IN THE UNITED STATED DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TELCORDIA TECHNOLOGIES, INC.,   )
)
    Plaintiff/Counterclaim Defendant,)
)
v.   )   C.A. No. 04-876-GMS
)
CISCO SYSTEMS, INC.,   )
)
    Defendant/Counterclaim Plaintiff.)

MEMORANDUM

I.   INTRODUCTION

The plaintiff, Telcordia Technologies, Inc. ("Telcordia"), filed the above-captioned action against Cisco Systems, Inc., ("Cisco") on July 16, 2004, alleging infringement of United States Patent Nos. 4,893,306 (the "'306 patent"), RE 36,633 (the "'633 patent), and 4,835,763 (the "'763 patent") (collectively, the "patents-in-suit"). The court held a *Markman* hearing and issued an order construing the disputed terms of the patents-in-suit on June 22, 2006. (D.I. 179) A jury trial was commenced on April 30, 2007, on all issues. During trial, Cisco properly moved for judgment as a matter of law ("JMOL") pursuant to Rule 50(a) of the Federal Rules of Civil Procedure. (D.I. 359.) The court reserved ruling on Cisco's motions.

On May 10, 2007, the jury returned a unanimous verdict on all claims in favor of Telcordia. The jury found that Cisco infringed the asserted claims of the '763 and '633 patents,[1] and that its infringement of the patents was willful. The jury also upheld the validity of the '763, '633, and '306 patents. The court entered judgment on the verdict on May 16, 2007. (D.I. 348.)

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[1] Telcordia asserted claims 1, 2, 7, and 8 of the '763 patent, and claims 11 and 33 of the '633 patent.

Following the jury's verdict, Cisco filed four renewed JMOL motions pursuant to Federal Rule of Civil Procedure 50(b): (1) a motion for JMOL that the '763 patent is not infringed; (2) a motion for JMOL that the '763 patent claims are invalid; (3) a motion for JMOL that the '633 patent claims are invalid; and (4) a motion for JMOL that the '306 patent claims are invalid. (D.I. 375.) Cisco also filed a motion for a new trial on willful infringement. (D.I. 373.) Telcordia filed a motion for an award of prejudgment interest and an accounting of Cisco's infringing sales since January 31, 2007 (D.I. 362), a motion for a permanent injunction or, in the alternative an order requiring Cisco to pay a market-rate royalty (D.I. 366), a motion to enhance damages pursuant to 35 U.S.C. § 284 (D.I. 369), and a motion for attorney fees and expenses pursuant to 35 U.S.C. § 285 or the court's inherent equitable authority (D.I. 371). For the following reasons, the court will deny all of Cisco's motions. In addition, the court will deny all of Telcordia's motions except the motion for an award of prejudgment interest and an accounting.

II.   BACKGROUND OF THE TECHNOLOGY

The patents-in-suit relate to telecommunications networks. In particular, the '306 patent relates to a method and apparatus for multiplexing circuit and packet traffic. The patent discloses a data transmission technique, or Dynamic Time Division Multiplexing ("DTDM"), that is compatible with the digital circuit transmission format, as well as the packet transmission format, thereby providing a flexible migration strategy between present circuit networks and future broadband packet networks.

The invention disclosed in the '633 patent relates to a residual time stamp ("RTS") technique for timing recovery in a broadband network. Specifically, the '633 patent discloses and claims a method and apparatus for recovering the timing signal of a source node service clock frequency at

a destination node in a broadband asynchronous transfer mode ("ATM") network where the source and destination nodes receive reference timing signals derived from a single master clock.

The '763 patent specifically relates to a survivable or self-healing ring network that can withstand a cut line or failed node. The invention comprises two rings carrying identical multiplexed node-to-node communications in opposite directions. If a node on one ring detects a fault in an incoming line, it places an error signal on the channels following demultiplexing. If an error signal is detected on a local channel of one ring, the identical communication from the associated channel of the second ring is sent to the receiver. That is, if one channel has an error signal, the receiver selects the alternate channel. In this way, a break in one ring or a break in both rings between two adjacent nodes will not cause a failure in the system. Nor will the failure of a node destroy communications among the remaining nodes.

