms of a separate channel is also consistent with Vonage's experts' apparent understanding of this term. Thus, the court is persuaded that "out-of-band" signaling is indeed a term of art defined in terms of the channel, as suggested by Sprint. Accordingly, the court construes the claim term "out-of-band telecommunications signaling" to mean *signaling that is sent on a separate channel from that used for voice and/or data*.[1]

[1] The court recognizes the seeming incongruity in construing "in-band signaling" in terms of the communications path while construing "out-of-band signaling" in terms of a separate channel. But, this actually comports with the commonly understood meanings of those terms, as illustrated by the dictionary definitions set forth above. Moreover, the distinction is attributable to the "communications path" language included in the specification with respect to "in-band" signaling. In the absence of that language in the specification, the court would be inclined to construe both of the terms in light of the "channel" distinction.

D. "Communication System"

Claim 1 of the '561 patent and claim 18 of the '932 patent recite the claim term "communication system." Sprint contends that this claim term should be construed to mean *a plurality of network elements and connections forming a network to transfer information*. In Vonage's response to Sprint's trial brief regarding claim construction, Vonage states that it does not dispute Sprint's proposed construction of this claim term. Accordingly, the court construes this claim term to mean *a plurality of network elements and connections forming a network to transfer information*.

E. "Processing System"

Claims 1 and 5 of the '429 patent and claims 1 and 7 of the '064 patent recite the claim terms "processing system." Sprint contends that this phrase does not require further construction, whereas Vonage contends that the court should construe it to mean *any processing system platform that can receive and process signaling to select virtual connections, and then generate and transmit signaling to identify the selections*.

Vonage argues that its proposed claim construction is warranted because the patentee specifically defined the phrase "processing system" in the specification. The excerpt in the specification upon which Vonage relies states as follows: "Signaling processing system **160** is any processing platform that can receive and process signaling to select virtual connections, and then generate and transmit signaling to identify the selections." '429 Patent at 4:21-24. Vonage's argument is without merit for two reasons. First and foremost, this statement appears in a discussion concerning one version of the invention, *id.* at 3:36 ("FIG.

1 depicts a version of the present invention" wherein 160 is labeled the "signaling processing system"), and absent some clear intent to the contrary such examples from the specification are generally not read into the claims. *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1372 (Fed. Cir. 2007). No such clear intent appears here, particularly where the specification concludes that "[t]he invention should not be restricted to the above embodiments, but should be measured by the following claims." '429 Patent at 25:39-41. Second, Sprint persuasively points out that Vonage's proposed claim construction which centers around the selection of "virtual connections" is nonsensical when considered in the context of the claims in question. For example, in claim 1 of the '064 patent, the "processing system" expressly processes set-up signaling to select a "DS0 connection," which is not a "virtual connection." In claim 1 of the '429 patent, the processing system must process information to "select an identifier" rather than a "virtual connection."

Vonage also contends that Sprint relied on the fact that the "processing system" is defined as a system that receives and processes signaling in order to overcome the Skoog prior art during prosecution of "the '928 patent (a child in the '301 Family Patents)."[2] Although the prosecution history of ancestor patent applications can be relevant to construing the claim terms of subsequent patent applications, the Federal Circuit has not applied the reverse of this principle. *See, e.g., Ormco Corp. v. Align Tech., Inc.*, — F.3d —, 2007 WL 2404723, at *5 (Fed. Cir. Aug. 24, 2007) (publication forthcoming) (prosecution history of

[2] The '928 patent is a parent to the '294 patent, but not to the '429 and '064 patents which recite the "processing system" claim terms being construed.

claims of "parent" patent application were relevant in construing claims of "child" patents); *Goldenberg v. Cytogen*, 373 F.3d 1158, 1167 (Fed. Cir. 2004) (prosecution history of the parent application is treated "as part of the intrinsic evidence" of the child application when construing claim terms); *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1333 (Fed. Cir. 2003) ("prosecution disclaimer may arise from disavowals made during the prosecution of ancestor patent applications"); *Jeneric/Pentron, Inc. v. Dillon Co.*, 171 F. Supp. 2d 49, 77 (D. Conn. 2001) (noting the lack of authority to support the proposition that the prosecution history of a later patent may reach back and limit a claim using the same element in an earlier related patent). Nonetheless, the Federal Circuit recently stated that "[w]hen the application of prosecution disclaimer involves statements from prosecution of a familial patent relating to the same subject matter as the claim language at issue in the patent being construed, those statements in the familial application are relevant in construing the claims at issue." *Ormco Corp.*, 2007 WL 2404723, at *5. Taking this statement at face value, then, the court will consider the possibility that statements made during prosecution of the child '928 patent are relevant to construing the same claim terms in the ancestor '429 and '064 patent claims.

