

**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

I. Introduction

In this lawsuit plaintiff Sprint Communications Company L.P. alleges that the voice over internet protocol telephony system of defendants Vonage Holdings Corp. and Vonage America, Inc. (Vonage) infringes sixty-one claims of seven telecommunications patents owned by Sprint. This matter is currently before the court on the parties' various pretrial motions. In the first set of motions, Vonage seeks summary judgment of non-infringement and Sprint moves to strike certain portions of Vonage's brief in support of its motion for summary judgment as well as its subsequent reply brief (docs. #200, #215 & #245). The second set of motions relates to Vonage's affirmative defenses and includes Sprint's motion for partial summary judgment on most of those defenses, Vonage's Rule 56(f) motion in response to Sprint's motion for partial summary judgment, and Sprint's motion to exclude

the non-infringement opinion of Vonage's expert Joel M. Halpern (docs. #196, #198 & #218). Vonage has also filed objections to the magistrate judge's orders of May 14 and 16, 2007 (doc. #210) in which the magistrate judge excluded certain matters from the final pretrial order in this case.

As to the first set of motions, for the reasons explained below, Sprint's motions to strike are largely granted. Many of the arguments raised by Vonage in Sections II, III, and IV of its opening brief do not comply with the rules governing summary judgment practice in this court and therefore the court will disregard those improperly supported factual assertions except to the extent that they appear to be uncontroverted and helpful to an understanding of the case. Additionally, the court will not consider the arguments raised by Vonage for the first time in its reply brief because Vonage should have raised those arguments in its opening brief. Turning to Vonage's motion for summary judgment, that motion is granted with respect to the issue of literal infringement of the claim terms "interworking device" and "interworking unit" in the '301 Family Patents, which the court construes to mean *ATM interworking multiplexer*, because it is undisputed that the Vonage system does not use ATM technology, and therefore does not contain an ATM interworking multiplexer. As to the '605 Family Patents, it is granted as to the following issues: the issue of non-infringement of the asserted claims of the '932 Patent in the inbound call scenario; the issue of literal infringement of the limitation in claim 24 of the '561 Patent that the processing system must select a network code and use that network code to route the user communication; the issue of infringement of the asserted claims of the '052 Patent in the

inbound scenario using an SIP gateway; and the issue of non-infringement of the asserted claims of the '572 Patent in the inbound call scenario. Vonage's motion is denied with respect to all of the other summary judgment arguments raised by Vonage, as either Vonage did not meet its initial summary judgment burden of informing the court of a valid basis for its motion or else the summary judgment record presents a genuine issue of material fact which precludes summary judgment of non-infringement.

Sprint's motion for partial summary judgment on Vonage's affirmative defenses and counterclaims is largely granted. Specifically, it is denied with respect to (1) the statutory marking and notice requirements set forth in 35 U.S.C. § 287, and (2) Vonage's defense and counterclaim of non-infringement. As to all other issues, the motion is granted. To the extent that Vonage's memorandum in opposition to Sprint's motion seeks relief under Rule 56(f), Vonage's Rule 56(f) motion is denied because Vonage has not demonstrated how additional time for discovery would enable it to rebut Sprint's allegations that there is no genuine issue of fact sufficient to preclude summary judgment on Vonage's equitable defenses. In denying summary judgment on Vonage's non-infringement defense and counterclaim, the court also denies Sprint's motion to exclude Mr. Halpern's non-infringement opinion.

Lastly, as to Vonage's objections and motion to review the magistrate judge's orders of May 14 and 16, 2007, the court first finds that Sprint has demonstrated good cause why it failed to respond to Vonage's objections in a timely fashion. The substance of Vonage's

objections are overruled because the magistrate judge's rulings were not clearly erroneous or contrary to law.

II. Nature of the Case and Background of the Technology Involved

In the summer of 1993, Joe Christie, an employee at Sprint's Advanced Technology Laboratory, invented a new telecommunications system. Mr. Christie was a unique expert in two very dissimilar disciplines: SS7 signaling and packet networks. SS7 signaling is the language used by conventional telephone networks to set up calls and communicate between telecommunications components in the Public Switched Telephone Network (PSTN). In 1993, virtually all voice traffic was carried over the PSTN using switches and other well-established components. PSTN is "synchronous" in that every component along a circuit must be synchronized in order for communications to successfully cross the network. Packet networks are entirely different. These networks use "packets" to transport data from point to point. Packets are digital transport units that include a header and a payload. Packet networks are "asynchronous" in that the transmitting and receiving points act out of sync with one another, sending and receiving packets within a message without regard to the timing of one another. Joe Christie essentially devised a way to combine the two types of systems to create a more efficient system. He invented a series of components and architectures of components that would allow the PSTN to "talk" to packet networks and intelligently set up and route telephone calls across the disparate networks. Mr. Christie's invention was significant in that it had the potential to render obsolete major components

within the PSTN, breaking the grip that a handful of switch manufacturers held on service providers like Sprint. Sprint immediately began the process of patenting Mr. Christie's invention.¹ In the following years, Mr. Christie's inventions and the related innovations made by people working with him resulted in a patent portfolio of well over one hundred issued United States patents. The portfolio is one of the largest project portfolios in the United States.

In the summer of 2004, Sprint became aware that Vonage was offering residential telephone services that used the Internet to connect calls to and from the PSTN. Vonage's system is known as VoIP (Voice over Internet Protocol). VoIP transmits calls over the Internet using voice packets, each of which contains a header with an IP address and a user datagram protocol port which are used to route the packet. The Vonage system performs this by using a series of components such as switches, connections, gateways, proxies, and signals. Vonage has grown to become one of the largest subscriber-based VoIP service providers in North America.

Sprint filed this lawsuit in October of 2005, asserting infringement of sixty-one claims from seven representative patents from its patent portfolio. The patents in suit can be divided into essentially two groups: the '301 Family Patents and the '605 Family Patents. The '301 Family Patents include U.S. Patent Nos. 6,473,429 (the '429 Patent), U.S. Patent No. 6,665,294 (the '294 Patent), and U.S. Patent No. 6,298,064 (the '064 Patent). These three

¹ Mr. Christie died unexpectedly in February of 1996.

patents are collectively referred to as the '301 Family Patents because they all share an identical written description and drawings with U.S. Patent No. 5,991,301 and were filed as continuation applications of the '301 Patent. For priority purposes they all claim the filing date of the '301 Patent, which is September 8, 1995. Each of these patents is entitled "Broadband Telecommunications System," and generally discloses an invention which is "a system for providing virtual connections through an ATM interworking multiplexer on a call-by-call basis." '429 Patent, Abstract.

The '605 Family Patents include U.S. Patent No. 6,452,932 (the '932 Patent), U.S. Patent No. 6,304,572 (the '572 Patent), U.S. Patent No. 6,463,052 (the '052 Patent), and U.S. Patent No. 6,633,561 (the '561 Patent). These four patents are collectively referred to as the '605 Family Patents because they all share an identical written description and drawings with U.S. Patent Application No. 08/238,605 (the '605 Application, now abandoned) and were filed as continuation applications to the '605 Application. For priority purposes they all claim the filing date of the '605 Application, which is May 5, 1994. Each of these patents is entitled "Method, System and Apparatus for Telecommunications Control," and generally discloses an invention that "includes a method, system, and apparatus for providing communication control." '932 Patent, Abstract.

Vonage disputes Sprint's allegations that its VoIP system infringes any claims of the asserted patents, either literally or under the doctrine of equivalents. Vonage also asserts that the patents in suit are invalid as anticipated, obvious, and for failure to comply with the written description, enablement, and definiteness requirements, as well as being

unenforceable under the doctrines of laches (including prosecution laches), estoppel and acquiescence, unclean hands, that a patentee “may not broaden his claims by describing the product in terms of function,” and by virtue of their misuse by Sprint.

After well more than a year of discovery, the parties have now filed various motions in an attempt to set the stage for the trial of this case. Vonage seeks summary judgment of non-infringement. Sprint of course opposes the motion and, additionally, has filed motions asking the court to strike or disregard significant portions of Vonage’s brief in support of its motion for summary judgment as well as new arguments raised by Vonage in its reply brief. Sprint also seeks partial summary judgment on many of the affirmative defenses asserted by Vonage. On a related note, Sprint has filed a motion to exclude the opinions of Vonage’s expert as to non-infringement issues. And, Vonage has filed objections to the magistrate judge’s orders of May 14 and 16, 2007, in which the magistrate judge denied Vonage’s motion to amend its answer to assert certain affirmative defenses and struck Vonage’s related legal and factual contentions from the final pretrial order in this case. The court will begin with the heart of the matter, which is Vonage’s motion for summary judgment directed at Sprint’s patent infringement claims.

III. Vonage’s Motion for Summary Judgment

Vonage contends that it is entitled to summary judgment as to all of the asserted claims of the patents in suit. Its overriding theory with respect to the asserted claims of the ‘301 Family Patents is that one of ordinary skill in the art would understand the invention of

the '301 Family Patents to be related solely to Asynchronous Transfer Mode (ATM) technology. Vonage contends that, when the claim terms are properly construed in view of this invention, its system cannot be found to infringe several elements of the claims because its system does not use ATM technology. Its overriding theory with respect to the '605 Family Patents is that one of ordinary skill in the art reviewing the '605 Family Patents' specification in its entirety would conclude that the invention of the '605 Family Patents relates to a signal processor which is external to the communications path. Based on this distinction, Vonage contends that its system does not infringe various asserted limitations of the '932, '572, '052, and '561 Patents.

A. Statement of Material Facts

1. Sprint's Motion to Strike or Disregard Portions of Vonage's Brief in Support of Its Motion for Summary Judgment

In order to properly resolve Vonage's motion for summary judgment, the court must first consider the arguments raised in Sprint's motion to strike or disregard portions of Vonage's brief in support of its motion for summary judgment. Therein, Sprint asks the court to strike certain portions of the "facts" contained in Vonage's brief because they contain improper argument, unsubstantiated allegations, and inaccurate recitations to the record. Specifically, Sprint contends that Vonage has failed to provide proper factual support for Sections II, III, and IV (except Vonage's Fact 4, which Sprint admits) of its brief in violation of D. Kan. Rule 56.1. The court agrees. Even in the absence of Sprint's motion, the court was struck by many of the same deficiencies in Vonage's brief.

This court's local rules, specifically D. Kan. Rule 56.1, set forth this court's summary judgment practice. Initially,

[t]he memorandum or brief in support of a motion for summary judgment shall begin with a section that contains a concise statement of material facts as to which the movant contends no genuine issue exists. The facts shall be numbered and shall refer with particularity to those portions of the record upon which the movant relies.

D. Kan. Rule 56.1(a). The party opposing the motion for summary judgment must respond in a similar fashion. *Id.* Rule 56.1(b). In doing so, the response must "fairly meet the substance of the matter asserted." *Id.* Rule 56.1(e). District courts have discretion in applying local rules such as these. *Vittoria N. Am., L.L.C. v. Euro-Asia Imports Inc.*, 278 F.3d 1076, 1081 (10th Cir. 2001) (considering a similar local rule governing summary judgment practice in the Western District of Oklahoma).

In this case, Sections II, III, and IV of Vonage's brief in support of its motion for summary judgment do not comply with these rules. These sections of Vonage's brief are largely cluttered with improper attorney argument and commentary as well as legal conclusions, none of which are "facts as would be admissible in evidence." Fed. R. Civ. P. 56(e). To the extent that these sections do actually contain facts which might be admissible in evidence, the facts are not adequately supported by appropriate citations to the record. For example, the five pages comprising Section II, entitled "The Sprint Patents," generally describe the patents in suit. This section is not set forth in numbered paragraph format. It contains mostly argument, attorney commentary, and conclusory statements regarding the patents and technology at issue, with only cursory citations to the record. Vonage's

purported “factual” description of the Sprint patents in Section II is actually attorney argument that roughly paraphrases the patent disclosures to support Vonage’s contentions in this case and, notably, selectively omits those portions of the patents which do not. Section III, entitled “The Vonage System,” contains nearly eight pages that generally describe Vonage’s allegedly infringing system. It suffers from the same flaws as Section II. Additionally, it is even more troubling because it contains paragraphs, some of which are lengthy, which purport to describe Vonage’s technologically complex system with nothing more than a single cursory citation to the record at the end of each paragraph. This makes it virtually impossible for the court to determine what, if any, portions of the record Vonage is relying on to support each of the statements which allegedly describes its system. The problems with Sections II and III are compounded even further in Section IV, Vonage’s purported “Statement of Undisputed Material Facts,” which contains numerous references to “The Vonage System” described in Section III to support other conclusory statements that Vonage contends are undisputed material facts. Additionally, Section IV is permeated with purported “facts” which, in reality, call for legal conclusions rather than facts that would be admissible as evidence.

Vonage contends that its approach to the summary judgment record complies with “the spirit of” this court’s summary judgment practices. The court disagrees. One of the purposes of this court’s summary judgment rules is to create a clean record to which the opposing party can respond and on which the court can effectively and efficiently rule. The technological and legal complexity of this case, in particular, demands compliance with these

rules. Vonage has no legitimate excuse for its decision to ignore these rules, as Vonage is represented by sophisticated counsel and competent local counsel who should be familiar with this court's rules governing summary judgment practice. Indeed, given Vonage's ample representation by counsel, the court wonders if Vonage's failure to abide by this court's summary judgment rules may have been a tactical decision. In any event, the prejudicial problems with Vonage's approach is that attorney arguments are interlaced with purported facts and entire pages of purported facts are supported by generalized citations to the record. Neither Sprint nor the court can or should be forced to sift through the record to determine whether Vonage is relying on mere argument or whether there is some support in its broad citations. This is not a case in which the court is considering nothing more than whether to overlook mere unnumbered fact paragraphs by a non-moving party. Here, Vonage is seeking affirmative relief—judgment on the merits—based on a summary judgment record which Vonage has chosen to present in a manner so convoluted and cumbersome that it is unrealistic to expect the non-moving party (Sprint) to be able to fairly meet the substance of the complex factual matters asserted by Vonage. Under these circumstances, Vonage's noncompliance is unfair to Sprint, and the court will not search through the summary judgment record to help Vonage meet its summary judgment burden of demonstrating that it is entitled to judgment as a matter of law. *See Cross v. Home Depot*, 390 F.3d 1283, 1290 (10th Cir. 2004) (on summary judgment the parties must “ensure that the factual dispute is portrayed with particularity, without . . . depending on the trial court to conduct its own search of the record” (quotation omitted)).

Accordingly, the court will grant Sprint's motion to the extent that it will largely disregard the arguments set forth in Sections II, III, and IV of Vonage's brief in support of its motion for summary judgment. The motion is denied only in the sense that the court will consider the intrinsic evidence, such as the patents in suit, in construing the disputed claim terms. Thus, for example, the court will disregard Vonage's loose interpretations of those patents as set forth in Section II, and instead will look directly to the patents themselves. As to the remainder of the parties' asserted facts, consistent with the well established standard for evaluating a motion for summary judgment, the following facts are either uncontroverted or stated in the light most favorable to Sprint, the nonmoving party.

2. Statement of Material Facts

a. *Facts Pertinent to the '301 Family Patents*

The parties' arguments concerning the asserted claims of the '301 Family Patents (the '429, '294, and '064 Patents) are primarily directed to claim construction. As such, the court will evaluate the intrinsic record, consisting of the patents-in-suit, in resolving the parties' claim construction arguments. The facts from those patents which are relevant to the court's claim construction analysis will be discussed in detail below. The only other evidence pertinent to the court's claim construction analysis is the fact (a fact which is undisputed by Vonage) that one of skill in the art would understand that the "asynchronous transfer mode virtual identifier" of claim 23 of the '294 Patent is an ATM virtual path identifier/virtual channel identifier (VPI/VCI) pair.

As will be discussed in more detail below, the court construes the disputed claim term “identifier” to mean *data for routing user information in a packet network*. The summary judgment record, viewed in the light most favorable to Sprint, establishes that in the Vonage system voice packets are in IP format and include a destination IP address. The destination IP address is used for routing the voice packets in a packet network to the destination network endpoint. Thus, Sprint contends that this destination IP address constitutes the claimed “identifier.”

Other disputed claim terms are “interworking device” and “interworking unit.” As discussed below, the court construes these claim terms to mean *ATM interworking multiplexer*. The parties agree that the Vonage system does not use ATM technology, and hence apparently does not include an ATM interworking multiplexer. Sprint nonetheless contends that Vonage’s system infringes this claim limitation under the doctrine of equivalents by virtue of the gateways in the Vonage system. The summary judgment record submitted by Sprint establishes that the Vonage system includes Session Initiation Protocol (SIP) gateways and media gateways. The gateways receive narrowband telecommunications audio signals from the PSTN and convert those signals into packets in the form of VoIP packets. Thus, the Vonage gateways convert narrowband telecommunication signals into packets, just as the ATM interworking multiplexers disclosed in the ‘301 Family Patents convert narrowband telecommunication signals into packets. Additionally, the Vonage gateways receive voice data as 8-bit DS0 signals and assemble them into packets with a header appended thereto, which are transmitted onto a packet network, just as the ATM

interworking multiplexers disclosed in the '301 Family Patents receive voice data as 8-bit DS0 signals and assemble them into packets with a header appended thereto, which are transmitted onto a packet network.