III. STANDARD OF REVIEW FOR JMOL MOTIONS

To prevail on a renewed motion for judgment as a matter of law following a jury trial and verdict, the moving party "'must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury's verdict cannot in law be supported by those findings.'" *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984)). "Substantial evidence" is defined as "such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review." *Perkin-Elmer Corp.*, 732 F.2d at 893.

The court should only grant the motion "if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is

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insufficient evidence from which a jury reasonably could find liability." *Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153, 1166 (3d Cir. 1993) (citing *Wittekamp v. Gulf Western Inc.*, 991 F.2d 1137, 1141 (3d Cir. 1993)). "In determining whether the evidence is sufficient to sustain liability, the court may not weigh the evidence, determine the credibility of witnesses, or substitute its version of the facts for the jury's version." *Lightning Lube*, 4 F.3d at 1166 (citing *Fineman v. Armstrong World Indus., Inc.*, 980 F.2d 171, 190 (3d Cir. 1992)). Rather, the court must resolve all conflicts of evidence in favor of the non-movant. *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991); *Perkin-Elmer Corp.*, 732 F.2d at 893.

"The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury could properly find a verdict for that party." *Lightning Lube*, 4 F.3d at 1166 (quoting *Patzig v. O'Neil*, 577 F.2d 841, 846 (3d Cir. 1978)). In conducting such an analysis, "the court may not determine the credibility of the witnesses nor 'substitute its choice for that of the jury between conflicting elements of the evidence.'" *Syngenta Seeds, Inc. v. Monsanto Co.*, 409 F. Supp. 2d 536, 539 (D. Del. 2005) (quoting *Perkin-Elmer Corp.*, 732 F.2d at 893).

IV. DISCUSSION

A. Cisco's Renewed JMOL Motion Regarding Non-Infringement of the '763 Patent

In the motion presently before the court, Cisco challenges the jury's finding that it infringed the asserted claims of the '763 patent. A patent infringement analysis entails two steps: "(1) claim construction to determine the scope of the claims, followed by (2) determination of whether the properly construed claim encompasses the accused device." *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir.1998) (citations omitted). The first step, claim construction, is a matter of law

for the court to decide. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372, 116 S. Ct. 1384, 1387 (1996). The second step, determination of infringement, is a question of fact. *Bai*, 160 F.3d at 1353. A patentee must establish literal infringement by a preponderance of the evidence. *See, e.g.*, *Braun Inc. v. Dynamics Corp.*, 975 F.2d 815, 819 (Fed. Cir.1992). "To establish literal infringement, every limitation set forth in a claim must be found in [the] accused product, exactly." *Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir.1995). Therefore, the court must determine whether substantial evidence supports the jury's finding that every limitation set forth in the asserted claims of the '763 patent is found in Cisco's accused products.

As previously described, the invention of the '763 patent is directed to a survivable or self-healing ring network that can withstand a cut line or failed node. Based on its review of the evidence, the jury found that Cisco's products infringed claims 1, 2, 7, and 8. Claim 1 is a representative claim containing all of the elements that Telcordia asserted for infringement purposes, and reads:

> 1. In a communications network having a plurality of nodes interconnected in a ring configuration by a first ring which conveys multiplexed subrate communications around the first ring from node to node in one direction and a second ring which conveys multiplexed subrate communications around the second ring from node to node in the other direction, each node including subrate transmitters with associated multiplexers and demultiplexers with associated subrate receivers, an improved node comprising
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> monitoring means, associated with the first ring and the second ring, for evaluating the integrity of the multiplexed subrate communications on the first ring and the second ring, respectively, and
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> insertion means, associated with the demultiplexers and said monitoring means, for inserting an error signal on designated ones of the subrate communications in response to said monitoring means detecting a lack of integrity on the multiplexed subrate communications on the first ring or the second ring or both the first ring and the second ring.

('763 Patent Claim 1). The court construed the term "multiplexed subrate communication[s]" to mean "a high-level signal that can be separated into its constituent channels" and the term "evaluating the integrity of the multiplexed subrate communications" to mean "determining whether each high-level signal is defective." (D.I. 179 ¶¶ 1, 3.) The court further construed the term "inserting an error signal on designated ones of the subrate communications" to mean "inserting an error signal on the channels following demultiplexing." (Id. ¶ 5.) With these constructions in mind, the court turns to the parties' arguments.