Even then, the only pertinent identical claim language is "processing system." To that end, the remarks to the '928 application state that the claimed processing system is distinguishable from Skoog "because Skoog does not teach a processing system that <u>receives and processes signaling</u>" (emphasis in original). The corresponding claim language in claims 1, 14, 21, and 34 of the '928 patent application is "to receive" or "receiving," and "to process" or "processing" "signaling." Thus, the asserted distinction over Skoog was

attributable to that particular claim language. By comparison, the only common language in claim 1 of the '429 patent is "receiving" and "processing" "information," not signaling. And, claim 1 of the '064 patent recites "receiving" and "processing" "set-up signaling." The remarks in the prosecution history of the '928 patent observe other distinctions from Skoog, but those are attributable to the claim language at issue in that application, most notably "virtual identifier" and "ATM cells," which is not included in the asserted claims of the '429 and '064 patents. Consequently, the prosecution history of the '928 patent relied on by Vonage demonstrates nothing more than that the claimed processing system must "receive" and "process" something. This disclosure, of course, adds nothing to the meaning of the asserted claims because they already disclose, by their plain terms, that the processing system must receive and process information (in the case of the '429 patent) and set-up signaling (in the case of the '064 patent). And, Vonage has not directed the court's attention to anything in the prosecution history which would warrant limiting the claim term "processing system," as proposed by Vonage, more specifically to "any platform that can receive and process signaling to select virtual connections, and then generate and transmit signaling to identify the selections." Accordingly, the court rejects Vonage's proposed claim construction and finds that the parties have not demonstrated that further construction of the claim term "processing system" is warranted.

F. <u>"Telecommunication Switches"</u>

Claim 5 of the '429 patent and claim 7 of the '064 patent recite the claim terms "telecommunication switches." Sprint contends that these claim terms should be construed

to mean *devices that set up calls and relay voice and/or data information from one connection to another*. In Vonage's response to Sprint's trial brief regarding claim construction, Vonage states that it does not dispute Sprint's proposed construction of these claim terms. Accordingly, the court construes them to mean *devices that set up calls and relay voice and/or data information from one connection to another*.

G. "Set-up Signaling"

Claim 1 of the '064 patent recites the claim term "set-up signaling." Sprint contends that this claim term should be construed to mean *information or commands used to set up calls*. In support of this argument, Sprint relies on a portion of the background of the invention which states that "[s]ignaling refers to messages that are used by telecommunications networks to set-up and tear down calls." '064 Patent at 1:25-26. Vonage contends that this claim term should be construed to mean *a narrowband signaling message*. Vonage relies on an excerpt from the summary of the invention which states that "[t]he signaling for the call could be a call set-up message, **such a[s]** Signaling System #7 (SS7) initial address message (IAM)," *id.* at 2:25-27 (emphasis added), and a portion of the detailed description which states that IAM (which is indisputably a narrowband signaling message) "initiates the call and contains call set-up information, such as the dialed number. LAMs [another abbreviation for initial address message] are transferred in the calling direction to set up the call." *Id.* at 17:43-46.

Vonage's argument is an attempt to limit the plain meaning of the claim term based on the specification. An inventor may use the specification to intentionally disclaim or disavow the broad scope of a claim. *Phillips*, 415 F.3d at 1316. This intention, however, "must be clear." *Conoco, Inc. v. Energy & Envtl. Int'l, L.C.*, 460 F.3d 1349, 1357 (Fed. Cir. 2006); *see also Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002) ("The patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion

or restriction, representing a clear disavowal of claim scope."). Here, the specification of the '064 patent does not contain a clear disavowal of claim scope. The background of the invention broadly refers to messages that are used to set-up and tear down calls. The summary refers to signaling that could be a call set-up message, and gives IAM as an example. The detailed description which sets forth a description of IAM call processing appears to be simply a continuation of IAM being an example of call set-up messaging. Consequently, the specification does not clearly disclaim or disavow the broad scope of the claim.