The final disputed claim term with respect to the '301 Family Patents is "asynchronous communication." As explained below, the court finds that this claim term does not need to be further construed. The term "asynchronous" is a term of art in the communications field that refers to communications where the transmitting and receiving devices do not communicate based on a synchronized clock. IP communication (such as that at issue in Vonage's VoIP system) does not require a synchronized timing relationship. Thus, it is asynchronous.

b. Facts Pertinent to the '605 Family Patents

The parties' arguments concerning infringement of the '605 Family Patents relate largely to the manner in which the Vonage system operates. For reasons discussed previously, the court will largely disregard Vonage's purported "facts" relating to operation of the Vonage system (due to Vonage's failure to abide by the governing summary judgment rules) except to the limited extent that those facts are helpful to an overall understanding of the Vonage system, are otherwise immaterial to the court's resolution of the disputed summary judgment issues, and appear to be uncontroverted by Sprint. The court will of course consider the relevant portions of the patents' specifications, where relevant. But, otherwise, the court will accept as true Sprint's description of the Vonage system, consistent with the well established summary judgment standard that the court must view the evidence

in the light most favorable to Sprint, as the non-moving party. The Vonage system operates in essentially three relevant call scenarios: (1) outbound calls, (2) inbound calls, and (3) calls using an RTP relay in a NAT'd scenario.

i. Outbound Calls (From a Vonage Customer to a PSTN Number)

In an outbound call scenario (from a Vonage customer to a PSTN number), a Vonage user dials the called party's telephone number. The Vonage user's Terminal Adapter (TA) receives the dialed number and sends it to the Vonage outbound proxy. The outbound proxy performs a lookup using the dialed number to select an appropriate signaling gateway. The outbound proxy signals the signaling gateway. The signaling gateway performs a longest match comparison on the dialed number and a load balancing algorithm to select a specific circuit (circuit identification code, or CIC) to extend the call to the PSTN. The identification of a CIC includes information that identifies a specific media gateway that will be used to complete the outbound call. The signaling gateway sends a Create Connection (CRCX) message to the identified media gateway. The media gateway generates information which includes the media gateway's selection of a public IP address. The identified media gateway, after receiving the CRCX message from the signaling gateway, provides its public IP address to the signaling gateway. The signaling gateway processes the information from the media gateway and then creates signaling in the form of an SIP 183 Session in Progress or 200 OK message to identify the media gateway to the Vonage TA so that the call can be completed. When the TA receives the 200 OK message from the signaling gateway, the call can be

completed. The media gateway selects a DS0 connection to connect to a PSTN switch. A DS0 is connected to only one media gateway and only one PSTN switch.

According to a declaration submitted by Sprint's technical expert, Dr. Stephen B. Wicker, in the '932 Patent, one of ordinary skill in the art would not find any disclosure of the processing system selecting a DS0 and not selecting a narrowband switch because the patent recognizes that selecting a connection necessarily also selects a network element. Dr. Wicker's declaration also states that by identifying and selecting the network codes of the respective opposite endpoints, in light of the '572 Patent's claims and specification, one of ordinary skill in the art would recognize that the processing system has selected a "connection" between those two endpoints.

ii. Inbound Calls (From a PSTN Number to a Vonage Customer)

An inbound call is received, first, through a PSTN switch. The PSTN switch is connected to the Vonage SIP gateway. When the Vonage gateway receives signaling from the PSTN switch, the gateway generates signaling to a Vonage inbound proxy. The Vonage inbound proxy receives the called number from Vonage's SIP gateway (which received the called number from the PSTN). The inbound proxy processes the called number to determine the identity of the Vonage user and to identify the user's TA. The inbound proxy signals the outbound proxy associated with the identified TA. When the outbound proxy receives an SIP invite from the inbound proxy, it already has the IP address of the identified TA. The outbound proxy signals the TA using the known IP address to set up the call. If the call is answered by the Vonage customer, the TA will reply to the outbound proxy with an

SIP 200 OK message. The 200 OK message transmitted from the TA to the outbound proxy includes the IP address of the TA.

Once the SIP gateway receives the 200 OK message, it signals the PSTN switch to send the audio from the call. The audio arrives from the PSTN switch over a DS0 channel which forms the connection between the PSTN switch and the SIP gateway. The SIP gateway converts the information in the DS0 into voice packets and sends them over the internet to the TA using the TA's address. The TA converts the voice packets received from the SIP gateway into an analog signal, which is converted to audible voice by the Vonage subscriber's conventional phone. At the other end, the TA converts the analog signal from the Vonage subscriber's conventional phone to packets with the SIP gateway's address in the header, which are then sent to the SIP gateway.

For an inbound call to a non-NAT'd (the meaning of NAT is discussed below) Vonage customer, the audio IP address in the Session Description Protocol (SDP) portion of the 200 OK message is the same IP address used by the outbound proxy to signal the TA.

According to a declaration submitted by Dr. Wicker, in light of the claims and the specification of the '052 and '561 patents, one of ordinary skill would recognize that the phrase "select[ing] the network code" is not limited to a process performed exclusively by a single system.

The Vonage network implements certain inbound calls through a Virginia point-of-presence using a Sonus architecture that includes a separate signaling gateway. In the Sonus

architecture, the signaling gateway receives signaling from a narrowband network in a narrowband SS7 format.

iii. NAT'd Calls Using an RTP Relay

When a Vonage customer's TA is behind a router that employs Network Address Translation (NAT), it has a private IP address which is not publicly routable. Calls to and from a TA behind a NAT are called NAT'd. To account for a NAT'd TA, the processing system invokes the use of a Real Time Protocol (RTP) relay.

For a NAT'd inbound call, the processing system instructs the media gateway to address its user communication packets to the IP address of an RTP relay. The RTP relay then re-addresses the received packets to the TA that the Vonage processing system selected. Packets from the Vonage gateways addressed to a specific IP address of an RTP relay are correspondingly sent to the IP address that identifies the TA.

For a NAT'd outbound call, the processing system instructs the TA to address its user communication packets to the IP address of an RTP relay. The RTP relay then re-addresses the received packets to the media gateway that the Vonage processing system selected. Packets from the TA addressed to a specific IP address of an RTP relay are correspondingly sent to the IP address that identifies the media gateway.

The use of an RTP relay is entirely invisible to the endpoint devices as well as to the end users of the telephone system, as the called and calling parties cannot tell whether a call is NAT'd. The TA and media gateway operate in the same manner regardless of whether RTP relays are involved. User communications are transported between the Vonage

gateways and TAs even when the TA is NAT'd. According to Dr. Wicker's declaration, from the perspective of one of ordinary skill in the art, in the context of the '561 and '052 Patents' asserted claims, any differences in the way the user communications are transferred between end users in NAT'd and non-NAT'd calls are insubstantial.

B. Applicable Legal Standards

1. 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.*

2. Summary Judgment

Summary judgment is appropriate if the moving party demonstrates that there is “no genuine issue as to any material fact” and that it is “entitled to a judgment as a matter of law.” Fed. R. Civ. P. 56(c). In applying this standard, the court views the evidence and all reasonable inferences therefrom in the light most favorable to the nonmoving party. *Spaulding v. United Transp. Union*, 279 F.3d 901, 904 (10th Cir. 2002). A fact is “material” if, under the applicable substantive law, it is “essential to the proper disposition of the claim.” *Wright ex rel. Trust Co. v. Abbott Labs., Inc.*, 259 F.3d 1226, 1231-32 (10th Cir. 2001) (citing *Adler v. Wal-Mart Stores, Inc.*, 144 F.3d 664, 670 (10th Cir. 1998)). An issue of fact is “genuine” if “there is sufficient evidence on each side so that a rational trier of fact could resolve the issue either way.” *Adler*, 144 F.3d at 670 (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)).

The moving party bears the initial burden of demonstrating an absence of a genuine issue of material fact and entitlement to judgment as a matter of law. *Spaulding*, 279 F.3d at 904 (citing *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986)). In attempting to meet that standard, a movant that does not bear the ultimate burden of persuasion at trial need not negate the other party’s claim; rather, the movant need simply point out to the court a lack

of evidence for the other party on an essential element of that party's claim. *Adams v. Am. Guar. & Liab. Ins. Co.*, 233 F.3d 1242, 1246 (10th Cir. 2000) (citing *Adler*, 144 F.3d at 671).

Once the movant has met this initial burden, the burden shifts to the nonmoving party to "set forth specific facts showing that there is a genuine issue for trial." *Spaulding*, 279 F.3d at 904 (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986)); *see also Anderson*, 477 U.S. at 256; *Celotex*, 477 U.S. at 324. The nonmoving party may not simply rest upon its pleadings to satisfy its burden. *Anderson*, 477 U.S. at 256; *Eck v. Parke, Davis & Co.*, 256 F.3d 1013, 1017 (10th Cir. 2001). Rather, the nonmoving party must "set forth specific facts that would be admissible in evidence in the event of trial from which a rational trier of fact could find for the nonmovant." *Mitchell v. City of Moore*, 218 F.3d 1190, 1197-98 (10th Cir. 2000) (quoting *Adler*, 144 F.3d at 671). To accomplish this, the facts "must be identified by reference to an affidavit, a deposition transcript, or a specific exhibit incorporated therein." *Adams*, 233 F.3d at 1246.

Finally, the court notes that summary judgment is not a "disfavored procedural shortcut"; rather, it is an important procedure "designed 'to secure the just, speedy and inexpensive determination of every action.'" *Celotex*, 477 U.S. at 327 (quoting Fed. R. Civ. P. 1).

C. Analysis

For the reasons explained below, Vonage's motion for summary judgment is largely denied. Specifically, it is granted with respect to the issue of literal infringement of the claim terms "interworking device" and "interworking unit" in the '301 Family Patents, which the

court construes to mean *ATM interworking multiplexer*, because it is undisputed that the Vonage system does not use ATM technology, and therefore does not contain an ATM interworking multiplexer. As to the '605 Family Patents, it is granted as to the following issues: the issue of non-infringement of the asserted claims of the '932 Patent in the inbound call scenario; the issue of literal infringement of the limitation in claim 24 of the '561 Patent that the processing system must select a network code and use that network code to route the user communication; the issue of infringement of the asserted claims of the '052 Patent in the inbound scenario using an SIP gateway; and the issue of non-infringement of the asserted claims of the '572 Patent in the inbound call scenario. Vonage's motion is denied in all other respects.

1. The '301 Family Patents

Vonage's argument in support of its motion for summary judgment with respect to the '301 Family Patents is premised on its proposed claim construction. Vonage contends that one of ordinary skill in the art would view the inventions disclosed in the '301 Family Patents as relating solely to ATM technology, and therefore the court should construe certain claim terms accordingly. Specifically, Vonage asks the court to construe the claim term "identifier" to mean *a VPI/VCI combination*; the claim terms "interworking device" and "interworking unit" to mean *ATM interworking multiplexer*; and the claim term "asynchronous communication" to mean *ATM communication*. It is undisputed that Vonage's VoIP system does not use ATM technology and therefore, according to Vonage, those claim elements cannot be found in the Vonage system.

Vonage's argument is grounded in the specification shared by the '301 Family Patents. The abstract describes the invention as follows:

The invention is a system for providing virtual connections through an ATM interworking multiplexer on a call-by-call basis. A signaling processor receives signaling for a call and selects the virtual connection for the call. The signaling processor generates new signaling that identifies the selection and transfers the new signaling to the ATM interworking multiplexer that accepted the access connection for the call. The multiplexer converts user information from the access connection into ATM cells for transmission over the virtual connection in accord with the new signaling.

'294 Patent, Abstract. Additionally, the background section frames the invention as being specific to problems formerly associated with ATM networks. It describes the existing need in the art to provide virtual connection switching in ATM networks on a call-by-call basis using ATM multiplexers rather than the more complex ATM switches that were in development at the time of the invention. The summary of the invention describes the system as comprising "an ATM interworking multiplexer and a signaling processor linked to the ATM interworking multiplexer." '294 Patent, col. 2, ll. 14-17. The summary continues to refer to the invention as including an ATM interworking multiplexer, it discusses converting and transmitting ATM cells, and it states that the system includes an ATM adaption processor and ATM interface. The summary concludes as follows:

In various embodiments, the invention accepts calls placed over DS0 voice connections and provides virtual connections for the calls. In this way, broadband virtual connections can be provided to narrowband traffic on a call-by-call basis without requiring the call processing and signaling capability of an ATM switch.

'294 Patent, col. 2, ll. 65-67 & col. 3, ll. 1-3. The detailed description describes various versions of the invention with references to diagrams. Suffice it to say without delving into further detail that the common specification shared by the '301 Family Patents certainly appears to support the proposition advanced by Vonage that the inventions disclosed in the written description relate to ATM technology. The pivotal issue is the impact of that specification on the meaning of the claim terms themselves.

The Federal Circuit addressed the significance of the written description in its landmark opinion on patent claim construction in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), the basic principles of which are set forth in the claim construction standards set forth above. In particular, with respect to the significance of a patent's written description, the Federal Circuit noted that "claims must always be read in view of the specification, of which they are a part." *Id.* at 1315 (quotation omitted). The specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Id.* (quotation omitted). The specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess, in which case the inventor's lexicography governs. *Id.* at 1316. In other cases, it may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor, in which case the inventor has dictated the correct claim scope and that invention, as expressed in the specification, is regarded as dispositive. *Id.* But, the court must be careful not to import limitations from the specification into the claim. *Id.* at 1323. In walking the "fine line" between using the

specification to interpret the meaning of a claim and importing limitations from the specification into the claim, the court must “focus . . . on understanding how a person of ordinary skill in the art would understand the claim terms.” *Id.* The purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so. *Id.* Reading the specification in context should reveal whether the patentee is setting out specific examples of the invention to accomplish those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive. *Id.* Thus, the court’s task is to determine “whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature.” *Id.*

With these overriding principles in mind concerning the significance of the specification of the ‘301 Family Patents, then, the court will turn its focus to the disputed claim terms as they are set forth in the three individual patents which share that specification. These patents include the ‘294, ‘429, and ‘064 Patents.

a. The ‘294 Patent

Sprint asserts that Vonage’s VoIP system infringes claims 1, 4, 9, 10, 17, 18, 19, 22, 26, 27, 28, 35, and 36 of the ‘294 Patent. Claims 1, 10, 19, and 28 are independent claims; the remainder are dependent claims. The independent claims include the disputed claim terms “identifier” and “interworking device.” Again, Vonage argues that the court should construe the claim term “identifier” to mean *a VPI/VCI combination* and the claim term “interworking unit” to mean *ATM interworking multiplexer*.

Claim construction begins with the words of the claims themselves. *Phillips*, 415 F.3d at 1312. The claims state, in relevant part, as follows:

1. A telecommunication signal . . . comprising:
a first signal component including user information from a narrowband communication signal; and
a second signal component including an **identifier** for routing the user information, wherein the **identifier** is selected by processing a signaling message, wherein an **interworking device** receives the narrowband communication signal and a control signal indicating the narrowband communication signal and the **identifier**, and in response to the control signal, converts the narrowband communication signal into a packet format having the first signal component including the user information and the second signal component including the **identifier** to form the telecommunication signal.

....

10. A control signal . . . comprising:
a first signal component indicating a narrowband communication signal having user information; and
a second signal component indicating an **identifier** for routing the user information, wherein the **identifier** is selected by processing a signaling message, wherein an **interworking device** receives the narrowband communication signal and the control signal indicating the narrowband communication signal and the **identifier**, and in response to the control signal, converts the narrowband communication signal into a packet format having the user information and the **identifier** to form a telecommunication signal.

'294 Patent, col. 23 ll. 20-34 & 55-67 (emphasis added). Claims 19 and 28 contain essentially identical relevant language, except that they claim methods of transferring signals.

i. "Identifier"

Beginning with the claim language itself, the claims do not indicate that the term "identifier" is limited to a VPI/VCI combination. In fact, Sprint correctly points out that the language of the claims identifies two key facts regarding the claimed "identifier": (1) it is part of a communication signal that includes user information in a packet format; and (2) it

is used for routing the user information. Based on this information, Sprint urges the court to construe the claimed “identifier” to mean *data for routing user information in a packet network*.

Other claims of the patent are useful for understanding the ordinary meaning of claim terms. *Phillips*, 415 F.3d at 1314. Sprint points out that dependent claims 5, 14, 23, and 32 add the limitation that the identifier comprises an “asynchronous transfer mode [ATM] virtual identifier.” It is undisputed that a person of ordinary skill in the art would understand this claim term to mean an ATM VPI/VCI pair. Thus, construing the claim term “identifier” in independent claims 1, 10, 19, and 28 to mean an ATM VPI/VCI pair would render dependent claims 5, 14, 23, and 32 duplicative of the independent claims on which they depend. This invokes the doctrine of claim differentiation. This doctrine is grounded in the notion that “[d]ifferences among claims can . . . be a useful guide in understanding the meaning of particular claim terms.” *Phillips*, 415 F.3d at 1314. “[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.*; *see also Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (doctrine of claim differentiation refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim). This is because “reading an additional limitation from a dependent claim into an independent claim would not only make that additional limitation superfluous, it might render the dependent claim invalid.” *Curtiss-Wright Flow Control Corp.*, 438 F.3d at 1380. Here, the ‘294 Patent contains

dependent claims which add the particular limitation urged by Vonage. Consequently, a presumption arises that the “identifier” disclosed in claims 1, 10, 19, and 28 is not limited to an “asynchronous transfer mode virtual identifier,” or an ATM VPI/VCI pair.

Vonage’s argument that the court should construe the claim term “identifier” to mean an ATM VPI/VCI pair is based on language contained in the specification. In addition to the overarching language concerning ATM technology discussed previously, Vonage points to language in the written description which discloses that VPI/VCI combinations are designated for the virtual connection. *See* ‘294 Patent, col. 7, ll. 15-21; col. 9, ll. 12-29. In fact, the specification’s references to VPI/VCI combinations are merely examples set forth as embodiments of the invention. The first reference to a VPI/VCI combination is contained in a portion of the written description describing Figure 2. It begins, “FIG. 2 depicts another embodiment of the invention.” ‘294 Patent, col. 5, at 41. In discussing the signaling received by the call/connection manager (CCM), the written description states as follows:

CCM **250** can select a virtual connection to the destination. The selection process can be accomplished through table look-ups. **For example**, a table could be used to translate a portion of the dialed number into a VPI. The VCI would be selected based on the available VCIs in the selected VPI. The VPI/VCI combination would correspond . . .