During trial, Telcordia argued that the pointer processor of Cisco's accused products performed the demultiplexing and inserted the error signals following the demultiplexing. In the renewed motion, Cisco contends that there is no evidentiary support for the finding that the pointer processor performs the demultiplexing required by the claims. As part of its argument, Cisco initially contends that there is no dispute in the record that the cross-connect, not the pointer processor, is the claimed demultiplexer. Cisco further contends that the demultiplexing is not complete until after the cross-connect, and it is the cross-connect, not the pointer processor, that performs the demultiplexing required by the patent (*i.e.* drops at least one demultiplexed channel at its output). As a result, Cisco contends that no reasonable jury could have found that the error signals in response to a high-level failure are inserted following demultiplexing as the claim construction requires, because all error signals are inserted before the cross-connect.

With respect to Cisco's first argument, the court concludes that substantial evidence in the record supports the jury's finding that the pointer processor performs the demultiplexing required by the claims. Specifically, Telcordia's expert, Dr. Paul Richard Prucnal ("Dr. Prucnal") testified that the pointer processor separates a single combined data stream into separate portions and puts each

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separate portion into different portion of RAM. (D.I. 354 at 1066.) Dr. Prucnal also testified that it

is the pointer interpreter, which is inside of the pointer processor, that separates the signal into the

various parts of memory.[2] (Id. at 1129.) Thus, even if a demultiplexer is defined as a device that

receives a multiplexed signal as its input and drops at least one demultiplexed channel as its output

as advanced by Cisco, a reasonable jury could have found that the pointer interpreter performs such

demultiplexing function because Dr. Prucnal's testimony demonstrates that each separated signal has

something dropped when compared to the input signal.

Cisco further contends that, because the claim requires a demultiplexer and demultiplexing,

the demultiplexing requirement must be performed by the demultiplexer recited in the claim. Relying

on the expert report submitted by Dr. Prucnal, in which only the cross-connect was identified and

listed as a "demultiplexer," Cisco argues that the demultiplexing function required by the claim must

be performed by the recited demultiplexer, *i.e.* the cross-connect, and not any unrecited element such

as the pointer processor. Cisco's argument fails because, although only the cross-connect was listed

as demultiplexer in the expert report, Dr. Prucnal testified at trail that he identified more than one

demultiplexer, such as the pointer processor, in the accused product. (Id. at 1123.) Thus, a

reasonable jury could have found that the pointer processor could also have been the claimed

demultiplexer and performed the demultiplexing function as required by the claim.

Interpreting the court's claim construction requiring the insertion of error signals "following

demultiplexing" to mean that the demultiplexing must be complete before the error signals being

inserted, Cisco also argues that there is no infringement as a matter of law because all error signals

are inserted before the cross-connect and the demultiplexing is not complete until after the cross-

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[2] According to Dr. Prucnal's testimony, Cisco's pointer processor contains 3 parts: the
pointer interpreter, RAM, and the pointer generator. (D.I. 354 at 1068.)

connect. The court is not persuaded. The court held a *Markman* hearing and the parties were given

opportunities to fully litigate the terms in dispute. The court issued an Order construing the terms

at issue, in which it construed the term "inserting an error signal on designated ones of said subrate

communication" was construed to mean "inserting an error signal on the channels following

demultiplexing."[3] The claim construction plainly requires that the error signal be inserted on the

channels "following demultiplexing." Whether demultiplexing is complete and it is the final stage

of the demultiplexing in the accused products is irrelevant to determining if the accused products

perform a function that meets the claim limitation. So long as there is demultiplexing and an error

signal is inserted on the channel following that demultiplexing, this particular claim limitation is met.

With this in mind, the court finds that the evidence supports a finding that a reasonable jury could

have concluded that an error signal was inserted on the channel following demultiplexing because,

as Dr. Prucnal testified, demultiplexing is performed in the pointer interpreter and there is an error

signal inserted following that demultiplexing. (D.I. 354 at 1129.)