The excerpts from the background and summary of invention establish that "set-up signaling" means "messages used to set-up calls." Sprint also contends that the disclosed "messages" necessarily contain "information or commands." Sprint has not, however, directed the court to any evidence in the intrinsic record which requires such a claim construction and therefore the court rejects that argument. Accordingly, the court construes the claim term "set-up signaling" to mean *a message or messages used to set up calls*.

H. "Signaling Message"

Claim 38 of the '572 patent, claim 1 of the '561 patent, and claim 19 of the '294 patent recite the claim term "signaling message." Sprint contends that these claim terms should be construed to mean *information or commands used to set up or tear down a call*. In support of this argument, Sprint relies on essentially the same specification language set forth above. Vonage contends that these claim terms should be construed to mean *a message used to transfer information among points and network elements to establish communication*

paths. In support of this argument, Vonage relies on narrowing disclaimers that Sprint made during prosecution history in which Sprint amended claimed phrases in the '928 patent from receiving and processing "information" to receiving and processing "signaling." But, as set forth above the court finds that the intrinsic record does not support the claim construction "information or commands" in any event. Vonage offers no further argument in support of its proposed claim construction. Accordingly, for essentially the same reasons set forth above, the court construes the claim term "signaling message" to mean *a message used to set up or tear down a call*.

I. "A Network Code That Identifies a Network Element to Provide Egress From the Packet Communication System"

Claim 1 of the '561 patent recites the phrase "a network code that identifies a network element to provide egress from the packet communication system." Sprint contends that this phrase should be construed to mean *information that identifies a network element that provides an exit from a packet communication system (wherein the phrase "to provide egress from the packet communication system" modifies the "network element" and not the "network code")*. Vonage contends that the phrase should be construed to mean *a logical address identifying a network element that provides an exit from a packet communication system*.

The primary dispute between the parties for this claim element is the meaning of the phrase "network code." In support of Sprint's proposed claim construction, Sprint contends that "it cannot be disputed that a 'network code' is 'information' for identifying a network

element." This argument, however, is not based on any evidence in the intrinsic record that would allow the specific claim term "network code" to be construed so broadly so as to encompass any "information." Vonage, on the other hand, relies on an excerpt from the '561 patent specification which states that "[n]etwork codes are the logical addresses of network elements." '561 Patent at 12:47-53. Sprint asks the court to discount the significance of this claim language because it is contained in a portion of the specification which discusses one embodiment of the invention. While the court certainly recognizes that it would be improper to read an example from the specification into the claims, here the language from the specification contains no indication that the meaning given to "network codes" is in any way limited to any particular embodiment. It states simply, clearly, and unequivocally that network codes "are" the logical addresses of network elements. And, this is consistent with the claim language which recites "a network code that identifies a network element." Consequently, the court will construe the claim language "network code" to have the meaning set forth in the specification, as argued by Vonage.

The parties agree that the fact that the network element "provide[s] egress" from the packet communication system means that it "provides an exit" from the system. And, Sprint correctly points out that the court previously noted in its summary judgment ruling that the claim phrase "to provide egress from the packet communication system" modifies the phrase "network element" and not the "network code." In order to clarify this, then, the court construes the phrase "a network code that identifies a network element to provide egress

from the packet communication system" to mean *a logical address identifying a network element which network element provides an exit from a packet communication system*.

J. "A Signaling Message . . . From a Narrowband Communication System"

Claim 1 of the '561 patent recites the phrase "a signaling message . . . from a narrowband communication system." Sprint contends that upon construction of the claimed term "signaling message" (discussed above), this broader phrase does not require further construction and should be afforded its plain and ordinary meaning. Vonage contends that this phrase should be construed to mean *a signaling message (as defined above) received in the format sent from a narrowband communication system*. Thus, Vonage is essentially arguing that the claimed signaling message "from" a narrowband communication system should be construed to mean a signaling message "received in the format sent from" a narrowband communication system. In support of this argument, Vonage relies on the prosecution history.