Id. col. 7, ll. 15-21 (emphasis added). The second discussion of VPI/VCI combinations is contained in a portion of the written description describing Figure 4, which is entitled the “ATM Cross-connect System.” That portion of the written description states as follows:

FIG. 4 depicts virtual connections provided by the ATM cross connect system in a version of the invention, **although numerous other techniques for**

providing virtual connections will be appreciated by one skilled in the art, and the invention contemplates any such system.

Id. col. 8, ll. 61-65 (emphasis added). The specification repeatedly states that drawings and the detailed descriptions of those drawings depict versions of the present invention. In fact, just prior to the claims themselves, the specification concludes as follows:

Those skilled in the art will appreciate that variations from the specific embodiments disclosed above are contemplated by the invention. The invention should not be restricted to the above embodiments, but should be measured by the following claims.

Id. col. 23, ll. 14-18.

With respect to the claim term “identifier,” the court concludes that a person of skill in the art would understand the specification’s reference to VPI/VCI combinations to be exemplary in nature, rather than defining the outer limits of the claim term. First, of course, the doctrine of claim differentiation gives rise to a presumption that the term is not limited to a VPI/VCI combination. Second, the references to VPI/VCI combinations in the written description fall far short of reflecting an intentional disclaimer, or disavowal, of the full scope of the claim. Instead, the written description’s references to VPI/VCI combinations contain qualifiers such as the fact that Figures 2 and 4, and the related detailed descriptions, are only versions of the invention; the “[f]or example” language; the statement that numerous other techniques for providing virtual connections will be appreciated by one skilled in the art, and the invention contemplates any such system; and, finally, the statement that the invention should not be restricted to those embodiments, but instead should be measured by the claims, as the invention contemplates variations that would be recognized by one skilled

in the art. Given the clarity of the language of the claim terms themselves, then, the court will not import this limitation from the specification into the claims. Instead, the court believes that a fair and accurate claim construction, which is based on the claim language itself, is the construction proposed by Sprint. As such, the court construes the claim term “identifier” to mean *data for routing information in a packet network*.

ii. “Interworking Device”

Turning to the second disputed claim term in the ‘294 Patent, “interworking device,” the court once again begins its task of claim construction with the language of the claims themselves. According to the claim language, the interworking device performs the task of “convert[ing] the narrowband communication signal into packet format.” In other words, explicit within the claim language itself is that the “interworking device” is a device that interworks or converts between two communication formats – specifically, between a narrowband format (such as used in the PSTN) and a packet format (such as ATM or IP). The claim language itself does not limit the packet format to ATM, but rather could encompass the IP technology employed by Vonage. Based on this claim language, Sprint argues that the court should construe the claim term “interworking device” to mean *a device that converts narrowband communication signals into a packet format*.

In support of Vonage’s argument that the court should construe the claim term “interworking device” to mean *ATM interworking multiplexer*, Vonage once again relies on language contained throughout the specification. It is true, as Vonage contends, that the specification repeatedly discloses in numerous important respects that an ATM interworking

multiplexer is the one and only “interworking device” claimed in the specification. The disclosures in the specification are not merely limited to preferred embodiments or versions of the invention. Reading the claim term in view of the specification, it seems that the only logical conclusion that could be reached by one of ordinary skill in the art is that the inventor intended the term “interworking device” to mean an ATM interworking multiplexer. The abstract describes the invention as a system for providing virtual connections “through an ATM interworking multiplexer” whereby the signaling is transferred to the “ATM interworking multiplexer” and the “multiplexer” converts the information. The background of the invention describes the need to improve upon ATM switch technology, and explains that although ATM multiplexers are being developed “these muxes” are not used to select virtual connections on a call-by-call basis. It concludes that “there is not a telecommunications system that can provide ATM switching on a call by call basis without relying on the call processing and signaling capability of an ATM switch.” The summary of the invention clearly and unequivocally discloses that an ATM interworking multiplexer is the claimed interworking unit which allows virtual connections on a call-by-call basis without requiring the call processing and signaling capability of an ATM switch. The summary states as follows:

... **The system comprises an ATM interworking multiplexer** and a signaling processor linked to the **ATM interworking multiplexer**. The method [receives, processes, generates, and transmits] new signaling **to the ATM interworking multiplexer**. The method also includes receiving the user information for the call from the particular connection into **the ATM interworking multiplexer**. . . .

. . . **The system includes an ATM interworking multiplexer** to receive user information from a connection The system could also include an ATM cross-connect system connected to the **ATM interworking multiplexer** and configured to provide a plurality of virtual connections to the **ATM interworking multiplexer**.

The invention also includes an ATM interworking multiplexer for providing calls with virtual connections

‘294 Patent, col. 2, ll. 14-50 (emphasis added).

Sprint points out that other language in the specification contained in the detailed description of Figure 1 indicates that the interworking unit could be any muxing system. Specifically, this description explains that “mux **130 could be any muxing system** operable to place user information arriving over connection **180** on the virtual connection selected by signaling processing system **160.**” *Id.* Col. 4, ll. 32-34 (emphasis added). But, prior to this disclosure the specification implicitly defines the term “mux” as an abbreviation for the term ATM interworking multiplexer. It states that the system “includes ATM interworking multiplexer (mux) **130**, mux **140.**” *Id.* col. 3, ll. 43-44. Thereafter, the written description refers to **130** and **140** as disclosed in Figure 1 as, simply, “mux.” The description of Figure 1 concludes that “[f]rom the above discussion, it can be seen that multiple virtual connections can be pre-provisioned through an ATM cross-connect system to interconnect ATM interworking multiplexers.” *Id.* col. 5, ll. 26-29. Similarly, Sprint points out the disclosure that “Fig. 3 shows one embodiment of the mux that is suitable for the present invention, but muxes that support the requirements of the invention are also applicable.” *Id.* col. 8, ll. 3-5. Again, however, it appears that the use of the term “mux” is nothing more than a continued

use of this term as a shorthand version of the term ATM interworking multiplexer, as this section is entitled “The ATM Interworking Multiplexer.” *Id.* col. 8, l. 1.

The written description in this case is much like the one at issue in *Honeywell International, Inc. v. ITT Industries, Inc.*, 452 F.3d 1312 (Fed. Cir. 2006). There, the Federal Circuit agreed with the district court that the claim term “fuel injection system component” was limited to a fuel filter. *Id.* at 1318. The court concluded that “the written description uses language that leads to the conclusion that a fuel filter is the only ‘fuel injection system component’ that the claims cover, and that a fuel filter was not merely discussed as a preferred embodiment.” *Id.* The written description referred to the fuel filter as “this invention” or “the present invention” on at least four occasions; it did not indicate that a fuel filter was merely a preferred embodiment, but rather it was the only component disclosed as having the claimed features; and limiting the claim term to a fuel filter comported with the discussion of the prior art problem addressed by the patented invention. *Id.* Similarly, here, the entirety of the written description, and particularly the disclosures in the summary of the invention, establish that an ATM interworking multiplexer is the only type of “interworking device” contemplated by the invention, and not merely a preferred embodiment. Given the clarity of the written description concerning the meaning of the claim term “interworking device,” then, the court construes this claim term to mean *ATM interworking multiplexer*.

iii. Infringement

Having construed the disputed claim terms, the court turns to the issue of infringement in which the court must compare the properly construed claims to the accused device or

process. *Boss Control, Inc. v. Bombardier Inc.*, 410 F.3d 1372, 1376 (Fed. Cir. 2005). “To prove infringement, the patentee must show that the accused device meets each claim limitation, either literally or under the doctrine of equivalents.” *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 906 (Fed. Cir. 2005). “Infringement, whether literal or under the doctrine of equivalents, is a question of fact.” *Boss Control*, 410 F.3d at 1376.

With respect to the claim term “identifier,” Vonage’s motion for summary judgment is denied. Vonage’s motion was premised on its proposed claim construction, which the court has rejected. As such, Vonage has not met its initial summary judgment burden of demonstrating the absence of a genuine issue of material fact and entitlement to judgment as a matter of law. Additionally, the court notes that as that claim term has been properly construed (to mean *data for routing user information in a packet network*), Sprint has raised a genuine issue of material fact sufficient to withstand summary judgment on the issue of literal infringement. Viewing the evidence in the light most favorable to Sprint, as of course the court must at this procedural juncture, voice packets in the Vonage system include a destination IP address and the destination IP address is used for routing the voice packets in a packet network. Thus, according to the evidence submitted by Sprint, the Vonage system literally utilizes and includes the claimed “identifier,” which consists of data for routing information in a packet network. Because this evidence is sufficient to withstand summary judgment on the issue of literal infringement, it is also sufficient to raise a genuine issue of material fact on infringement under the doctrine of equivalents.

Turning to the claim term “interworking device,” Vonage’s motion is granted on the issue of literal infringement. The court has construed this claim term to mean *ATM interworking multiplexer*. Given this claim construction, Sprint has not raised a genuine issue of material fact to withstand summary judgment. It is undisputed that Vonage’s allegedly infringing system does not use ATM technology and, therefore, does not contain such a device. Thus, a rational trier of fact could not find based on the summary judgment record that Vonage’s system infringes this claim limitation. As such, summary judgment is granted on the issue of literal infringement.

Nonetheless, summary judgment is not warranted on the issue of infringement of this limitation under the doctrine of equivalents. “Infringement under the doctrine of equivalents requires that the accused product contain each limitation of the claim or its equivalent.” *AquaTex Indus., Inc. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005). An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. *Id.* The analysis focuses on whether the element in the accused device performs substantially the same function in substantially the same way to obtain the same result as the claim limitation. *Id.* (quotation omitted). In performing this analysis, the court must of course view the summary judgment record in the light most favorable to Sprint. Viewed as such, Sprint has raised a genuine issue of material fact sufficient to withstand summary judgment as to whether the Vonage system contains structure equivalent to an ATM interworking multiplexer. The ATM interworking multiplexer disclosed in the ‘294 Patent performs the function of converting the narrowband communication signals into

packet format. According to the deposition testimony submitted by Sprint, the gateways in the Vonage system perform this same function. They also perform this same function in substantially the same way—that is, by receiving 8-bit DS0 signals and assembling them into packets with a header appended thereto. And, both accomplish the same result, which is converting narrowband DS0 signals into packet format and transporting them onto a packet network. Based on this record, a rational trier of fact could conclude that the differences between the ATM interworking multiplexer disclosed in the ‘294 patent and the Vonage gateways are insubstantial. Accordingly, Vonage’s motion for summary judgment is denied based on infringement of this claim limitation under the doctrine of equivalents.

Vonage raised for the first time in its reply brief the argument that Sprint should be barred by prosecution history estoppel from using the doctrine of equivalents to expand the ‘301 Family Patents to capture non-ATM technology. Vonage’s original brief on the issue of non-infringement of these claim limitations under the doctrine of equivalents was directed solely to a function/way/result argument. Vonage did not argue that Sprint had so clearly and unmistakably surrendered claim scope during prosecution of the ‘301 Family Patents that Sprint should be precluded from recapturing through the doctrine of equivalents. Indeed, if Vonage had believed that such was the case, it would not have needed to resort to the function/way/result argument that it raised in its initial brief. It is well settled that “a party seeking summary judgment always bears the initial responsibility of informing the district court of the basis for its motion.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). Thus, Vonage cannot satisfy its initial summary judgment burden by relying on arguments it did

not raise for the first time until its reply brief where Sprint has not had an opportunity to respond to those arguments. *See Green v. New Mexico*, 420 F.3d 1189, 1196-97 (10th Cir. 2005) (“Generally, the nonmoving party should be given an opportunity to respond to new material raised for the first time in the movant’s reply.”); *Minshall v. McGraw Hill Broad. Co.*, 323 F.3d 1273, 1288 (10th Cir. 2003). Accordingly, Sprint’s motion to strike this portion of Vonage’s reply brief is granted.

b. The ‘429 Patent

The parties’ arguments with respect to claim construction and infringement as to the ‘429 Patent are essentially the same as with respect to the ‘294 Patent. Much like the ‘294 Patent, the disputed claim terms in the ‘429 Patent are “identifier” and “interworking unit” (which the parties seem to agree means the same thing as the “interworking *device*” disclosed in the ‘294 Patent). Thus, for essentially the same reasons as stated above,² the court construes those claim terms with respect to the ‘294 Patent, which shares the common specification of the ‘301 Family Patents, to have the same meaning and scope as set forth above with respect to the ‘429 Patent. As such, Vonage’s motion for summary judgment as to the asserted claims in the ‘429 Patent is granted in part and denied in part to the same extent as set forth with respect to the ‘294 Patent.

² The doctrine of claim differentiation applies with equal force with respect to the claim term “identifier” in the ‘429 Patent because it also contains dependent claims (claims 4 and 23) “wherein the identifier is an asynchronous transfer mode [ATM] connection.” ‘429 Patent, col. 25, ll. 66-67 & col. 27, ll. 40-41. Thus, it must be presumed that the claimed “identifier” in the independent claims of the ‘429 Patent is not limited to an ATM VPI/VCI combination.

c. *The '064 Patent*

The disputed claim terms in the '064 Patent are “interworking unit” (which, again, the parties seem to agree means the same thing as the “interworking *device*” disclosed in the '294 Patent) and “asynchronous communication.” With respect to the claim term “interworking unit,” the parties once again incorporate their arguments as to the same claim term in the '294 Patent. For the same reasons, the court also construes the claim term “interworking unit” in the '064 Patent to mean *ATM interworking multiplexer*, grants Vonage’s motion for summary judgment on the issue of literal infringement as to this claim limitation, and denies Vonage’s motion as to the issue of infringement of this claim limitation under the doctrine of equivalents.

The only new issue presented with respect to the '064 Patent is the disputed claim term “asynchronous communication.” Vonage asks the court to construe this claim term to mean *ATM communication*. To help understand the distinction, “asynchronous” is a term of art in the communications field that refers to communications where the transmitting and receiving devices do not communicate based on a synchronized clock. A declaration submitted by Sprint’s expert, Dr. Wicker, is helpful to an understanding of the relevant technology underlying the distinction between “asynchronous communication” and ATM communication. Dr. Wicker explains that one of skill in the art recognizes “asynchronous” as a term of art in the communications field that refers to communications where the transmitting and receiving devices do not share a common clock to facilitate communication. This is opposed to synchronous communications such as the PSTN in which time

synchronization is required to identify data and ensure delivery to its proper destination. To put the matter in context, Dr. Wicker asserts that asynchronous communication in the '301 Family Patents is descriptive of packet communication including ATM, IP, and other well known packet technologies. Such packets are generally communicated without a timing relationship (or synchronized clock) between the sender and receiver. Thus, packet technologies are asynchronous. Consequently, Vonage's argument that the court should construe the claim term "asynchronous communication" to mean *ATM communication* is essentially an attempt to limit the claim term to one particular type of packet communication and, in particular, to the exclusion of the IP packet technology used in the Vonage system.

As Sprint points out, the doctrine of claim differentiation is once again pertinent to the court's construction of this claim language. Dependent claim 6 claims a method "wherein the asynchronous communication is in asynchronous transfer mode [ATM]." '064 Patent, col. 23, ll. 56-57. Thus, a presumption arises against construing the claim term in the manner suggested by Vonage. Vonage has not directed the court's attention to any disclosure in the specification which suggests that the court should construe the specific claim term "asynchronous communication" in the manner urged by Vonage. Instead, Vonage relies on its overriding theory that the written description establishes that the inventions disclosed in the '301 Family Patents generally relate to ATM technology. In the absence of some type of link to the disputed claim language at issue, however, these generalized disclosures are insufficient to overcome the presumption created by the doctrine of claim differentiation. As such, the court declines to construe the claim term in the manner urged by Vonage.

In the absence of Vonage's sought-after claim construction, then, Vonage's motion for summary judgment is denied as to the issue of infringement with respect to this claim limitation. Vonage's motion was premised on its proposed claim construction, which the court has rejected. As such, Vonage has not met its initial summary judgment burden of demonstrating the absence of a genuine issue of material fact and entitlement to judgment as a matter of law.

2. The '605 Family Patents

Vonage's arguments for summary judgment on the asserted claims of the '605 Family Patents are based on its contention that the specification discloses that the invention of the '605 Family Patents relates to a new signal processor which is external to the communications path and selects network elements and/or connections for telephone calls.

a. *The '932 Patent*

Sprint asserts that Vonage's VoIP system infringes claims 1 and 18 of the '932 Patent, both of which are independent claims. Vonage argues that it is entitled to summary judgment on these claims because its processing system does not receive and process a message so as to select a narrowband switch to be used for the subsequent telephonic communication, as required by the asserted claims. Specifically, the claims state as follows:

1. A method for handling a call . . . , the method comprising:
receiving and processing the first message in a processing system
external to narrowband switches to select one of the narrowband switches . .
. .

'932 Patent, col. 22, ll. 12-15.

18. A communications system . . . , the communication system comprising:
a processing system external to narrowband switches and configured to receive and process the first message to select one of the narrowband switches
. . . .