As an alternative, Cisco argues that, even if the pointer processor performs the demultiplexing

function, there is no evidentiary basis to find that the error signals inserted by the pointer processor

are inserted in response to high-level failure as required by the claims. Specifically, Cisco contends

that the only error signals in response to a high-level failure are inserted by the framer, which is

positioned before the pointer processor. Cisco further contends that the pointer processor merely

propagates and reformats the error signal inserted by the framer, which is in response to the receipt

of an incoming error signal and not in response to a high level failure.

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[3] The court notes that this construction is consistent with Cisco's proposed construction. The court also notes that Cisco proposes that this court further construe the term "following demultiplexing." The court, however, declines Cisco's invitation to construe a construction. It is the claim terms of a patent that the court construes, not its own construction of those terms.

The court finds that Cisco's alternative argument fails as well. Specifically, Dr. Prucnal testified that there are two different error signals, line signals (*i.e.* AIS-L) and path signals (*i.e.* AIS-P). (Id. at 1130-31.) AIS-L signals are line-level signals inserted by the framer, while AIS-P signals are inserted inside of the pointer processor. (Id. at 1130-31, 35.) According to Dr. Prucnal's testimony, when there is a loss of signal or loss of frame, error signals (AIS-L) are generated by the framer and go down into the next portion of the chip. (Id. at 1133.) In addition to that, another signal coming out of the receive framer goes directly to the pointer processor to tell it to insert the new error signals, the AIS-P. (Id.) More specifically, Dr. Prucnal testified that, when there is a line fault detected (by the framer), error signals, *i.e.*, AIS-L, are generated and go into the pointer interpreter. (Id. at 1134.) Once inside of the pointer processor, new error signals are generated locally and internally to the pointer interpreter. (Id. at 1135.) Another insertion of error signals occurs in the pointer generator, which is a different error signal on individual paths (AIS-P). (Id.) Although the error signals are inserted as 1's, they are different 1's – that is, there are 1's for AIS-L and 1's for AIS-P. (Id. at 1136.) Thus, Dr. Prucnal's testimony demonstrates that a reasonable jury could conclude that error signals on individual paths are inserted in response to a high-level failure, as required by the claims.

Based on the foregoing discussion, the court concludes that substantial evidence in the record supports the jury's finding that Cisco's accused products meet the limitations of the asserted claims of the '763 patent, particularly the limitation "inserting an error signal on designated ones of the subrate communications." Therefore, the court will deny Cisco's motion for JMOL of non-infringement.

B.   Cisco's Renewed JMOL Motion Regarding Invalidity of the '763 Patent

Cisco next argues that the '763 patent is invalid as indefinite because there is no structure disclosed in the specification that is clearly linked to the "monitoring means" recited in the claims. 35 U.S.C. § 112 provides that "[t]he specification shall 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. As the construer of patent claims, it is the court's duty to determine whether patent claims are indefinite. *Personalized Media Communications, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 705 (Fed. Cir.1998). Where the issues are factual in nature, definiteness is amenable to resolution by the jury. *BJ Servs. Co. v. Halliburton Energy Servs., Inc.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003). "The definiteness inquiry focuses on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the rest of the specification." *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 692 (Fed. Cir. 2001). "If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more." *Miles Labs., Inc. v. Shandon, Inc.*, 997 F.2d 870, 875 (Fed. Cir.1993) (citation omitted).

35 U.S.C. § 112 further provides that "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. § 112, ¶ 6. As a quid pro quo for the convenience of employing this provision, the applicant has a duty to clearly link or associate structure to the claimed function. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1377 (Fed. Cir. 2001). While the specification must contain structure linked to claimed means, this is not a high bar. *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007).

What is required is to recite some structure corresponding to the means in the specification so that one can ascertain what the claim means. *Id.* Thus, for a means-plus-function claim to be valid under 35 U.S.C. § 112, ¶ 2, the corresponding structure of the limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation. *Id.* The inquiry, therefore, is whether one of skill in the art would understand the specification itself to disclose a structure, not simply whether that person would be capable of implementing a structure. *Id.* at 953.