The court looks to the prosecution history, when pointed out and placed in evidence, to determine whether it contains statements that narrow the scope of the claims. *Phillips*, 415 F.3d at 1317. Under the doctrine of prosecution disclaimer, a patentee may limit the meaning of a claim term by making a clear and unmistakable disavowal of scope during prosecution. *Purdue Pharma L.P. v. Endo Pharm. Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006); *see also Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (prosecution disclaimer applies where the patentee unequivocally disavowed a certain meaning to obtain his or her patent). This may occur, for example, if the patentee explicitly characterized an aspect of his

or her invention in a specific manner to overcome prior art. *Purdue Pharma*, 438 F.3d at 1136. Although the prosecution history is relevant to claim construction, "it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Phillips*, 415 F.3d at 1317. "It is inappropriate to limit a claim term based on prosecution history that is itself ambiguous." *Mars, Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1377 (Fed. Cir. 2004) (quotation omitted).

Thus, the court must determine whether Sprint disclaimed signaling other than that received in a format from a narrowband communication. On February 1, 2001, Sprint submitted a response to the U.S. Patent and Trademark Office (PTO) to an earlier rejection of (among others) claim 1 of the '561 patent. At that time, the claim recited "receiving signaling formatted for a narrowband system into a processing system." That claim language was not amended in connection with the February 1, 2001, response. The remarks noted as follows:

> Claims 1 and 21 require "receiving signaling *formatted for a narrowband system* that is external to any communication switches" and selecting a code or a logical address in the processing system based on the narrowband signaling. La Porta '852 teaches a call processing architecture that operates using a <u>new</u> broadband signaling protocol. La Porta '852 does not teach the processing of signaling from narrowband systems.

(Emphasis in original.) Thus, La Porta '852 teaches the processing of broadband signaling, not narrowband signaling. In this prosecution argument, then, Sprint was making the distinction that claim 1 of the '561 patent did not disclose the processing of broadband signaling because it requires receiving signaling "formatted for" a narrowband system. The

remark concluded by reasoning that La Porta '852 does not teach the processing of signaling "from" narrowband systems. In a later response dated August 7, 2002, Sprint explained that Claim 1 requires receiving signaling "from" a narrowband communication system into a processing system. Thus, by that time, the claim had apparently already been amended to the later-issued claim language "from" a narrowband communication system.[3]

The overall thrust of Vonage's argument seems to be that Sprint essentially treated the terms "formatted for" and "from" interchangeably, and therefore the court should construe the claim term "from" to mean "received in a format sent from." The court does not, however, find adequate evidence to invoke such a prosecution disclaimer. The prosecution history is ambiguous concerning the meaning of the distinction between the original claim language signaling "formatted for" a narrowband system and the apparently subsequently amended claim language involving signaling "from" a narrowband communication system. Contrary to Vonage's argument, the prosecution does not contain anything which could be construed as a clear disavowal of claim scope or an explicit characterization of an aspect of the invention to overcome prior art that "from a narrowband system" means "received in a format sent from a narrowband system." To the contrary, Sprint was apparently permitted to amend the claim language "formatted for" to the broader claim language "from." This is simply one of those situations where the prosecution history

[3] Vonage has also submitted the remarks included in the prosecution history of the '282 patent, but has provided no discussion concerning the relationship between the '282 patent and the '561 patent such that the court could determine the relevance of that prosecution history to the meaning of claim 1 of the '561 patent.

lacks clarity and, at best, is ambiguous. Accordingly, the court rejects Vonage's argument with respect to this claim element and determines that no further claim construction is required.

K. "Process[ing] . . . to Select"

Claim 1 of the '561 patent, claim 1 of the '429 patent, claim 1 of the '064 patent, claim 38 of the '572 patent, and claim 18 of the '932 patent require "processing . . . to select" or "process . . . to select." Sprint contends that these phrases should be construed to mean *process/processing to participate in selecting*. Vonage contends that they should be construed to mean *process/processing and make/making a selection*.