'932 Patent, col. 23, ll. 20-27. Thus, the operative claim language is that the "processing system" must receive and process the first message "to select one of the narrowband switches." The parties do not ask the court to construe the claim terms to give them any particular scope and meaning, and therefore the issue presented is as to infringement only, which is a question of fact. *See PSC Computer Prods., Inc. v. Foxconn Int'l, Inc.*, 355 F.3d 1353, 1357 (Fed. Cir. 2004) (court may proceed directly to the issue of infringement without construing the claims where their meaning is not disputed).

Vonage's reasoning that its processing system does not select a narrowband switch is that the specification defines a switch to be a network element whereas it defines a DS0 to be a connection; the specification distinguishes between the selection of a network element and the selection of a connection; that in an outbound call the signaling gateway in the Vonage system selects the DS0 connection; and therefore there can be no literal infringement because the Vonage processor selects a DS0 connection and not a narrowband switch. To further elaborate on the manner in which the Vonage system operates, Sprint points to the deposition testimony of Rohan Dwarkha, one of Vonage's engineers. He testified that in an outbound call scenario the media gateway (part of the Vonage processing system) plays a role in selecting the DS0 connection, that the DS0 connects the media gateway to the PSTN (narrowband) switch, and that a DS0 is connected to only one media gateway and only one

PSTN switch. Viewing this evidence in the light most favorable to Sprint, a rational trier of fact could find that the processing system's selection of a DS0 connection also constitutes the selection of "one of the narrowband switches," as required by the claim limitation, because the DS0 connection is connected to only one narrowband switch. Indeed, the written description in the '932 Patent discloses this type of scenario as one embodiment of the invention. It states as follows:

There are situations in which the selection of a network element and the selection of a connection signify the same thing. On FIG. 1 for example, instructing first element **131** to use first connection **141** is synonymous with an instruction to connect to second element **132**. **This is because the connection inevitably connects to the element.** The selection of a connection may effectively select a network element, and the selection of a network element may effectively select a connection (or group of connections) to that network element.

'932 Patent, col. 7, ll. 10-19 (emphasis added). Accordingly, Sprint has presented a genuine issue of material fact sufficient to withstand summary judgment on the issue of literal infringement of this claim limitation in the outbound call scenario.

Vonage further contends that there can be no infringement under the doctrine of equivalents because Sprint dedicated "selection of a connection" (as opposed to selection of a narrowband switch) to the public. Under the disclosure-dedication rule, disclosed but unclaimed subject matter is dedicated to the public. *Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co.*, 285 F.3d 1046, 1054 (Fed. Cir. 2002). Under those circumstances, application of the doctrine of equivalents to recapture the subject matter deliberately left unclaimed would conflict with the primacy of the claims in defining the scope of the patentee's right to

exclude. *Id.* In order to dedicate matter to the public, the disclosure in the written description must be specific enough that one of ordinary skill in the art can understand the unclaimed disclosed teaching upon reading the written description. *Pfizer, Inc. v. Teva Pharms. USA, Inc.*, 429 F.3d 1364, 1378 (Fed. Cir. 2005) (quotation omitted). Additionally, the unclaimed matter must have been identified in the patent as an alternative to a claim limitation. *Id.* at 1379. This disclosure-dedication rule furthers the public notice function of patents by prohibiting the patentee from using the doctrine of equivalents to reclaim some specifically-disclosed-but-unclaimed matter. *PSC Computer Prods.*, 355 F.3d at 1359-60.

The written description of the '932 Patent falls far short of disclosing the "selection of a connection" with the requisite specificity that one of ordinary skill in the art would understand it to be unclaimed subject matter. Vonage relies on two disclosures in the specification. One states that in one embodiment, the processing system "selects the network elements and the connections that comprise the communications path." '932 Patent, col. 6, ll. 23-25. The other states that in another embodiment, the processing system "may select only the network elements and not the connections." *Id.* col. 6, ll. 62-63. Vonage's argument does not account for the clarity of the language in the next paragraph, quoted above, that there are situations "in which the selection of a network element and the selection of a connection signify **the same thing**." *Id.* col. 7, ll. 10-12 (emphasis added). Far from disclosing that this subject matter is unclaimed, it discloses that this matter is, to the contrary, claimed. Consequently, Vonage's motion for summary judgment on the issue of

infringement under the doctrine of equivalents based on this claim limitation in the outbound call scenario is denied.

Vonage points out in its reply that Sprint has never contended that the use of the Vonage system on inbound calls infringes the claims of the '932 patent, literally or under the doctrine of equivalents. Indeed, in Sprint's response to Vonage's motion for summary judgment, it does not raise a genuine issue of fact on the issue of infringement of these claim limitations in the inbound call scenario. To this extent, then, Vonage's motion for summary judgment is granted with respect to infringement of this limitation of the claims in the '932 patent in the inbound call scenario.

b. The '561 & '052 Patents' Limitation Requiring a Processing System to Select a Network Code That Identifies a Network Element to Provide Egress from the Packet Communication System

Sprint asserts that Vonage's VoIP system infringes claims 1, 3, 22, 23, 24, 26, 29, 36, and 38 of the '561 Patent, and claims 1, 2, 3, 4, 5, and 11 of the '052 Patent. Claims 1 and 24 of the '561 Patent and claim 1 of the '052 Patent are independent claims; the remainder are dependent claims. The independent claims provide, in relevant part, as follows:

1. A method of operating a **processing system** to control a packet communication system for a user communication, the method comprising:
receiving a signaling message for the user communication from a narrowband communication system into the processing system;
processing the signaling message to select a network code that identifies a network element to provide egress from the packet communication system for the user communication . . .

'561 Patent, col. 22, ll. 12-21 (emphasis added).

24. A method of operating a **processing system** to control a packet communication system for a user communication, the method comprising:
selecting a network code that identifies a network element to provide egress for the user communication **from the packet communication system** to a narrowband communication system . . .

. . . .

. . . and **using the network code to route the user communication** through the packet communication system to the network element . . .

'561 Patent, col. 23, ll. 20-37 (emphasis added).

1. A method of transferring a user communication to a packet communication system, the method comprising:

receiving the user communication into a device;

receiving signaling formatted for a narrowband system into a processing system;

in the processing system, 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** . . .

'052 Patent, col. 22, ll. 10-18 (emphasis added). These patents share a common specification that explains that network codes are typically selected through table look-ups or algorithm solutions. '561 Patent, col. 14, ll. 46-53.

Vonage raises three arguments as to why its system does not infringe these claim limitations. First, it contends that in its system the media gateway and TA, not its processing system, select the network codes. Second, and on a related note, Vonage contends that its system does not infringe the limitation in claim 24 of the '561 Patent that the system must use the network code selected by the processing system to route the user communication. And, third, Vonage contends that in NAT'd calls the processing system selects a network code that identifies an RTP relay, a network element that does not provide egress from the packet communication system.

i. Selection of a Network Code by the Processing System

Vonage's first argument of non-infringement with respect to these claim limitations is that its processing system does not select the network code that identifies the network element to provide egress from the packet communication system. Vonage's theory in this respect is that in an outbound call the Vonage media gateway selects the network code and in an inbound call the Vonage customer's TA selects the network code; neither the media gateway nor the TA are part of the Vonage call processing architecture; therefore the Vonage system does not meet the limitation that the "processing system" select the network code. In so arguing, Vonage essentially contends that its processing system (the inbound and outbound proxies and the signaling gateway) does not select the network code of the egress elements because the egress elements themselves (the media gateway and TA) perform the selection themselves. Sprint does not seem to take issue with Vonage's argument that the media gateway and TA are not part of the Vonage processing system, or that the media gateway and TA are the components that actually select the network code. Instead, Sprint's argument focuses on the fact that the Vonage processing system performs a significant part of the selection of the network code by the media gateway and TA. Sprint contends that the court should give the claim term "select[ing]" the full breadth of its ordinary meaning, including requesting information from other elements and processing the received information.

As the parties do not present this issue as seeking claim construction, the issue presented is as to infringement only, which is a question of fact. Consequently, the court's

task is to compare the limitations set forth in the claim terms to Vonage's accused system. Claim 1 of the '561 Patent claims a method of operating a processing system that includes (among other things) "**processing the signaling message** to select a network code." '561 Patent, col. 22, ll. 18 (emphasis added). Similarly, claim 1 of the '052 Patent claims a method comprising, "in the processing system, **processing the signaling** to select a network code." '052 Patent, col. 22, ll. 15-16 (emphasis added). Neither claim requires that the processing system must actually "select" a network code, but rather that the processing system must merely "process [the signaling] to select" a network code. Viewing the evidence in the light most favorable to Sprint, a rational trier of fact could find that the Vonage processing system (the inbound and outbound proxies and signaling gateway) processes the signaling "to select" a network code, *i.e.*, that the processing system is involved in the selection of the network code. Consequently, a genuine issue of material fact precludes summary judgment on the question of literal infringement with respect to these independent claims.

In contrast, claim 24 of the '561 Patent claims a method of operating a processing system that includes (among other things) "**selecting a network code.**" '561 Patent, col. 23, ll. 23 (emphasis added). As to this claim, then, the processing system must do more than merely process the signal to select the network code; it must actually select the network code. The summary judgment record and arguments presented by the parties establishes that the Vonage media gateway and TA, which are not part of the Vonage processing system, perform the function of selecting the network code. Consequently, Vonage's motion for

summary judgment is granted on the issue of literal infringement as to claim 24 of the '561 Patent.

Vonage further seeks summary judgment under the doctrine of equivalents. Vonage's arguments in this respect are not directed to a lack of evidence that the differences in Vonage's system are insubstantial so as to meet the same function/way/result test. Instead, Vonage argues that its system cannot infringe under the doctrine of equivalents because (1) allowing the claims to encompass Vonage's Media Gateway or TA selecting a network code would violate the "all elements" rule by vitiating this limitation, and (2) during prosecution, Sprint repeatedly emphasized that the "processing system" in its claims must be "external" from the communications path whereas the Vonage Media Gateway and TA are part of the communications path. The court finds both arguments to be without merit.

The "all elements" rule is a limitation on the doctrine of equivalents. *Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1016 (Fed. Cir. 2006), *petition for cert. filed*, 75 U.S.L.W. 3598 (U.S. Apr. 27, 2007) (No. 06-1434). The rule requires that equivalence be assessed on a limitation-by-limitation basis, rather than from the perspective of the invention as a whole, and that no limitation be read completely out of the claim. *Id.* at 1017. Thus, the "all elements" rule forecloses resort to the doctrine of equivalents when "a limitation would be read completely out of a claim—*i.e.*, the limitation would be effectively removed or 'vitated.'" *Id.* This does not mean that the doctrine of equivalents is always foreclosed whenever a claim limitation does not literally read on an element of an accused device, as "such an interpretation of the 'all elements' rule would swallow the

doctrine of equivalents entirely.” *Id.* at 1018. Ultimately, a claim limitation can be said to be vitiated under the “all elements” rule only where “the theory or evidence of equivalence is legally incapable of establishing that the differences between the limitation in the claim and the accused device are insubstantial; *i.e.*, if the theory or evidence is so legally insufficient as to warrant a holding of non-infringement as a matter of law.” *Id.* at 1017. Here, Vonage has not discussed the theory or evidence of equivalence at all. Instead, its only argument in this respect is one sentence, as follows: “to allow the claims to be expanded to encompass Vonage’s Media Gateway or TA selecting a network code would utterly vitiate the limitation that the processing system perform this selection, and so would be a clear violation of the all elements rule.” But, of course, a claim limitation is not vitiated simply because a claim limitation does not literally read on the accused device. In light of this sparse record, Vonage has by no means informed the court of the basis of its motion based on this legal theory sufficiently to establish the absence of a genuine issue of material fact and entitlement to judgment as a matter of law.

Vonage’s prosecution history estoppel argument suffers from the same fundamental flaw. Its argument is so cursory and undeveloped that the court could not even begin to find that Vonage is entitled to judgment as a matter of law based on this theory. For example, Vonage contends that “as described above, throughout the prosecution of the ‘561 and ‘052 Patents and its parent applications, including the ‘780 patent, Sprint repeatedly emphasized that the ‘processing system’ in its claims must be ‘external’ from the communications path.” Aside from the fact that Vonage has not directed the court’s attention to any evidence in the

record pertaining to the prosecution history, Sprint points out that it has never contended that the Vonage processing system can be on the communications path. In the absence of any meaningful discussion to demonstrate that Sprint is now taking an approach that is inconsistent with the relevant prosecution history, then, the court finds Vonage's prosecution history estoppel argument to be without merit at this procedural juncture.

ii. Using the Network Code to Route the User Communication

Vonage next turns to the limitation in claim 24 of the '561 patent that the processing system must not only select a network code, but must also actually use that network code to route the user communication. According to Vonage, in an outbound call scenario its media gateway, not its processing system, selects the network code. Vonage's argument in this respect seems to be a repackaged version of its non-infringement arguments in the preceding section. In other words, Vonage seems to be arguing that the "using the network code to route the user communication" limitation cannot be met literally because the specified "network code" is not selected by the processing system. For the same reasons stated above, then, as to this claim limitation the court grants Vonage's motion for summary judgment on the issue of literal infringement and denies it on the issue of infringement under the doctrine of equivalents.

iii. Egress in a NAT'd Scenario Using an RTP Relay

As to selecting the network code discussed above, each of the asserted independent claims in the '561 and '052 Patents requires the selection of "a network code that identifies a network element to provide egress [for the user communication] from the packet

communication system.” ‘561 Patent, col. 22, ll. 18-21 and col. 23, ll. 23-25; ‘052 Patent, col. 22, ll. 16-18. Vonage contends that its system does not infringe these limitations in a NAT’d call scenario because the identified network element, which is an RTP relay, does not provide egress from the packet communication system; instead of being an egress point an RTP relay is wholly within and is a part of the packet communication system. In response, Sprint explains that it does not contend that the RTP relay is “a network element to provide egress,” but rather that the RTP relay is a pass-through device to facilitate transfer between a Vonage media gateway and a TA that resides behind a firewall (a NAT’d TA).

The summary judgment record, viewed in the light most favorable to Sprint, establishes that to account for a NAT’d TA, the Vonage processing system invokes the use of an RTP relay. For a NAT’d inbound call, the processing system instructs the media gateway to address its user communication packets to the IP address of an RTP relay. The RTP relay then re-addresses the received packets to the TA that the Vonage processing system selected. Packets from the Vonage gateways addressed to a specific IP address of an RTP relay are correspondingly sent to the IP address that identifies the TA. Sprint contends that the IP address of the RTP relay is a “network code”; that the TA selected by the Vonage processing system also is a “network code”; that the network code that identifies the RTP relay is correspondingly replaced with the network code that identifies the TA; thus, the RTP relay merely acts as a pass-through device. For a NAT’d outbound call, the processing system instructs the TA to address its user communication packets to the IP address of an RTP relay. The RTP relay then re-addresses the received packets to the media gateway that

the Vonage processing system selected. Packets from the TA addressed to a specific IP address of an RTP relay are correspondingly sent to the IP address that identifies the media gateway. Again, Sprint contends that the RTP relay merely acts as a pass-through device.

This description of the system creates a genuine issue of material fact precluding summary judgment on the issue of literal infringement. The claim limitations require that the processing system process the incoming signaling message to select a network code (in the case of claim 1 of the '561 Patent and claim 1 of the '052 Patent) or select a network code (in the case of claim 24 of the '561 Patent) that identifies a network element to provide egress. Not only does the Vonage processing system select the IP address (a network code) of the RTP relay (a network element) that does not provide egress, but it also selects the identity of the TA (in an inbound call) and media gateway (in an outbound call) to which the RTP is to re-address the packets. A rational trier of fact could find based on this record that the TA and the media gateway are network elements that provide egress from the system, and therefore the Vonage processing system infringes these claim limitations in a NAT'd scenario because it selects network codes that identify network elements to provide egress from the packet communication system. Accordingly, Vonage's motion for summary judgment on the issue of literal infringement of these claim limitations is denied.

Vonage's motion for summary judgment on the issue of infringement of these claim limitations under the doctrine of equivalents is also denied. According to the summary judgment record, the use of an RTP relay is entirely invisible to the endpoint devices as well as to the end users of the telephone system, as the called and calling parties cannot tell

whether a call is NAT'd. The TA and media gateway operate in the same manner regardless of whether RTP relays are involved. User communications are transported between the Vonage gateways and TAs even when the TA is NAT'd. According to Dr. Wicker's declaration, one of ordinary skill in the art would view any differences in the way the user communications are transferred between end users in NAT'd and non-NAT'd calls to be insubstantial. Based on this evidence, a rational trier of fact could certainly conclude that the Vonage system performs substantially the same function in substantially the same way to obtain the same result as the claim limitations and that the differences between the two are insubstantial. The court further notes that it finds Vonage's cursory argument based on the "all elements" rule to be without merit. Accordingly, Vonage's motion for summary judgment of non-infringement of this claim limitation under the doctrine of equivalents is denied.

c. The '052 Patent's Limitation Requiring Receiving Signaling Formatted for a Narrowband System

Vonage seeks summary judgment that its inbound calls do not infringe the '052 patent because the Vonage system does not meet the limitation of "receiving signaling formatted for a narrowband system into a processing system," as required by independent claim 1. '052 Patent, col. 22, ll. 13-14. Vonage contends that in the inbound scenario it is the Vonage SIP gateway, not the processing system, that receives signaling formatted for a narrowband switch. In response, Sprint states that it does not contend that the Vonage system infringes in the inbound scenario using an SIP gateway. Accordingly, Vonage's motion for summary

judgment is granted as unopposed as to the asserted claims of the '052 Patent to the extent that infringement is asserted against the Vonage system in the inbound scenario using an SIP gateway.

Sprint further explains that its allegations have focused on implementations within the Vonage system that do not employ an SIP gateway. Specifically, the Vonage system implements certain inbound calls through a Virginia point-of-presence using a Sonus architecture that includes a separate signaling gateway. Sprint contends that, in the Sonus architecture, the signaling gateway receives signaling directly form a narrowband network in a narrowband SS7 format. Thus, for inbound calls in Vonage's Sonus implementation, the Vonage processing system (specifically, the signaling gateway) receives signaling formatted for a narrowband system. In Vonage's reply, it raised for the first time the argument that it is entitled to summary judgment of non-infringement in the inbound call scenario involving the Sonus architecture in situations where the Vonage system employs an RTP relay, or NAT'd calls. Once again, the court will not consider this argument because it was not raised for the first time until Vonage's reply. Dr Wicker's supplemental expert report, dated April 27, 2007, disclosed that Sprint was asserting infringement of the claims of the '052 Patent with respect to the Sonus architecture, not the architecture involving an SIP gateway. Thus, if Vonage wished to seek summary judgment on the issue of non-infringement for inbound calls where the Vonage system employs an RTP relay, it should have done so in its opening brief, not its reply.

In Vonage's opening brief, it also moved for summary judgment on claim 1 of the '561 Patent on the same grounds as with respect to claim 1 of the '052 Patent. Significantly, however, claim 1 of the '561 Patent contains a different limitation than claim 1 of the '052 Patent. The limitation in the '561 Patent claims a method where the processing system "receiv[es] a signaling message for the user communication **from a** narrowband system," '561 Patent, col. 22, ll. 15-17 (emphasis added), not "*formatted for* a narrowband system." This is distinct from the limitation in the '052 Patent, which requires the signaling to be formatted for a narrowband system. Despite this critical distinction, Vonage's sole argument with respect to non-infringement of this claim limitation in its opening brief was that in the inbound scenario using an SIP gateway, the Vonage system does not infringe for the same reasons set forth with respect to claim 1 of the '052 Patent. In the absence of any meaningful discussion by Vonage of even the applicable claim language, Vonage has not met its initial summary judgment burden of informing the court of the basis for its motion so as to demonstrate the absence of a genuine issue of material fact and entitlement to judgment as a matter of law. Apparently later recognizing this deficiency in its opening brief, Vonage devoted four pages of its reply brief to explaining why its system does not infringe this claim limitation. Again, the court will not consider these arguments raised for the first time in Vonage's reply brief and Sprint's motion to strike this argument is granted. Accordingly, this aspect of Vonage's motion is denied.

d. The '572 Patent's Limitation Regarding Selecting a Second Connection

Sprint asserts that Vonage's VoIP system infringes claims 1, 2, 5, 6, 14, 38, 39, 42, 43, and 51 of the '572 Patent. Claims 1 and 38 are independent claims; the remainder are dependent claims. These claims state, in relevant part, as follows:

1. A method for processing telecommunications signaling that comprises:

(a) receiving in-band telecommunications signaling into a first telecommunications device coupled to a first connection;

(b) in the first telecommunications device, converting the in-band telecommunications signaling to an out-of-band telecommunications signaling message;

(c) **routing the out-of-band telecommunications signaling message from the first telecommunications device to a processor that is external to the first telecommunications device and a second communication device;**

(d) **processing the out-of-band telecommunications signaling message in the processor to select a second connection** coupled to the first telecommunications device and to the second telecommunications device;

(e) **generating a first control message and a second control message indicating the second connection . . .**

'572 Patent, col. 22, ll. 16-34 (emphasis added).

38. A system for processing telecommunications is signaling that comprises:

. . . .

a processor that is external to the first telecommunications device and a second telecommunications device and configured to receive the out-of-band telecommunications signaling message from the first telecommunications device and to process the out-of-band telecommunications signaling message to select the second connection, to generate the first control message and a second control message that indicate the second connection . . .

'572 Patent, col. 23, ll. 51-67 to col. 24, ll. 1-3 (emphasis added).

The operative claim limitations upon which Vonage's non-infringement argument focuses is that "a processor that is external" to the communication devices must process the incoming signaling message "to select a second connection" and generate control messages

that indicate that connection. The parties discuss these claim limitations in an outbound call scenario only. Vonage's argument in support of its motion for summary judgment on this issue is twofold: that its processing system does not "select" the second "connection." Its argument as to the limitation "select" is without merit for the same reasons discussed above in Section III(C)(2)(b)(i) with respect to the analogous limitations of claim 1 of the '561 Patent and claim 1 of the '052 Patent, which is essentially that the claim terms do not explicitly require that the processor actually select the second connection, but instead only that the processor "process" the signaling message "to select" the second connection. In other words, the processor only needs to be involved in processing the signaling message to select the second connection. Thus, a rational trier of fact could conclude that the Vonage processing system meets this limitation. Vonage's argument as to the limitation "connection" is essentially a repeat of its non-infringement argument with respect to the '932 Patent. For the same reasons as set forth above in Section III(C)(2)(a), then, the court rejects that argument. The court also rejects Vonage's argument of non-infringement under the doctrine of equivalents based on the "all elements" rule for the same reasons as set forth previously with respect to other claim limitations. And, the court grants Sprint's motion to strike another argument raised by Vonage for the first time in its reply brief, this time as to Vonage's "connectionless Internet" argument. Accordingly, Vonage's motion for summary judgment on the asserted claims of the '572 Patent is denied as to outbound calls.

On the other hand, Vonage's motion is granted as to inbound calls. Vonage correctly points out that Sprint's arguments as to infringement of the asserted claims in the '572 Patent

are directed only to the outbound call scenario. Thus, Sprint's response to Vonage's motion for summary judgment does not raise a genuine issue of fact on the issue of infringement of these claim limitations in the inbound call scenario.

IV. Sprint's Motion for Partial Summary Judgment

Sprint's motion for partial summary judgment is directed to certain affirmative defenses and counterclaims asserted by Vonage in this case. Sprint relies on essentially three predominant theories to support its motion. First, Sprint argues that Vonage did not produce sufficient evidence during discovery to support many of these defenses. Second, Sprint contends that certain of Vonage's affirmative defenses are legally defective. And, third, Sprint contends that Vonage's expert is not qualified to provide testimony on the subject of non-infringement.

A. Statement of Material Facts³

1. The Written Description, Enablement, and Definiteness Requirements of 35 U.S.C. § 112

Vonage contends that the asserted patents are invalid pursuant to 35 U.S.C. § 112 for failure to comply with the written description, enablement, and definiteness requirements. Pretrial Order (doc. #207), ¶ 7(a)(6), at 18. Vonage's amended answers in this case further explain the basis for this defense. Therein, Vonage asserted as its "Second Affirmative

³ Consistent with the well established standard for evaluating a motion for summary judgment, the following facts are either uncontroverted or stated in the light most favorable to Vonage, the nonmoving party.

Defense” that the asserted patents are invalid because they fail to point out and distinctly claim that part or portion of the subject matter disclosed in the patents’ specifications that the named inventor regarded as the invention or improvement upon the prior art, and Vonage asserted as its “Seventh Affirmative Defense” that Sprint’s complaint is barred by the doctrine that a patentee may not broaden the claims by describing the product in terms of function.

During discovery in this case, Sprint sought to ascertain the nature of Vonage’s evidence to support these asserted affirmative defenses. Sprint’s Interrogatory No. 5 asked Vonage to “[d]escribe, in detail, the full factual basis and explanation for Vonage’s contention that Sprint’s Asserted Patents are invalid, void and/or unenforceable.” Vonage responded, in relevant part, as follows:

Vonage asserts that the apparent scope of the asserted claims as set forth in Mr. Wicker’s January 12, 2007 expert report of infringement is sufficiently broad such that . . . one or more of the claims of the asserted patents fail to particularly point out and distinctly claim the subject matter to which the applicant regards as the invention pursuant to 35 U.S.C. § 112. **Vonage will provide further details of the invalidity of the asserted claims under [§ 112] in its expert report due on February 23, 2007.**

In Vonage’s second supplemental response to this interrogatory, Vonage specifically “incorporate[d] by reference the February 28, 2007 Expert Invalidity Report of Frank R. Koperda and its accompanying exhibits and attachments, which *inter alia* set forth opinions that each asserted claim of . . . each of the patents-in-suit is not valid under one or more sections of Title 35 of the U.S. Code.” Mr. Koperda’s expert invalidity report provides no opinion regarding 35 U.S.C. § 112, ¶ 2 (Vonage’s Second Affirmative Defense) or “the

doctrine that a patentee may not broaden his claims by describing the product in terms of function” (Vonage’s Seventh Affirmative Defense). Vonage does not dispute this, but states that it served a supplemental response to this interrogatory concurrently with the filing of its opposition to Sprint’s motion for partial summary judgment.

2. Laches (Including Prosecution Laches), Estoppel, and Acquiescence

Vonage asserts that the asserted patents are unenforceable by virtue of the doctrines of laches (including prosecution laches), estoppel, and acquiescence. Pretrial Order (doc. #207), ¶ 7(a)(7) & (8), at 18. Vonage’s amended answers in this case further explain the basis for these defenses. Originally, all of these defenses were set forth in Vonage’s Fifth Affirmative Defense, which asserted that Sprint’s complaint was barred by the doctrines of laches, estoppel, and acquiescence.

In attempting to ascertain the evidentiary basis for these affirmative defenses, Sprint served Vonage with its Interrogatory No. 6, asking Vonage to “[d]escribe, in detail, the full factual basis and explanation for Vonage Holding Corp.’s contention that Plaintiff’s claim is barred, in whole or in part, by the doctrine of laches, estoppel and unclean hands.” Vonage responded, in relevant part, as follows:

Subject to and without waiving these objections, Vonage Holdings states that Sprint’s Asserted Patents issued as early as 2001, and because Sprint was aware of Vonage Holdings and its VoIP activities since that time, its decision to wait until 2005 to initiate the present law suit [sic] amounts to inexcusable delay and prejudice to Vonage Holdings.

Vonage later supplemented its response to this interrogatory, stating as follows:

[T]o expand on Vonage's response, with respect to the Affirmative Defense of "laches, estoppel and acquiescence" Vonage states that Sprint knew of Vonage's activities [sic] in 2001, at the same time as the Asserted Patents were issuing, yet decided to wait until 2005 to file suit. Sprint therefore unreasonably and inexcusably delayed in filing suit, and consequently, Sprint is barred from pursuing its claim by the doctrine of laches.

The asserted patents in this case issued in 2001, 2002, and 2003. Specifically, the '064 and '572 Patents issued in October of 2001, the '932 and '052 Patents issued in September and October of 2002, the '052 and '561 Patents issued in October of 2003, and the '294 Patent issued in December of 2003. Vonage states that it served a supplemental response to this interrogatory concurrently with the filing of its opposition to Sprint's motion for partial summary judgment.

As stated previously, the pretrial order in this case includes a defense of prosecution laches. Sprint points out, however, that Vonage did not raise the specific defense of prosecution laches (as opposed to the general laches defense) in its answers, its interrogatory responses, or its expert reports. It is undisputed that Sprint produced copies of the patents and their prosecution histories on February 10, 2006. Additionally, on February 15, 2007, Sprint produced copies of the prosecution histories of the parent applications as well as prosecution histories of related patents. Vonage first specifically disclosed its prosecution laches defense in the parties' preliminary pretrial order, which was submitted to the court on May 7, 2007. Vonage disputes Sprint's characterization of its laches defense, contending that the general laches defense Vonage asserted in its original responsive pleading encompassed a defense of prosecution laches. Vonage further states that it served a

supplemental response to Sprint's Interrogatory No. 6 concurrently with the filing of its opposition to Sprint's motion for partial summary judgment.

3. Unclean Hands and Patent Misuse

Vonage contends that the asserted patents are unenforceable by virtue of the doctrines of unclean hands and patent misuse. Pretrial Order (doc. #207), ¶ 7(a)(9) & (11), at 18-19. In Vonage's amended answers in this case, Vonage asserted unclean hands as its "Sixth Affirmative Defense" and patent misuse as its "Eighth Affirmative Defense." In response to Sprint's Interrogatory No. 5 (set forth above) as to Vonage's invalidity contentions, Vonage responded:

Vonage Holdings states that it cannot fully respond to this Interrogatory until such time as Vonage Holdings receives Sprint's infringement contentions. To the extent Vonage Holdings understands the scope of Sprint's Asserted Patents, Vonage Holdings asserts that Sprint's Asserted Patents do not cover VoIP technology. Thus, Sprint's overbroad reading of its Asserted Patents to cover VoIP technology constitutes patent misuse . . .

In response to Sprint's Interrogatory No. 6 (set forth above), Vonage stated as follows:

Finally, with respect to unclean hands, Vonage states that Sprint has impermissibly broadened the "physical or temporal scope" of the patent grant with anticompetitive effect. That is, Sprint is now asserting a claim scope that is neither supported by the specification of the Asserted Patents nor the language of the claims themselves. As such, Sprint has impermissibly broadened the scope of its patent grant and, by attempting to enforce these expanded claims against Vonage, Sprint is committing patent misuse and has unclean hands.

Again, Vonage points out that it served a supplemental response to this interrogatory concurrently with the filing of its opposition to Sprint's motion for partial summary judgment.

4. Statutory Marking and Notice Requirements of 35 U.S.C. § 287

The parties stipulated in the Pretrial Order that Sprint is not aware of any product or service made, sold, or offered for sale by Sprint that is within the scope of any claim of the Asserted Patents. Vonage nonetheless points to the deposition testimony of Michael J. Setter, Esquire, that he recalled seeing prototypes of the systems disclosed in the patent applications.

5. Non-Infringement

Vonage asserts that its VoIP system does not infringe the asserted patents in that it does not meet every limitation of any claim of any of the asserted patents, either literally or under the doctrine of equivalents. Pretrial Order (doc. #207), ¶ 7(a)(1) & (2), at 18. During discovery in this case, Sprint's Interrogatory No. 7 asked Vonage to "[d]escribe, in detail, the full factual basis and explanation for Vonage's contention that Vonage has not infringed any of the Asserted Patents." Vonage responded, in relevant part, as follows:

Vonage incorporates by reference the February 28, 2007 Expert Non-infringement Report of Joel M. Halpern and its accompanying exhibits and attachments, which *inter alia* set forth opinions that each asserted claim of the [sic] each of the patents-in-suit is not infringed by Vonage, either literally or under the doctrine of equivalents.

Vonage's subsequent supplemental responses to Sprint's interrogatories further reiterated that Mr. Halpern's expert report contains Vonage's evidence of non-infringement.

B. Legal Standard for Summary Judgment

The legal standard for summary judgment is set forth in Section II(B)(2) above. The only difference is that of course rather than viewing the facts in the light most favorable to

Sprint as was the case with respect to Vonage's motion for summary judgment, as to Sprint's motion for partial summary judgment the court views the facts in the light most favorable to Vonage.

C. Analysis

For the reasons explained below, Sprint's motion is granted in its entirety except with respect to (1) the statutory marking and notice requirements set forth in 35 U.S.C. § 287, and (2) Vonage's defense and counterclaim of non-infringement. The affidavit submitted by Vonage does not demonstrate that Vonage is entitled to relief under Rule 56(f) with respect to its equitable defenses. Implicit in the court's denial of Sprint's motion on the issue of non-infringement is the fact that the court will also deny Sprint's motion to exclude Mr. Halpern's non-infringement opinions.

1. The Written Description, Enablement, and Definiteness Requirements of 35 U.S.C. § 112

Sprint's request for summary judgment as to Vonage's "regards as" affirmative defense under 35 U.S.C. § 112, ¶ 2 is based on Vonage's failure to identify the factual basis for this defense. Vonage does not dispute that the only evidence it identified during discovery in response to Sprint's interrogatory in support of this defense is Mr. Koperda's expert invalidity report, and that Mr. Koperda's report provided no opinion or analysis of this defense. Thus, Sprint has met its initial summary judgment burden of pointing out to the court a lack of evidence in support of Vonage's "regards as" defense. Consequently, the

burden shifts to Vonage to set forth specific facts showing a disputed issue of material fact on this issue.

Title 35 U.S.C. § 112 requires a patent specification to “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. To satisfy this requirement, the claim, read in light of the specification, must apprise those skilled in the art of the scope of the claim. *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340 (Fed. Cir. 2005). This is a definiteness requirement by which the standard for indefiniteness is somewhat high; a claim is not indefinite merely because its scope is not ascertainable from the face of the claims. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1342 (Fed. Cir. 2003). Rather, a claim is indefinite under § 112, ¶ 2 if it is “insolubly ambiguous, and no narrowing construction can properly be adopted.” *Id.* (quotation omitted). A claim is not indefinite if it is amenable to construction, even if the task is formidable and the conclusion is one over which reasonable persons will disagree. *Aero Prods. Int’l, Inc. v. Intex Recreation Corp.*, 466 F.3d 1000, 1016 (Fed. Cir. 2006). Thus, it is only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction that the court must declare it invalid as indefinite under § 112, ¶ 2. *Id.*; *Metabolife Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366 (Fed. Cir. 2004).