Sprint's argument is based on this court's stated view of the claim language in the court's prior ruling on the parties' motions for summary judgment. There, the court reasoned that a rational trier of fact could find that the Vonage processing system processes signaling "to select" a network code (as required by claim 1 of the '561 patent and claim 1 of the '052 patent), "*i.e.*, that the processing system is involved in the selection of the network code." *Sprint Commc'ns Co. v. Vonage Holdings Corp.*, — F. Supp. 2d —, 2007 WL 2263955, at *25 (D. Kan. Aug. 7, 2007) (publication forthcoming). Importantly, however, at that time the parties presented the issue as a question of fact as to infringement, not as an issue of law as to claim construction. Consequently, the court's reasoning was simply that a rational trier of fact could conclude that "processing signaling to select" was satisfied by the system's involvement in processing the selection. The court certainly did not ascribe the definitive meaning to the claim terms that the processing must do nothing more than merely

"participate" in the selection. And, indeed, Sprint has not directed the court's attention to any evidence in the intrinsic record which would require defining those claim terms in such a manner. Thus, the court rejects Sprint's claim construction argument.

Vonage, on the other hand, presents its claim construction argument as one of prosecution disclaimer. The prosecution history relied on by Vonage is an excerpt relating to one of the claims in the '780 patent in which Sprint responded to rejections over D'Amato and explained as follows:

> Claim 139 recite[s] that the signaling processor **processes the telecommunications signaling to select a "connection"** for the communications path. In D'Amato, signaling director 151 does not select a connection, but selects an action for switch 130; either to: (a) proceed, (b) wait, or (c) deny. . . . None of these responses is a connection. If response (a) is given, switch 130 must possess the IAM to select the connection. **Because it selects connections**, the signaling processor of claim 139 is different than signaling director 151 of D'Amato. The signaling processor of claim 139 is advantageous in that it can avoid the need for this level of processing complexity in the switch.

(Emphasis added.) Vonage contends that the second boldfaced phrase means that the processor must actually "select" connections rather than merely perform "processing . . . to select."

The court disagrees and finds, once again, that this is too ambiguous to constitute a clear disclaimer of claim scope. The remark explains that in D'Amato the signaling director does not select a connection at all but instead selects an action for a switch, none of which is a connection. It makes the distinction that the signaling processor in the subject claim is different because it selects connections. Notably, the first boldface phrase states that the

claim recites a signaling processor that "processes . . . signaling to select" a connection. Thus, this remark in the prosecution history does not purport to make any distinction between "selecting" and "processing to select." Rather, the distinction made is that the claim recites a processor that is involved in making the selection rather than simply selecting an action for a switch. There was no argument made that the signaling director in D'Amato performs the action of "processing . . . to select" and the remark itself does not make any distinction as to whether the processor must actually make the selection or whether it may simply perform "processing to select" the connection. Consequently, the excerpt set forth above does not clearly disavow the full scope of the claim and, therefore, the court rejects Vonage's prosecution disclaimer argument with respect to this claim term. Because neither of the parties has directed the court to intrinsic evidence which would support their proposed claim constructions, then, the court finds that these claim terms do not require further construction.

L. "Generating a Control Message Indicating the Network Code"

Claim 1 of the '561 patent recites the phrase "generating a control message indicating the network code." Sprint contends that this phrase does not require construction and should be afforded its plain and ordinary meaning. Vonage contends that the phrase should be construed to be consistent with Vonage's arguments concerning the claim terms "generating" and "network code" to mean *creating for the first time a new control message specifying the logical address of the egress network element*. For the reasons explained previously, the court will construe this phrase to be consistent with its rulings above concerning the claim terms "generating" and "network code." *See* Sections B & I, *supra*. Accordingly, the court

construes this phrase to mean *assembling information to create a control message indicating the logical address of a network element*.

M. "First Message"

Claim 18 of the '932 patent recites the claim term "first message." Sprint contends that this claim term should be construed to mean *a signaling message that is distinct from the claimed second message*. Vonage contends that it should be construed to mean *a narrowband signaling message*.

Vonage argues that the specification recognizes that the first signal is a narrowband signaling message. A careful review of these excerpts, however, reveals that none of them contain the word "narrowband." Moreover, as Sprint points out, the claim language refers to "a call having a first message," '932 Patent at 23:20-21, which is not necessarily synonymous with the "first signal" referred to in the specification. As to Vonage's prosecution disclaimer argument, Vonage has not presented evidence establishing a clear and unmistakable disavowal of claim scope. Vonage cites comments from an amendment to the '605 application, purportedly relating to "claim 121." The court is unable to determine from the record presented that the emphasized language has any relationship to claim 18 of the '932 patent, let alone whether it is pertinent to the "first message" recited in that claim. Given this lack of clarity in the prosecution history submitted by Vonage, the court does not find any valid basis to import the limitation urged by Vonage. The court therefore rejects Vonage's arguments on that basis.

Turning to Sprint's argument, Sprint contends that the claimed "first message" should be construed to mean that it is distinct from the second message. In support of this argument, Sprint relies on the language of the claim itself. The claim recites a communications system for handling a call having "a first message" in which the system is comprised of (1) a processing system that is configured to process and receive "the first message" and to generate and transmit "a second message," and (2) an asynchronous communication system configured to receive "the second message." This claim language seems to reflect, as argued by Sprint, that the claim uses the terms "first" and "second" messages essentially as terms to distinguish between the respective roles of the two messages within the communications system. Because the claim construction urged by Sprint is an accurate characterization of the claim term "first message" according to the language of the claim itself, then, the court construes this claim term to mean *a signaling message that is distinct from the second message*.

N. <u>"Using the Network Code to Route the User Communication Through the Packet Communication System to the Network Element"</u>

Claim 1 of the '561 patent recites the phrase "using the network code to route the user communication through the packet communication system to the network element." Sprint contends that, in accordance with the above constructions of "network code" and "route," this phrase does not require construction and should be afforded its plain and ordinary meaning. Vonage contends that this phrase should be construed to mean *using the logical*

address identifying the network element to deliver the user communication through the packet communication system to the egress network element.

Vonage contends that this claim construction is warranted, first, given the proper constructions for "network code" and "route." For reasons described previously, the court will construe these claim terms to have the same meaning and scope as set forth above. Additionally, Vonage contends that the phrase "the network element" plainly refers to an antecedent network element, which is the element that provides egress from the packet communication set forth in the second limitation of claim 1. The court agrees. Claim 1 recites a method of operating a processing system which comprises, among other things, a second limitation of "processing the signaling message to select a network code that identifies a network element to provide egress from the packet communication system" (emphasis added) and a fifth limitation of "using the network code to route the user communication through the packet communication system to the network element" (emphasis added). Plainly, this claim language envisions that "the network element" recited in the fifth limitation is the network element initially recited in the second limitation. As such, it is indeed the egress network element. Accordingly, the court construes the phrase to mean *using the logical address identifying a network element (which network element provides an exit from the packet communication system) to direct the user communication through the packet communication system by a selected route or in a specified direction to the network element that provides an exit from the packet communication system.*

PROSECUTION HISTORY ESTOPPEL[4]

Vonage raises two separate arguments in which it contends that Sprint's claims of infringement under the doctrine of equivalents are barred as a matter of law. First, Vonage contends that the prosecution history of the asserted patent claims bars Sprint from relying on the doctrine of equivalents to capture non-ATM technology with respect to the '301 Family Patents, which includes the '429, '064, and '249 patents. Second, Vonage contends that Sprint is precluded from relying on equivalency with respect to the claim term "to select a network code" in the '561 patent because Sprint amended a similar claim term during prosecution of the '052 patent.

A. The '301 Family Patents

In this court's Memorandum and Order on the parties' motions for summary judgment, the court granted Vonage's motion in part with respect to Sprint's claims for literal infringement of the '301 Family Patents, leaving Sprint to present its case as to infringement of those patents under the doctrine of equivalents (DOE). Vonage now contends that Sprint is barred from arguing infringement under the DOE because of arguments and amendments included in the prosecution history of the '605 Family Patents.

[4] The court will deny Sprint's motion to strike Vonage's prosecution history estoppel arguments (doc. #373). Although the motion to strike appears to have some merit as it pertains to Vonage's separate prosecution history estoppel arguments (as opposed to the prosecution disclaimer arguments which are part of the claim construction process), the court finds Vonage's prosecution history estoppel arguments to be without merit in any event.