In response to Sprint’s motion for partial summary judgment on this affirmative defense, Vonage relies on *In re Conley*, 490 F.2d 972, 976 (Fed. Cir. 1974), for the proposition that there must be some extrinsic evidence to show that the claims were not

directed to subject matter that the inventor regards as his invention. Vonage directs the court to evidence which it contends shows that Mr. Christie regarded his invention as being directed to an ATM system rather than including the Internet as a component. This evidence consists of documents authored by Mr. Christie as well as the deposition testimony of a Sprint employee and one of Sprint's patent attorneys. Vonage's argument in this respect is misplaced. *In re Conley* involved an appeal from the rejection of a patent application on the ground of indefiniteness. The court noted that the "regards as" requirement has been "relied upon in cases where some material submitted by the applicant, other than his specification, shows that a claim does not correspond in scope with what he regards as his invention." *Id.* at 976. Unlike *In re Conley*, in this case the patents-in-suit have already issued. Once the patent issues, the determination of whether a claim complies with § 112, ¶ 2 is drawn from the court's performance of its duty as the construer of patent claims. *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1380 (Fed. Cir. 2000). As such, extrinsic evidence which would be inadmissible in a claim construction analysis may not be used to invalidate issued claims under § 112, ¶ 2. *Id.* (holding the district court erred in using the inventor's deposition testimony to invalidate the claims under the "regards as" portion of the statute). At this point, in an analysis under § 112, ¶ 2, the court must view the claims and written description objectively from the standpoint of a person of skill in the art. *Id.*

Viewed from that standpoint, Vonage's "regards as" defense is without merit. Vonage has not directed the court's attention to any particular claim term whose meaning remains insolubly ambiguous without a discernible meaning after all reasonable attempts at

construction. Instead, Vonage argues that its defense would be obviated if the court were to adopt its proposed constructions for claim terms such as “identifier” and “interworking device” because if the court were to adopt its proposed claim constructions then the terms would be commensurate with the subject matter Mr. Christie regarded as his invention; if, on the other hand, the court construes the claim terms to encompass non-ATM technology then this is beyond the scope of what Mr. Christie regarded as his invention. But, the fact that the parties may disagree on the correct meaning of those claim terms does not render them indefinite. The critical point is that Vonage has not directed the court’s attention to any particular claim terms that it contends are not amenable to construction, which as explained above is the applicable legal standard for invalidity under § 112, ¶ 2. The only claim construction arguments raised by Vonage that fall within the rubric of the subject matter to which Vonage now refers are those raised with respect to the ‘301 Family Patents relating to ATM technology. For the reasons set forth above with respect to Vonage’s motion for summary judgment, the court finds those claim terms to be amenable to claim construction. As such, Vonage has not met its summary judgment burden of demonstrating the existence of a genuine issue of material fact sufficient to withstand summary judgment. Accordingly, Sprint’s motion for partial summary judgment is granted as to Vonage’s invalidity defense under the “regards as” provision of § 112, ¶ 2.

The parties agree that their arguments under the “regards as” provision of § 112, ¶ 2 apply with equal force to Vonage’s related defense that the patents are unenforceable by virtue of the doctrine that a patentee may not broaden its claims by describing the product

in terms of function. For the same reasons as set forth with respect to the parties' § 112, ¶ 2 arguments, then, Sprint's motion for partial summary judgment is also granted as to Vonage's defense that the patents are unenforceable by virtue of the doctrine that a patentee may not broaden its claims by describing the product in terms of function.

2. Laches (Including Prosecution Laches), Estoppel, and Acquiescence

Sprint seeks summary judgment on Vonage's defenses of laches, estoppel, and acquiescence on the grounds that Vonage's discovery responses make clear that these defenses all rely on the same set of operative facts, which is Sprint's allegedly unreasonable and inexcusable delay in filing the current lawsuit against Vonage. Sprint contends that any arguable delay by Sprint in filing suit does not provide a sufficient evidentiary basis to support Vonage's laches, estoppel, and acquiescence defenses. In response to this argument, Vonage seeks relief under Rule 56(f) based on an affidavit submitted by counsel for Vonage stating that Vonage needs further discovery as to certain "competitive documents" as well as licensing and related agreements between Sprint and Cisco Systems, Inc. Vonage further contends that its originally pled laches defense encompassed the defense of prosecution laches, while Sprint contends that Vonage should be precluded from relying on this evidence as to prosecution laches.

a. *Vonage's Rule 56(f) Motion as to Laches, Estoppel and Acquiescence*

Rule 56(f) grants a court discretion to deny summary judgment or order a continuance when the nonmovant submits an affidavit averring that it possesses insufficient facts to oppose a summary judgment motion. Fed. R. Civ. P. 56(f). The central tenet of this rule is

that summary judgment should be refused where the nonmoving party has not had the opportunity to discover information that is essential to its opposition. *Burke v. Utah Transit Auth.*, 462 F.3d 1253, 1264 (10th Cir. 2006), *cert. denied*, 127 S. Ct. 2250 (2007). The affidavit must identify the probable facts not available and what steps have been taken to obtain these facts, and it must explain how additional time will enable it to rebut the movant's allegations of no genuine issue of fact. *Hackworth v. Progressive Cas. Ins. Co.*, 468 F.3d 722, 732 (10th Cir. 2006), *cert. denied*, 127 S. Ct. 2883 (2007).

Vonage's Rule 56(f) affidavit is directed to essentially two categories of documents: (1) so-called "competitive documents," and (2) licensing and related agreements between Sprint and Cisco Systems, Inc. Turning first to the competitive documents, Vonage contends that it has sought on multiple occasions documents relating to any competitive analyses performed by Sprint with regard to Vonage and other providers of VoIP telephony systems, cable telephony systems, or alternative systems. Counsel for Sprint repeatedly acknowledged the existence of such documents, on multiple occasions assured counsel for Vonage that the documents would be forthcoming, and yet had failed to produce the documents as of the date Vonage filed its Rule 56(f) affidavit. Vonage contends that these documents are likely to present the most candid and contemporaneous evidence of when Sprint became aware of Vonage as a competitor and when Sprint became aware of what Sprint alleges as Vonage's infringing activity. Vonage categorically argues that these issues are critical to Vonage's defenses of laches, estoppel, acquiescence, and unclean hands. It raises no further legal argument, except to cite a portion of *Gasser Chair Co. v. Infanti Chair Manufacturing Corp.*,

60 F.3d 770 (Fed. Cir. 1995), in which the Federal Circuit addressed a laches defense. The portion of the affidavit which pertains to the competitive documents concludes that these documents “are highly relevant to a necessary element to [sic] Vonage’s laches defense.”

The other aspect of Vonage’s Rule 56(f) affidavit addresses licensing and related agreements between Sprint and Cisco Systems, Inc. Vonage built its VoIP telephony system with the technical advice of, and using components purchased from, Cisco. The affidavit states that Vonage made extensive and persistent requests for all documents referring to or relating to contracts and licenses relating to the technology in the asserted patents. In January of 2007 Sprint produced fully executed agreements between Sprint and Cisco which included the following: an Alliance Agreement reflecting an extensive alliance between Sprint and Cisco for the joint development and ownership of products and intellectual property relating to the asserted patents; a License Agreement by which Sprint agreed to license to Cisco numerous patents relating to the JCS2000 (JCS presumably stands for Joe Christie System) system and covenanted not to sue Cisco customers for infringement of any patent for any invention conceived of prior to the date of the agreement; a Statement of Work detailing extensive obligations between Sprint and Cisco regarding this joint development effort; and a Purchase Agreement providing the terms of any sales of products between Cisco and Sprint. These agreements included a covenant by Sprint not to sue any Cisco customer for infringement of Sprint’s patents during an “Immunity Period.” The patents to which the covenant not to sue applies includes the patents Sprint now accuses Vonage of infringing, and the Immunity Period extended the covenant not to sue into the period Sprint alleges

Vonage's VoIP telephony system infringed the asserted patents. Vonage contends that this evidence "estops Sprint from its claims of infringement against Vonage" and raises genuine issues of material fact as to Vonage's defenses of laches, estoppel, acquiescence, and unclean hands. Vonage explains that it cannot present this evidence in support of its opposition to Sprint's motion for summary judgment because Magistrate Judge Waxse struck from the pretrial order all references to the Sprint/Cisco agreements, including Vonage's contentions in support of its defense of estoppel.⁴

Having examined the nature of the evidence that Vonage contends it needs to rebut Sprint's allegations concerning the absence of a genuine issue of material fact on Vonage's equitable defenses, the court will examine the relevance of these two categories of evidence as it pertains to each of Vonage's defenses of laches, estoppel, and acquiescence.

i. Laches

To successfully invoke the defense of laches, a defendant must prove (1) that the plaintiff delayed filing suit for an unreasonable and inexcusable length of time from the time the plaintiff knew or reasonably should have known of its claim against the defendant, and (2) the delay resulted in material prejudice to the defendant. *A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1032 (Fed. Cir. 1992) (en banc). Here, the evidence discussed in Vonage's Rule 56(f) affidavit that is arguably relevant to these two factors is the competitive documents because they could establish when Sprint became aware of what

⁴ This issue is discussed in detail in Section V, *infra*.

Sprint alleges as Vonage's infringing activity. Thus, this information could theoretically reveal the extent of Sprint's delay in filing suit. Importantly, however, the earliest that an infringement suit could have been brought was the patents' issuance dates. *State Contracting & Eng'g Corp. v. Condotte Am., Inc.*, 346 F.3d 1057, 1065-66 (Fed. Cir. 2003) (laches period does not begin to run until the patent issues); *Meyers v. Asics Corp.*, 974 F.2d 1304, 1307 (Fed. Cir. 1992) (same). Here, the first of the patents-in-suit issued in October of 2001 and the last issued in December of 2003. Sprint filed this lawsuit on October 4, 2005. Consequently, the summary judgment record already establishes that the maximum laches period is four years.

Vonage's Rule 56(f) affidavit does not state how additional discovery will allow it to establish the two elements of a laches defense, *i.e.*, that Sprint's delay in filing suit was unreasonable and inexcusable or that it was materially prejudiced by the delay. *See State Contracting & Eng'g Corp.*, 346 F.3d at 1065-66 (where period of delay is less than six years prejudice is not presumed and defendant has the burden to prove it was materially prejudiced by the delay). In short, Vonage's affidavit does not state how additional time and material would allow it to rebut Sprint's allegations concerning the absence of a genuine issue of fact to withstand summary judgment. The only purpose for which Vonage seeks the competitive documents (determining the maximum laches period) is already established by the existing summary judgment record. Vonage's Rule 56(f) motion is therefore denied as to the defense of laches. Furthermore, the existing summary judgment record does not present a genuine

issue of material fact as to either of the key elements necessary to support Vonage's laches defense. Accordingly, Sprint's motion for summary judgment is granted on this defense.

ii. Estoppel

"Equitable estoppel may be imposed in a patent case when a patentee induces another party to believe that it will not sue that party for infringement." *A.C. Aukerman Co.*, 960 F.2d at 1042. The evidence discussed in Vonage's Rule 56(f) affidavit which is arguably relevant to this defense is the Sprint/Cisco documents because the terms allegedly contained in that series of agreements might lead an alleged infringer such as Vonage to believe that Sprint would not sue for infringement. As with Vonage's affidavit concerning the competitive documents and its laches defense, Vonage's affidavit concerning the Sprint/Cisco documents does not state how additional discovery would allow it to rebut Sprint's allegations concerning the absence of a genuine issue of fact on one of the key elements of an estoppel defense. A party raising equitable estoppel as an affirmative defense to patent infringement must prove three elements: (1) that the patentee communicated something in a misleading way, either by words, conduct, or silence; (2) that the accused infringer relied upon that communication; and (3) that the accused infringer would be harmed materially if the patentee is later permitted to assert any claim inconsistent with his earlier conduct. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n*, 366 F.3d 1311, 1324 (Fed. Cir. 2004); *A.C. Aukerman Co.*, 960 F.2d at 1041. Even if the court were to accept the proposition that the Sprint/Cisco documents satisfied the first of these elements (*i.e.*, they constituted a misleading communication), Vonage's Rule 56(f) affidavit belies any

suggestion that the second of these elements (reliance on them) could plausibly be satisfied in this case. This reliance element requires Vonage to “show that, in fact, it substantially relied on the misleading conduct of the patentee in connection with taking some action.” *A.C. Aukerman Co.*, 960 F.2d at 1042-43. If the alleged “misleading conduct” underlying Vonage’s estoppel claim is the Sprint/Cisco documents, then Vonage must have been aware of these documents in order for Vonage to have substantially relied on them in taking action. The very nature of Vonage’s Rule 56(f) affidavit, however, is to the effect that Vonage was unaware of the Sprint/Cisco documents until late in this litigation. Accordingly, Vonage’s Rule 56(f) motion is also denied as to the defense of estoppel. And, Sprint’s motion for summary judgment is granted on this defense because the record demonstrates the absence of a genuine issue of material fact sufficient to withstand summary judgment as to the essential element of reliance.

iii. Acquiescence

Vonage has raised no argument, expressly or implicitly, legal or factual, to explain how the evidence set forth in its Rule 56(f) affidavit would be pertinent to its asserted acquiescence defense. Consequently, it has not shown that additional discovery would allow it to rebut Sprint’s allegations concerning the absence of a genuine issue of fact to withstand summary judgment. Vonage’s Rule 56(f) motion is therefore denied as to the defense of acquiescence and Sprint’s motion for summary judgment is granted on this defense.

b. *Prosecution Laches*

Sprint seeks summary judgment on Vonage's defense of prosecution laches on the grounds that Vonage asserted this defense for the first time in its defenses section of the preliminary pretrial order, which was submitted to the court a week after discovery closed. Specifically, Vonage pled a generalized "laches" defense and stated in its responses to Sprint's Interrogatory No. 6 that its laches defense was based solely on Sprint's asserted unreasonable and inexcusable delay in filing suit. In response to Sprint's motion for summary judgment on this defense, Vonage contends that its pleading of a laches defense was sufficient to also encompass a defense of prosecution laches. Vonage sets forth pages of detailed argument and authorities in support of its argument that a genuine issue of material fact exists precluding summary judgment on its prosecution laches defense.

The court will assume, without deciding, that Vonage's assertion of a general laches defense in its amended answers was sufficient to also set forth the defense of prosecution laches. Even so, it is important to note that the factual underpinnings of these two defenses are quite distinct. Laches is concerned with a delay in bringing suit. It may exist where the plaintiff's neglect or delay in bringing suit, taken together with lapse of time and other circumstances, causes prejudice to the defendant and operates as an equitable bar. *A.C. Aukerman Co.*, 960 F.2d at 1028. Prosecution laches, on the other hand, is concerned with a delay in patent prosecution. It may render a patent unenforceable when it has issued only after an unreasonable and unexplained delay in prosecution. *Symbol Techs., Inc. v. Lemelson Med., Educ. & Research Foundation, LP*, 422 F.3d 1378, 1384-85 (Fed. Cir. 2005). Prosecution laches is a doctrine that is to "be applied only in egregious cases of misuse of

the statutory patent system.” *Id.* at 1385. Sprint’s Interrogatory No. 6 sought to discover the factual basis and explanation for Vonage’s affirmative defense of laches. Vonage responded that its defense was based on Sprint’s asserted unreasonable and inexcusable delay in filing suit. As such, the summary judgment record presented by the parties reflects that the only laches theory disclosed by Vonage during discovery was a general laches defense, not a prosecution laches defense. Notably absent from Vonage’s memorandum in opposition to Sprint’s motion for summary judgment on the prosecution laches defense is any explanation as to why Vonage did not disclose its intent to assert this defense in its response to Sprint’s Interrogatory No. 6 or a timely supplement thereto.

This situation is precisely the type sought to be avoided by the supplementation requirement set forth in Rule 26(e)(2) of the Federal Rules of Civil Procedure. That rule imposes a continuing duty to amend written discovery responses, as follows:

A party is under a duty seasonably to amend a prior response to an interrogatory . . . if the party learns that the response is in some material respect incomplete or incorrect and if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing.

Fed. R. Civ. P. 26(e)(2); *see Rodriguez v. IBP, Inc.*, 243 F.3d 1221, 1229 (10th Cir. 2001) (party is under a continuing duty to supplement incomplete information disclosed in interrogatories). Vonage’s belated assertion of a prosecution laches defense is a clear violation of this rule. Sprint produced copies of the patents-in-suit and their prosecution histories on February 10, 2006, and produced copies of the prosecution histories of the parent applications as well as prosecution histories of related patents on February 15, 2007. Yet,

Vonage did not disclose any information which would have led Sprint to believe that Vonage's laches defense pertained to anything other than Sprint's asserted delay in filing the lawsuit until Vonage first disclosed its prosecution laches defense in the parties' original preliminary pretrial order, which was submitted to the court on May 7, 2007. This cannot reasonably be considered to be a "seasonabl[e]" amendment of its interrogatory response. Additionally, this belated disclosure, as well as the supplemental response Vonage submitted to Sprint in connection with its opposition to Sprint's motion for summary judgment more than a month later, clearly violated the scheduling order in this case, which required a final supplemental response to Sprint's interrogatory forty days before the discovery deadline. *See* Scheduling Order (doc. #48), ¶ 2(i), at 6. This deadline was May 1, 2007, and thus forty days prior would have been March 21, 2007. This was well over a month after Sprint had produced the key documents upon which Vonage's prosecution laches defense is based. It was not until May 7, 2007, that the full factual basis and explanation for Vonage's laches defense was made known during the discovery process.

"A party that without substantial justification fails . . . to amend a prior response to discovery as required by Rule 26(e)(2), is not, unless such failure is harmless, permitted to use as evidence at trial, at a hearing, or on a motion any witness or information not so disclosed." Fed. R. Civ. P. 37(c)(1). The determination of whether a Rule 26 violation is justified or harmless is entrusted to the broad discretion of the district court. *Jacobsen v. Deseret Book Co.*, 287 F.3d 936, 953 (10th Cir. 2002) (internal quotations omitted). In determining whether a violation is justified or harmless, the court is to consider the following

factors: (1) the prejudice or surprise to the party against whom the evidence is offered; (2) the ability of the party to cure the prejudice; (3) the extent to which introducing the evidence would disrupt the trial; and (4) the moving party's bad faith or willfulness. *Id.*

Having carefully considered these factors in light of the circumstances surrounding Vonage's belated disclosure that the factual basis for its laches defense is the prosecution history of the patents-in-suit rather than Sprint's delay in filing suit, the court finds that Vonage's Rule 26(e)(2) violation is wholly unjustified and not at all harmless from Sprint's perspective. There is nothing in the summary judgment record from which the court could find that Sprint had any clue before the close of discovery that Vonage was going to be relying on Sprint's asserted delay in prosecution of the patents-in-suit to support its laches defense. The critical inquiry in a prosecution laches defense is whether the delay in prosecution is unreasonable and unexplained. Given the complexity of the patent prosecution system, the court credits Sprint's concern that a patentee would typically rely on expert testimony to show that the patentee's prosecution of the patents was reasonable. Indeed, the court believes that such testimony would be particularly helpful in a case like this which may implicate an extensive patent portfolio. Because Vonage did not disclose its prosecution theory until so late in the case, it has prejudiced Sprint's ability to muster key testimony to rebut this theory. Although Sprint could theoretically cure this prejudice between now and the trial date approximately four weeks away, doing so would likely be difficult as a practical matter given the trial preparation the parties are undoubtedly facing at this late date. This case involves sixty-one asserted claims of seven patents; it involves complex technology;

Vonage has asserted a multitude of affirmative defenses, the two most significant of which (invalidity for anticipation and obviousness based on the prior art) are not even at issue in Sprint's motion for partial summary judgment. Thus, allowing Vonage to rely on the prosecution history, rather than Sprint's alleged delay in filing suit, to support its laches defense undoubtedly would be highly disruptive to the parties' trial preparations.

The court might be willing to put the parties to this inconvenience if Vonage had offered a legitimate justification for its belated reliance on the prosecution histories as the basis for its laches defense. Significantly, however, Vonage has not done so. In this respect, it is important to note that Vonage's approach to this issue is not unique. Rather, it is entirely typical of the manner in which Vonage has approached the entire pretrial phase of this case. Vonage has repeatedly raised arguments in a belated fashion and has engaged in tactics which the court believes are designed to delay the trial of this case. Its overall approach leads the court to believe that either (1) Vonage has not adequately prepared this case for trial, or (2) Vonage is attempting to benefit from "hide-the-ball" tactics. The court discounts the likelihood that Vonage is unprepared, as Vonage is represented by counsel who are undoubtedly well versed in patent litigation as well as the disclosure and supplementation requirements of the Federal Rules of Civil Procedure. Thus, the court can only conclude that Vonage's belated assertion of this patent prosecution defense theory must have been a strategic litigation decision. As such, Vonage's Rule 26(e)(2) defense is most accurately characterized as "willful" rather than justified.

Under these circumstances, pursuant to Rule 37(c)(1) the court will not permit Vonage to use the evidence that it now seeks to use to support its defense of laches because Vonage did not timely amend its interrogatory responses to identify that type of evidence as the basis for its laches theory. To be sure, Sprint was obviously aware of the existence of the prosecution histories. Such evidence, however, is commonly disclosed in patent infringement cases. The critical point here is that prosecution laches is not at all a typical defense, and Sprint cannot be expected to have anticipated that these prosecution histories would form the basis of Vonage's laches defense in the absence of some notice to that effect from Vonage. In the absence of evidence to support Vonage's prosecution laches defense, then, the record does not present a genuine issue of material fact to support this defense. Accordingly, Sprint's motion for summary judgment is granted as to this affirmative defense.

3. Patent Misuse and Unclean Hands

Vonage's stated basis for its patent misuse defense is that Sprint's overbroad reading of the patents to cover VoIP technology and its attempt to enforce these expanded claims constitutes patent misuse. Vonage's argument in this respect is once again predicated on its theory that the claims of the '301 Family Patent are limited to ATM technology. Thus, Vonage contends that Sprint has improperly attempted to extend the claims of the asserted patents beyond the scope to which Sprint knows it is entitled.

Patent misuse is an equitable defense to infringement, the purpose of which is to prevent a patentee from using the patent to obtain market benefit beyond that which inheres in the statutory patent right. *U.S. Philips Corp. v. Int'l Trade Comm'n*, 424 F.3d 1179, 1184

(Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 2899 (2006). The key inquiry in assessing a claim of patent misuse is whether, by imposing conditions that derive their force from the patent, the patentee has impermissibly broadened the scope of the patent grant with anticompetitive effect. *Id.* A patent owner is not guilty of patent misuse by merely seeking to enforce its patent rights against infringement. 35 U.S.C. § 271(d)(3). In order to establish patent misuse based on a patent infringement action, “there must be bad faith and improper purpose in bringing the suit.” *Graverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550, 1558 (Fed. Cir. 1995). “A purpose is improper if its goal is not to win a favorable judgment, but to harass a competitor and deter others from competition, by engaging in the litigation process itself, regardless of the outcome.” *Id.*

Vonage’s theory of patent misuse is based on the fact that Sprint is seeking to enforce its patent rights against infringement. As such, Vonage must establish that Sprint has brought this lawsuit in bad faith and with an improper purpose. The summary judgment record does not present a genuine issue of material fact that Sprint brought this lawsuit in bad faith and with an improper purpose. In support of Vonage’s patent misuse theory it advances nothing more than an argument that it disagrees with Sprint’s proposed scope of some of the claim terms in the ‘301 Family Patents, which is the type of claim construction argument that is common in most patent infringement actions. Additionally, Vonage’s patent misuse arguments relate to only three of the seven asserted patents and, even with respect to those three patents the court has rejected Vonage’s proposed claim construction with respect to two of the claim terms. There is nothing in the summary judgment record from which a rational

trier of fact could find that Sprint has acted with bad faith or an improper purpose in bringing this infringement lawsuit. Accordingly, Sprint's motion for summary judgment on Vonage's patent misuse defense is granted.

Sprint also seeks summary judgment on Vonage's unclean hands defense. In response, Vonage relies on the same facts to support its unclean hands defense. The court construes this same factual argument as invoking the same legal theory as Vonage's patent misuse defense because the defense of patent misuse arises from the equitable doctrine of unclean hands. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1372 (Fed. Cir. 1998); *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1427 (Fed. Cir. 1997). Vonage also generally cites its Rule 56(f) affidavit in support of its unclean hands defenses, but makes no attempt to correlate the facts in that affidavit with its unclean hands defense. For the reasons stated previously with respect to Vonage's patent misuse defense and Vonage's other Rule 56(f) arguments, then, Sprint's motion for summary judgment is granted as to Vonage's defense of unclean hands.

4. Statutory Marking and Notice Requirements of 35 U.S.C. § 287

Vonage seeks to limit Sprint's damages by virtue of Sprint's asserted failure to comply with the so-called patent "marking" statute. This statute provides as follows:

Patentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented, either by fixing thereon the word "patent" or the abbreviation "pat.," together with the number of the patent, or when, from the character of the article, this can not [sic] be done, by fixing to it, or to the package wherein one or more of them is contained, a label containing a like notice. In the event of failure to so

mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice. Filing of an action for infringement shall constitute such notice.

35 U.S.C. § 287(a). This statute permits either constructive notice, which is accomplished by marking the article with the patent number, or actual notice. *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1345 (Fed. Cir. 2001). The requirement of actual notice is designed to assure that the accused infringer knew of the adverse patent and the alleged infringement during the period in which its liability accrues. *Id.* Failure to comply with this statute serves to limit a patentee's damages to acts of infringement that occurred after the patentee gave the alleged infringer "notice of infringement." *Id.* Compliance with § 287 is a question of fact. *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1111 (Fed. Cir. 1996).

Sprint argues that it is entitled to summary judgment on Vonage's § 287 defense on the grounds that the marking and notice requirements of § 287 do not apply in this case because the parties stipulated in the pretrial order that Sprint is not aware of any product or service made, sold, or offered for sale by Sprint that is within the scope of any claim of the asserted patents. *See Wine Ry. Appliance Co. v. Enter. Ry. Equip. Co.*, 297 U.S. 387 (1936); *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1219-20 (Fed. Cir. 2002) (operation of the statute is not triggered where the patentee does not produce or sell the patented product, and hence the patentee's recovery of damages is not limited, because there are no products to mark). In response, Vonage contends that Sprint's statement that it is "not aware of" any product or service made, sold, or offered for sale "by Sprint" is not sufficient

for Sprint to satisfy its summary judgment burden. Vonage points out that Sprint “apparently authorized Cisco to make, manufacture, and sell products using Mr. Christie’s technology, which, depending on the resolution of certain outstanding factual issues, may include some or all of the asserted patents.” In support of this argument, Vonage cites the series of Sprint/Cisco agreements discussed above with respect to Vonage’s Rule 56(f) affidavit.

Ultimately, the court agrees with Vonage that the undisputed fact set forth in the pretrial order that Sprint “is not aware of” any product or service made, sold, or offered for sale “by Sprint” is insufficient to meet its initial summary judgment burden on this issue. Although the parties have presented the § 287 issue to the court as a “defense” by Vonage, the Federal Circuit has stated that a patentee bears the burden of proving compliance with § 287. *Nike, Inc. v. Wal-Mart Stores, Inc.*, 138 F.3d 1437, 1446 (Fed. Cir. 1998); *Maxwell*, 86 F.3d at 1111. Because Sprint bears the burden of proof on this issue, then, its initial summary judgment burden is not merely to point to the absence of a genuine issue of material fact; rather, Sprint must show that “no disputed material fact” exists on this issue and, absent such a showing, Vonage bears no summary judgment burden. *Cf. Johnson v. Riddle*, 443 F.3d 723, 724 n.1 (10th Cir. 2006) (clarifying summary judgment burden where a defendant is seeking summary judgment on the basis of an affirmative defense); *Hutchinson v. Pfeil*, 105 F.3d 562, 564 (10th Cir. 1997) (same). The equivocal and qualified statement upon which Sprint relies in support of its motion for summary judgment does not conclusively establish that neither Sprint nor anyone acting for or under Sprint has made, sold, or offered for sale any article patented under the asserted patents. The most glaring deficiency in

Sprint's evidence is its failure to discuss the fact that the marking statute also applies to "persons making or selling any patented article for or under [the patentee]." § 287. Thus, licensees and manufacturers must also comply. *Maxwell*, 86 F.3d at 1111. Sprint has produced no affirmative evidence that no such licensee or manufacturer has made, sold, or offered for sale a patented article for or under Sprint. Indeed, viewing the evidence in the light most favorable to Vonage, as the court must on Sprint's motion for summary judgment, a rational trier of fact could conclude that Cisco has done so. Accordingly, Sprint's motion for summary judgment is denied as to the statutory marking and notice requirements set forth in 35 U.S.C. § 287.

5. 35 U.S.C. § 101

In response to one of Sprint's interrogatories, Vonage stated that one of its asserted bases for its invalidity contentions was 35 U.S.C. § 101 and that any further contentions would be provided by Vonage's experts. Sprint points out that Vonage did not plead this defense and, furthermore, that Mr. Koperda did not mention § 101 in his report. The pretrial order entered in this case supersedes the parties' pleadings and controls the subsequent course of the case. Fed. R. Civ. P. 16(e); *Youren v. Tintic Sch. Dist.*, 343 F.3d 1296, 1304 (10th Cir. 2003). To the extent that Vonage seeks to assert a defense pursuant to § 101, this defense does not appear in the pretrial order. Thus, Vonage has waived this defense because it is not included in the pretrial order. *See Wilson v. Muckala*, 303 F.3d 1207, 1215 (10th Cir. 2002) (claims, issues, defenses, or theories of damages not included in the pretrial order are

waived); *accord Youren*, 343 F.3d at 1304. Consequently, Sprint's motion is granted as to Vonage's § 101 defense because it is not at issue in this case.

6. Counterclaim for Unenforceability

Sprint's motion for summary judgment is granted as to Vonage's counterclaim seeking an order declaring the asserted patents unenforceable. The court has granted summary judgment on all of Vonage's affirmative defenses relating to the alleged unenforceability of the asserted patents, and Vonage has identified no other basis for its counterclaim. Having failed to raise a genuine issue of material fact on this counterclaim, then, Vonage cannot withstand summary judgment.

7. "Additional Defenses"

Sprint's motion for summary judgment on Vonage's "additional defenses" is granted for the same reason as with respect to Vonage's § 101 defense. Although Vonage originally stated in its amended answers that it was preserving any additional defenses which might arise during discovery, discovery is now closed and the pretrial order does not include the generic category of "additional defenses." Accordingly, Vonage has waived any such defenses.

8. Non-Infringement

Vonage asserts that its VoIP system does not infringe the asserted patents in that it does not meet every limitation of any claim of any of the asserted patents, either literally or under the doctrine of equivalents, and it seeks a court order declaring that it does not infringe any of the asserted patents. Pretrial Order (doc. #207), ¶ 7(a)(1) & (2), at 18 and ¶ 11, at 29.

It is undisputed that Vonage's only evidence of non-infringement is set forth in the expert report of Joel M. Halpern. Sprint seeks summary judgment on Vonage's non-infringement defense and counterclaim on the basis that Mr. Halpern lacks the educational requirements and industry experience necessary to testify to the issues of claim construction and infringement. In support of this argument, Sprint filed concurrently with its motion for partial summary judgment a separate motion to exclude Mr. Halpern's opinions as to non-infringement on the grounds that Mr. Halpern does not have the qualifications of a person of ordinary skill in the art, as is required by the Federal Circuit for expert testimony on the issue of infringement. In response, Vonage argues that Sprint, as the plaintiff in this action, has the burden to prove that Vonage's system infringes the claims of the asserted patents and that, in any event, Mr. Halpern is well qualified to offer expert testimony in this case. Sprint points out that it is not seeking summary judgment of infringement, but rather that its motion is directed solely to Vonage's asserted defense and counterclaim of non-infringement.

In many patent cases expert testimony is not necessary because the technology is "easily understandable without the need for expert explanatory testimony." *Union Carbide Corp. v. Am. Can Co.*, 724 F.2d 1567, 1573 (Fed. Cir. 1984). But, the Federal Circuit has set forth parameters for when expert testimony is required on the issue of infringement. First, "in a case involving complex technology, where the accused infringer offers expert testimony negating infringement, the patentee cannot satisfy its burden of proof by relying on testimony from those who are admittedly not expert in the field." *Centricut, LLC v. Esab Group, Inc.*, 390 F.3d 1361, 1370 (Fed. Cir. 2004) (patentee could not withstand summary judgment on

the issue of literal infringement in a case involving complex technology in the absence of expert testimony). Additionally, “when the patent holder relies on the doctrine of equivalents . . . the difficulties and complexity of the doctrine require that evidence be presented to the jury or other fact-finder through the particularized testimony of a person of ordinary skill in the art, typically a qualified expert, who (on a limitation-by-limitation basis) describes the claim limitations and establishes that those skilled in the art would recognize the equivalents.” *AquaTex Indus., Inc. v. Techniche Solutions*, 479 F.3d 1320, 1329 (Fed. Cir. 2007) (patentee could not withstand summary judgment on the issue of infringement under the doctrine of equivalents in the absence of expert testimony); *see also Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1357 (Fed. Cir. 2004) (district court did not err by requiring patentee to present evidence as to the level of ordinary skill in the art as part of its proof of infringement under the doctrine of equivalents). These cases certainly indicate that Sprint would not be able to meet its burden of proving infringement in the absence of expert testimony because this case involves both complex technology and allegations of infringement under the doctrine of equivalents. Conversely, then, Vonage cannot withstand summary judgment on its affirmative defense and counterclaim of non-infringement in the absence of testimony from a qualified expert. The pivotal issue is whether Mr. Halpern is sufficiently qualified to provide that testimony.

Sprint has certainly raised legitimate concerns about whether Mr. Halpern is qualified to testify as an expert in this case. Sprint points out that Mr. Halpern himself set forth the qualifications of a person of ordinary skill in the art as follows:

A person of ordinary skill in the art at the time of effective filing dates of the Sprint Patents would have had a bachelors degree in electrical engineering, computer engineering or computer science, and at least three years experience in the telecommunications industry. The person would also have had some familiarity with narrowband and broadband networks, telecommunications signaling requirements and the Public Switched Telephone Network (“PSTN”).

Sprint’s patent invalidity expert, Frank R. Koperda, provided a similar opinion. He set forth his view of the qualifications of a person of ordinary skill in the art as follows:

A person of ordinary skill in the art at the time of filing the applications from which the Asserted Patents ultimately issued . . . would have had at least a Bachelors degree in electrical engineering and/or computer engineering and/or computer science, or the equivalent skills or knowledge, and/or at least three years experience at a company working with narrowband and broadband networks, telecommunications signaling requirements and the Plain Old Telephone System (POTS), providing equipment, services and/or systems.

Sprint contends that Mr. Halpern’s qualifications fall far below these requirements. Mr. Halpern has a bachelors degree in mathematics rather than in electrical engineering, computer engineering, or computer science. He also does not have experience in the telecommunications industry. Although he has had some general exposure to the field, he has never worked for a telecommunications company and telecommunications was not the principal focus of any of his positions. His work on wireless and cellular networks involved data networking, not telephony or the PSTN. The only mention of “phone companies” in his curriculum vitae (CV) is with respect to a company where he worked on a router device. Even then, in his deposition he admitted that the router was originally aimed at enterprise customers and Internet service providers who were not telephone companies. Additionally,

he does not have experience with narrowband signaling requirements or with the transmission of voice over the PSTN.