Sprint contends that the '301 Family Patents are not related to the '605 Family Patents and, therefore, the '605 Family Patents cannot create a prosecution history estoppel with respect to the '301 Family Patents. By way of background, the September 8, 1995, patent application that matured into the '301 patent (which is a parent or other ancestor to each of the '429, '064, and '294 patents) mistakenly included a reference that it was a continuation-in-part of the '605 application. This mistake was discovered and, according to Sprint, the cross-reference was deleted during prosecution of the '301 patent in response to an office action dated April 16, 1997. Despite this correction, the language "Continuation-in-part of application No. 08/238,605, May 5, 1994, abandoned" erroneously appeared on the face of the issued '301 patent. The '429, '064, and '294 patents, by virtue of their cross reference to the '301 patent, included similar cross references to the '605 application. On January 4, 2005, the U.S. Patent and Trademark Office (PTO) issued a certificate of correction deleting the reference to the '605 application in the '301 patent. Thus, the '301 patent is not a continuation-in-part of the '605 application.

In January and February of 2005, similar certificates of correction were issued deleting the reference to the '605 application with respect to the '064 and '294 patents. Sprint has not presented evidence that a similar certificate of correction was issued deleting the reference with respect to the '429 patent. Attached to Sprint's response brief was a certificate of correction relating to Sherbrooke University. The trial exhibit of the '429 patent contains a certificate of correction dated January 27, 2004, which predated the '301 patent's certificate of correction in January of 2005 and still includes the reference to the

'605 application. Despite the absence of a separate, specific certificate of correction with respect to the '429 patent, the court believes that the certificate of correction with respect to the '301 patent is sufficient to sever the tie between the '429 patent and the '605 application because the '429 patent references the '605 application only in the sense that the '301 patent application is a continuation-in-part of the '605 application. Because the '301 patent was subsequently corrected to state that it is not a continuation-in-part of the '605 application, then, by necessary implication that link was also severed with respect to the child '429 patent.

Notably, Vonage has not raised any argument seeking to invalidate these certificates of correction, *see Central Admixture Pharmacy Servs., Inc. v. Advanced Cardiac Solutions, P.C.*, 482 F.3d 1347, 1353 (Fed. Cir. 2007) (party seeking to invalidate a certificate of correction must meet the clear and convincing standard of persuasion), or directed the court's attention to any evidence that the '605 Family Patents remain related to the '301 Patent Family history notwithstanding these certificates of correction such that the prosecution history of the '605 Family Patents could be used as a valid basis for applying prosecution history estoppel. *See Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1167-68 (Fed. Cir. 2004) (finding statements in another patent or its prosecution history irrelevant to claim construction "[a]bsent a formal relationship or incorporation during prosecution" of the patent at issue); *Tex. Digital Sys. v. Telegenix, Inc.*, 308 F.3d 1193, 1211 (Fed. Cir. 2002) (explaining that an unrelated patent "sheds no light" on the claims in the patent at issue); *Abbott Labs. v. Dey L.P.*, 287 F.3d 1097, 1104-05 (Fed. Cir. 2002) (finding arguments made

during prosecution of a commonly owned but unrelated patent did not create prosecution history estoppel). In the absence of any evidence from which the court could find that the prosecution history of the '605 Patent Family is in fact a part of the prosecution history of the '301 Family Patents, then, the court certainly cannot find that Sprint is precluded from claiming infringement under the DOE by virtue of prosecution history estoppel. For that reason alone, the court finds Vonage's prosecution history estoppel argument with respect to the '301 Family Patents to be without merit.

In light of the somewhat murky record concerning the '605 reference in the '429 patent, out of an abundance of caution the court will also proceed to briefly examine the substance of Vonage's prosecution history arguments. The court finds those arguments to be without merit because Vonage has not demonstrated that Sprint surrendered claim scope with respect to any claim terms which appear in the '429, '064, or '294 patents. Instead, Vonage has discussed amendments involving the claim limitations "ATM interworking multiplexer," "virtual connections," and "a network element to provide egress from a packet communication system." None of those particular claim terms appear in the asserted claims of the '301 Family Patents. Sprint prosecuted different claim terms in applying for the '429, '064, and '294 patents, and therefore the prosecution history of parent or ancestor patent applications does not operate to estop Sprint from arguing that later applications involving different claim terms have different claim scope. *See AquaTex Indus., Inc. v. Techniche Solutions*, 479 F.3d 1320, 1326 (Fed. Cir. 2007) (amendment directed to different claim limitation did not create prosecution history estoppel); *Invitrogen Corp. v. Clontech Labs.*,

Inc., 429 F.3d 1052, 1078 (Fed. Cir. 2005) (noting prosecution history argument faltered on the principle that the prosecution of one claim term in a parent application will generally not limit different claim language in a continuation application).