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-93 (1993), the Supreme Court instructed that district courts are to perform a “gatekeeping” role concerning the admission of expert scientific testimony. *See also Kumho Tire Co. Ltd. v. Carmichael*, 526 U.S. 137, 147-48 (1999). The admissibility of expert testimony is governed by Rule 702 of the Federal Rules of Evidence, which states:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, **a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise**, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702 (emphasis added). To qualify as an expert, the expert must possess such “knowledge, skill, experience, training, or education” in the particular field as to make it appear that his or her opinion would rest on substantial foundation and would tend to aid the trier of fact in its search for the truth. *LifeWise Master Funding v. Telebank*, 374 F.3d 917, 928 (10th Cir. 2004).

Here, despite some arguable deficiencies in Mr. Halpern’s qualifications, the court is satisfied that he possesses sufficient knowledge, skill, experience, training, or education in the field of the invention as to make it appear that his opinion would rest on substantial foundation and tend to aid the trier of fact in its search for the truth. Sprint’s expert, Mr. Koperda, stated that the credentials of a personal of ordinary skill in the art included an

electrical engineering, computer engineering, or computer science degree (which Mr. Halpern admittedly does not have) “or the equivalent skills or knowledge.” The court has carefully reviewed Mr. Halpern’s CV, his non-infringement report, and his deposition testimony concerning his qualifications, and the court is satisfied that he possesses the equivalent skills or knowledge. Mr. Halpern has more than twenty-seven years of experience in the computer and networking industries. His relevant experience is predominantly with data networks, including projects involving wireless and cellular telephone data networks and their interface with the Internet. He has professional experience with Session Initial Protocol (SIP), the signaling protocol used in the Vonage system for establishing a VoIP call. He has served as Chief Technology Officer of a company that designs and builds devices that interface between the Internet and such other networks. He is experienced in ATM technology. Even though his bachelors degree is in mathematics rather than electrical engineering, computer engineering, or computer science, he testified in his deposition that although he does not have a formal degree in computer science, he studied computer science extensively, including some graduate-level classes in computer science. His expert report demonstrates that he clearly possesses relevant technical knowledge that would tend to aid the trier of fact. Mr. Halpern may not technically qualify as a person of ordinary skill in the art under the standards he set forth because he does not have the required bachelor’s degree and he may lack meaningful experience with the PSTN and narrowband networks, but the court is satisfied that he qualifies under the standards set forth by Mr. Koperda because his extensive computer science coursework combined with his twenty-seven years of

professional experience in the computer and networking industries appears to have given him the equivalent skills or knowledge that he would have gained by obtaining a bachelors degree in computer engineering or computer science. Thus, any shortcomings in his qualifications go to the weight of his testimony, not its admissibility. Accordingly, the court will deny Sprint's motion to exclude Mr. Halpern's expert opinions as well as Sprint's motion for summary judgment as to Vonage's non-infringement defense and counterclaim.

V. Vonage's Objections and Motion to Review the Magistrate Judge's Orders

The final matter before the court is Vonage's objections and motion to review certain orders dated May 14 and 16, 2007, in which the magistrate judge denied Vonage's motion for leave to amend its answer to assert new affirmative defenses and struck related factual and legal contentions from Vonage's proposed pretrial order in this case. Related to this matter is Sprint's response to the court's order to show good cause as to why it failed to respond in a timely fashion to Vonage's objections and motion to review. As explained below, the court finds that Sprint has demonstrated good cause for failing to file a timely response to Vonage's objections. Additionally, the court finds that the magistrate judge's rulings were not clearly erroneous or contrary to law, and therefore Vonage's objections to the magistrate judge's orders are overruled.

A. Sprint's Response to the Court's Order to Show Cause

On May 29, 2007, Vonage filed its objections to the magistrate judge's orders. On June 13, 2007, the court issued an order to show cause noting that Sprint did not file a

response to Vonage's objections within the time period provided in Fed. R. Civ. P. 72, stating that the court ordinarily considers and decides such motions as uncontested if a respondent fails to file a response within the time required by the rule, and directing Sprint to show good cause why it failed to respond to Vonage's objections in a timely fashion. Sprint responded, explaining that it calculated its response deadline based on the time period set forth in Rule 72(b) for dispositive issues. Rule 72(b) states that "[a] party may respond to another party's objections within 10 days after being served with a copy thereof." Sprint therefore determined that ten days later was June 12, 2007, *see* Fed. R. Civ. P. 6(a) (when period of time is less than ten days it excludes intermediate Saturdays, Sundays, and holidays), plus three additional days for service by electronic means, *see* Fed. R. Civ. P. 5(b)(2)(D) and 6(e), for a response deadline of June 15, 2007.

Sprint's explanation is certainly understandable. But, it is based on a mistaken understanding that the magistrate judge's rulings were addressed to dispositive issues under Rule 72(b) rather than nondispositive issues under Rule 72(a). The federal statute which sets forth the scope of magistrate judges' authority, 28 U.S.C. § 636, lists dispositive motions on which a magistrate judge may not issue a final ruling, but instead may issue a report and recommendation subject to de novo review by the district judge. *Id.* § 636(b)(1)(A). Because motions to amend pleadings are not included on this list, it is generally accepted that a magistrate judge's order on such a motion is regarded as nondispositive subject to reconsideration by the district court only "where it has been shown that the magistrate judge's order is clearly erroneous or contrary to law." *Id.*; *see, e.g., Hall v. Norfolk S. Ry.*

Co., 469 F.3d 590, 595 (7th Cir. 2006); *Continental Cas. Co. v. Cominick D'Andrea, Inc.*, 150 F.3d 245, 250-51 (3d Cir. 1998); *Pegano v. Frank*, 983 F.2d 343, 346 (1st Cir. 1993). In this case, then, Vonage's objections are directed to orders by the magistrate judge which are regarded as nondispositive under Rule 72(a). Unlike Rule 72(b), Rule 72(a) does not set forth a deadline for responding to a party's objections to a magistrate judge's orders. Consequently, the applicable deadline is the deadline for filing responses as set forth in this court's local rules, which is fourteen days inclusive of the three-day period set forth in Fed. R. Civ. P. 6(e). *See* D. Kan. Rule 6.1(d)(1). The deadline for Sprint to file its response to Vonage's objections was therefore fourteen calendar days after Vonage filed its objections on May 29, 2007, which was June 12, 2007. As the court stated previously, Sprint's explanation is mistaken but understandable, and therefore Sprint has demonstrated good cause for failing to file its response to Vonage's objections in a timely fashion. The court will therefore resolve Vonage's objections on the merits.

B. Standard of Review

Magistrate judges may issue orders as to nondispositive pretrial matters and district courts review such orders under a "clearly erroneous or contrary to law" standard of review. *First Union Mortgage Corp. v. Smith*, 229 F.3d 992, 995 (10th Cir. 2000) (quoting *Ocelot Oil Corp. v. Sparrow Indus.*, 847 F.2d 1458, 1461-62 (10th Cir. 1988)); 28 U.S.C. § 636(b)(1)(A); Fed. R. Civ. P. 72(a). The clearly erroneous standard applies to factual findings, *see* 12 Charles Alan Wright et al., *Federal Practice & Procedure* § 3069, at 355 (2d ed.1997) (and cases cited therein), and "requires that the reviewing court affirm unless it 'on

the entire evidence is left with the definite and firm conviction that a mistake has been committed.” *Ocelot Oil*, 847 F.2d at 1464 (quoting *United States v. United States Gypsum Co.*, 333 U.S. 364, 395 (1948)). By contrast, the “contrary to law” standard permits “plenary review as to matters of law.” See 12 Wright et al., *supra*, § 3069, at 355; *Haines v. Liggett Group Inc.*, 975 F.2d 81, 91 (3d Cir. 1992); *Computer Econ., Inc. v. Gartner Group, Inc.*, 50 F. Supp. 2d 980, 983 (S.D. Cal. 1999) (“contrary to law” standard permits independent review of purely legal determinations by a magistrate judge); *Weekoty v. United States*, 30 F. Supp. 2d 1343, 1344 (D.N.M. 1998) (when reviewing legal determinations made by magistrate judge, standard of review is de novo).

C. Analysis

In Vonage’s motion to amend its answer, it sought to assert two additional affirmative defenses that Sprint’s claims are barred (1) by license and (2) by misuse of the patents based on the manner in which Sprint licensed the patents. Vonage filed the motion on March 30, 2007, which was eleven months after the deadline for amending the pleadings had passed, see Scheduling Order (doc. #48), ¶ 3(a), at 7, and on the then-current discovery deadline. Vonage contended that the belated amendment was justified because Vonage had only recently come into possession of a contract between Sprint and Cisco, the terms of which include licenses, covenants not to sue, and other terms that Vonage contended may bar Sprint’s claims against Vonage. The magistrate judge denied Vonage’s motion on the grounds of undue delay and prejudice to Sprint. He noted that Vonage’s motion was filed on the last day of discovery in the case over two months after Sprint produced the

purportedly “newly discovered” documents, and implicitly rejected Vonage’s justification that it had been busy pursuing follow-up discovery. He further reasoned that he was persuaded that allowing the belated amendment would subject Sprint to significant prejudice given that discovery was closed and Sprint would be unable to conduct meaningful discovery on these new theories and defenses, which appeared to have no relation to any existing claim or defense in this litigation. On a related note, the magistrate judge directed Vonage to delete all references in the revised pretrial order and issued a separate order noting that in the pretrial order the court had deleted all substantive assertions based on the proposed affirmative defenses relating to the Sprint/Cisco documents.

Vonage now argues that the magistrate judge erred in denying Vonage’s motion for leave to amend because its delay in requesting leave to amend was not undue and because the assertion of its proposed affirmative defenses would not prejudice Sprint. Vonage further argues that, the assertion of the affirmative defenses notwithstanding, the magistrate judge erred in striking from the pretrial order its references to the license documents, as well as its related legal and factual contentions, because those documents support Vonage’s originally pled affirmative defense of estoppel.

1. Leave to Amend

Rule 15(a) of the Federal Rules of Civil Procedure provides that leave to amend the pleadings “shall be freely given when justice so requires.” Fed. R. Civ. P. 15(a). The court may deny leave to amend on the grounds of undue delay, bad faith or dilatory motive on the part of the movant, repeated failure to cure deficiencies by amendments previously allowed,

undue prejudice to the opposing party, or futility of the proposed amendment. *Minter v. Prime Equip. Co.*, 451 F.3d 1196, 1204 (10th Cir. 2006) (quoting *Foman v. Davis*, 371 U.S. 178, 182 (1962)). Whether to deny leave to amend is within the district court's sound discretion. *Barfield v. Commerce Bank, N.A.*, 484 F.3d 1276, 1280 (10th Cir. 2007); *Lind v. Aetna Health, Inc.*, 466 F.3d 1195, 1199 (10th Cir. 2006).

In considering the timeliness of the proposed amendment, the Tenth Circuit has noted that a party “who delays in seeking an amendment is acting contrary to the spirit of the rule and runs the risk of the court denying permission because of the passage of time.” *Minter*, 451 F.3d at 1205 (quotation omitted). “The longer the delay, the more likely the motion to amend will be denied, as protracted delay, with its attendant burdens on the opponent and the court, is itself a sufficient reason for the court to withhold permission to amend.” *Id.* (same). In this case, Vonage had copies of the agreements on which it relies in its possession on January 25, 2007. By that time, the court had already extended the discovery deadline once, extending it from the original deadline of December 29, 2006, to a new deadline of February 16, 2007. *See* Order (doc. #105). And, the parties had already submitted a request to extend the discovery deadline yet another time, which the court subsequently granted by extending the deadline to March 30, 2007. *See* Order (doc. #113). Thus, by the time Vonage received the license agreements on January 25, 2007, it should have known that time was of the essence in terms of wrapping up discovery. Notwithstanding this, Vonage waited to file its motion until the day discovery was set to close in this case on March 30, 2007, only days before the then-current deadline for the parties to submit their proposed pretrial order on

April 6, 2007.⁵ In essence, the timing of Vonage's motion to amend was such that the proposed affirmative defenses would have been asserted for the first time in the final pretrial order. "Courts do not normally expect to see claims or defenses not contained in the pleadings appearing for the first time in the pretrial order." *Minter*, 451 F.3d at 1206 (quotation omitted).

Additionally, denial of leave to amend is appropriate where the party seeking to amend has no adequate explanation for the delay. *Id.* Vonage's attempt to blame Sprint for the belated production is unpersuasive. For example, Vonage contends that the Sprint/Cisco license agreement upon which it relies was "buried in a production of over 55,000 pages." Yet Vonage is represented by capable counsel (several of them, in fact) who undoubtedly have ample resources to have reviewed those documents promptly given the then-upcoming close of discovery. Also, Vonage explains that it "discovered references to an extensive set of agreements between Sprint and Cisco . . . in its review of documents produced by Sprint." Furthermore, "[i]n light of its discoveries, Vonage immediately and specifically sought confirmation and production of these documents," referencing a letter from Vonage's counsel to Sprint's counsel dated September 20, 2006. This establishes that Vonage was aware of the potential existence of such documents as early as September of 2006, yet Vonage

⁵ On April 4, 2007, Vonage filed a motion to amend the scheduling order, seeking an extension of approximately six months for the key deadlines and the trial setting of this case. On April 16, 2007, the magistrate judge denied the motion on the grounds that Vonage failed to show sufficient good cause for the requested extension. The magistrate judge directed that all outstanding discovery be completed by May 1, 2007. *See* Order (doc. #168).

apparently did not view those documents as important enough to warrant a motion to compel production directed at discovering those documents, but instead opted to wait until the close of discovery to begin vigorously pursuing this evidence as supporting potential affirmative defense theories. In short, the record suggests that Vonage pursued a rather lax approach to discovery on this issue, waiting until the close of discovery to recognize what it now contends is the importance of this evidence.

The most important factor in deciding a motion to amend is whether the amendment would prejudice the nonmoving party. *Minter*, 451 F.3d at 1207. This occurs if the amendment affects the nonmoving party in terms of preparing its defense to the amendment. *Id.* at 1208. This most often occurs when the amendment claims arise out of different subject matter than previously set forth in the complaint and raise significant new factual issues. *Id.* Here, the magistrate judge's reasoning reflects that this is just such a case, as he explained that Vonage's proposed amendments contain new affirmative defenses that appear to have no relation to any existing claim or defense in this litigation. And, the arguments raised by Sprint persuade the court that allowing Vonage to assert these defenses at this belated date would necessitate reopening discovery as well as perhaps requiring yet another round of dispositive motion practice. Sprint points out that these defenses hinge entirely on the fact that the sole provider of Vonage's network equipment is now and always has been Cisco, yet Sprint is generally aware that some Vonage elements were provided by Cisco whereas other elements were provided by other vendors. To date, Sprint has not focused on the identity of Vonage's providers because they have not been an issue relevant to any claim or defense in

the case. Sprint also has not focused on discovering the dates that any particular equipment from any particular provider was put into service by Vonage. Sprint also has not engaged its experts to consider the impact of some theoretical license defense from a technical or damages standpoint.

In sum, for the magistrate judge to have granted Vonage's motion for leave to amend would have required the re-evaluation of disclosures and witness testimony, additional expert reports, the re-opening of discovery, a second round of dispositive motions, and the possible delay of trial, which is scheduled for September of 2007. Such a result is simply not warranted where, as here, Vonage is represented by capable counsel who appear to have made a free, calculated, and deliberate choice not to be more aggressive in pursuing discovery on these theories. Under these circumstances, the court cannot find that the magistrate judge's finding that Vonage's motion to amend was the product of undue delay and would unfairly prejudice Sprint was clearly erroneous or contrary to law. Accordingly, Vonage's objections to the magistrate judge's order of May 14, 2007, are overruled.

B. Striking References to the Sprint/Cisco Documents in the Pretrial Order

The magistrate judge's order of May 16, 2007, noted that the court had revised the proposed pretrial order by deleting all references to the new affirmative defenses that Vonage had sought to plead in its motion to amend. The court has reviewed these revisions to the pretrial order, and does not find that the magistrate judge's deletion of these references was clearly erroneous or contrary to law. Vonage's attempt to insert legal estoppel and contractual estoppel defenses, as well as related factual contentions, was clearly an attempt

to subvert the magistrate judge's ruling denying Vonage's motion to amend its answer to assert the license and misuse defenses. Vonage also objects to the magistrate judge's deletion of other references in the pretrial order to the Sprint/Cisco documents supporting Vonage's originally-pled estoppel defense. Although this language was deleted from the pretrial order, the court has nonetheless considered whether these documents can support Vonage's estoppel defense and has concluded, for reasons stated above, that these documents do not provide a viable basis for Vonage's estoppel defense. Accordingly, Vonage's objections to the magistrate judge's order of May 16, 2007, are also overruled.

IT IS THEREFORE ORDERED BY THE COURT that Vonage's Motion for Summary Judgment (doc. #200) is granted in part and denied in part as set forth above; Sprint's Motion to Strike or Disregard Portions of Vonage's Brief in Support of Motion for Summary Judgment (doc. #215) is granted to the extent set forth above; and Sprint's Motion to Strike Arguments Raised by Vonage for the First Time in Its Summary Judgment Reply Brief or, in the Alternative, for Leave to Surreply (doc. #245) is granted in the sense that the court will not consider those arguments.

IT IS FURTHER ORDERED that Sprint's Motion for Partial Summary Judgment (doc. #198) is granted in part and denied in part as set forth above; Vonage's Rule 56(f) motion (which is embedded in docs. #218 & #219) is denied; and Sprint's Motion to Exclude the Opinions of Vonage's Expert Joel M. Halpern (doc. #196) is denied.

IT IS FURTHER ORDERED that Vonage's Objections to and Motion for Review of Orders of May 14, 2007 and May 16, 2007 Pursuant to Fed. R. Civ. P. 72 (doc. #210) are overruled.

IT IS SO ORDERED this 7th day of August, 2007.

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