B. The '561 Patent

Vonage also contends that based on the prosecution history concerning the claim language "processing the signaling to select a network code that identifies a network element to provide egress for the user communication from the packet communication system," Sprint is barred from recapturing the surrendered claim scope to cover the selection of the network code of an RTP relay. Sprint does not dispute, and the court therefore finds as uncontested, that the amendment was a narrowing one that was made for a substantial reason relating to patentability. Consequently, a rebuttable presumption arises that Sprint surrendered all subject matter between the original claim limitation and the amended claim limitation. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 344 F.3d 1359, 1366-67 (Fed. Cir. 2003) (*Festo IX*). Sprint contends that it has rebutted this presumption by presenting evidence that the alleged equivalent involved later-developed technology that would have been unforeseeable at the time of the narrowing amendment. The court agrees.

There are some cases in which a narrowing amendment cannot reasonably be viewed as surrendering a particular equivalent. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 740 (2002) (*Festo VIII*). One of these instances is when the equivalent was unforeseeable at the time of the application. *Id.* Elaborating on the standard

for determining whether the particular equivalent was foreseeable, the Federal Circuit has explained:

> This criterion presents an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment. Usually, if the alleged equivalent represents later-developed technology (e.g., transistors in relation to vacuum tubes, or Velcro® in relation to fasteners) or technology that was not known in the relevant art, then it would not have been foreseeable. In contrast, old technology, while not always foreseeable, would more likely have been foreseeable. Indeed, if the alleged equivalent were known in the prior art in the field of the invention, it certainly should have been foreseeable at the time of the amendment. By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment. Therefore, in determining whether an alleged equivalent would have been unforeseeable, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries.

Festo IX, 344 F.3d at 1369 (citation omitted).

In this case, the evidence at trial has demonstrated that the alleged equivalent (use of an RTP relay for NAT'd calls) would not have been foreseeable to one of ordinary skill in the art at the time of the amendment. To put the matter in context, where the Vonage system is operating in a NAT'd scenario using an RTP relay to maintain communications with a Vonage customer's TA, the "network code" selected is that of the RTP relay (which is not an egress network element) instead of the customer's TA (which is an egress network element). The evidence has demonstrated that the use of an RTP relay for NAT'd calls is proprietary technology developed after the narrowing amendment was made in 2001. Jeffrey Citron, Vonage's CEO, testified that this "SIP-through-NAT" technology that uses an RTP relay with NAT'd calls was developed by Vonage in 2002. A patent application for this

technology was filed on October 15, 2003. Thus, the alleged equivalent involving the use of an RTP relay is "later-developed technology." Because this alleged equivalent was unforeseeable, then, the court finds that Sprint has made the required showing to rebut the presumption of prosecution history estoppel with respect to this alleged equivalent. As such, prosecution history estoppel does not bar Sprint from claiming infringement under the DOE with respect to this claim limitation.

DISCLOSURE-DEDICATION RULE

Lastly, Vonage contends that Sprint is precluded from its claim of equivalents under the '932 patent with respect to the claimed step of "to select a narrowband switch" because of the disclosure-dedication rule. This argument is a rehash of an argument previously raised by Vonage in its motion for summary judgment that the court has already rejected. *Sprint Communications Co. L.P. v. Vonage Holdings Corp.*, — F. Supp. 2d —, 2007 WL 2263955, at *22-*23 (D. Kan. Aug. 7, 2007) (publication forthcoming). The court's prior ruling on this issue requires no further elaboration. Vonage's argument is without merit.

IT IS THEREFORE ORDERED BY THE COURT that the court construes the disputed claim language to have the meaning and scope set forth above and will instruct the jury accordingly. The court finds Vonage's prosecution history estoppel and disclosure-dedication rule arguments to be without merit.

IT IS FURTHER ORDERED that Sprint's Motion to Strike Vonage's Prosecution History Estoppel Defense and Arguments Relating to Same in Vonage's Trial Brief (doc. #373) is denied.

IT IS SO ORDERED this 20th day of September, 2007.

s/ John W. Lungstrum
John W. Lungstrum
United States District Judge