In its *Markman* Order, the court determined that the term "monitoring means" is a means-plus-function term pursuant to 35 U.S.C. § 112, ¶ 6. The court further identified the function of this "monitoring means" to be "evaluating the integrity of the multiplexed subrate communications on the first ring and the second ring," and the corresponding structure for that function to be "the circuitry at a controller that determines if a defect exists with the multiplexed subrate communications," and all equivalents thereof. (D.I. 179 at 2-3.) Accordingly, for the claims containing this mean-plus-function term to be valid under 35 U.S.C. § 112, ¶ 2, the proper inquiry is whether the specification sufficiently discloses a structure that functions to be "the circuitry at a controller that determines if a defect exists with the multiplexed subrate communications," not simply the "circuitry" as contended by Cisco, nor the "controller" as argued by Telcordia.

As an initial matter, the court notes that, because the inquiry is factual in nature, it is proper to submit it to resolution by the jury. *BJ Servs. Co.*, 338 F.3d at 1372. Accordingly, if substantial evidence in the record supports the jury's finding that the specification discloses a structure for the monitoring means as defined by the court, Cisco's challenge on the definiteness, and thus the validity, of the '763 patent should fail. A review of the '763 patent and the record compels this court to

uphold the jury's verdict regarding the validity of the '763 patent.

First, the specification describes that node 1 comprises controller 117 and 118, which are connected with ring 101 and carry signals in opposite direction. ('763 patent, Col. 2, ll. 29-34.) The specification further describes the function performed by controller 117 and 118 in node 1 in detail, including multiplexing the channels and transmitting the resultant higher level signals. (Id. at ll. 41-65.) As each node continuously monitors and evaluates the integrity of the multiplexed subrate signals arriving at the node, controller 118 also inserts an error signal onto the channels when node 1 recognizes a major line fault. ('763 patent, Col. 3, ll. 4-11.) This is consistent with Dr. Prucnal's testimony during the trial. (D.I. 354 at 1147.) Identifying controllers 117 and 118 in Figure 1 as the monitoring means, Dr. Prucnal further testified that it is the circuitry in the controller that corresponds to the monitoring means. (Id. at 1149.) According to Dr. Prucnal, although the specification might not have described the circuitry itself that is in the controller and corresponds to the monitoring means, the specification nonetheless describes what it does. (Id. at 1148.) Moreover, Dr. Prucnal testified that one could not describe all the details at every circuit in a patent that is describing an entire network and protection path. (Id. at 1147.) Because what is required for a means-plus-function claim to be valid under 35 U.S.C. § 112, ¶ 2, is simply a description in a manner that permits a skilled artisan to know and understand what structure corresponds to the means limitation, a reasonable jury, upon all the evidence before it, could have found that the '763 patent sufficiently discloses a structure that corresponds to the "monitoring means" limitation. Accordingly, the court will deny Cisco's motion for JMOL regarding invalidity of the '763 patent.

C.   **Cisco's Renewed JMOL Motion Regarding Invalidity of the '633 Patent**

With respect to the '633 patent, Cisco argues that it is invalid based on two grounds: obviousness and improper inventorship. The court will address these two grounds separately.

1. Obviousness

35 U.S.C. § 103 provides, in pertinent part, that a patent may not be obtained "if the differences between the subject matter sought to be patented and the prior art such that the subject matter as a whole would have been obvious to a person having ordinary skill in the art." 35 U.S.C. § 103. Obviousness is a question of law that is predicated upon several factual inquiries. *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479 (Fed. Cir. 1997). Specifically, the trier of fact must consider: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations of non-obviousness such as commercial success, long felt but unsolved need, failure of others, and acquiescence of others in the industry that the patent is valid, and unexpected results. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966) (the "*Graham* factors"). The Supreme Court in *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, ---, 127 S. Ct. 1727, 1734 (2007), reaffirmed that the *Graham* factors "continue to define the inquiry that controls." Rejecting the rigid application of the "teaching, suggestion, or motivation" (TSM) test in favor of a more expansive and flexible approach in the determination of obviousness, it is permissible for a court to look "to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art." *Id.* at 1740-41.

In assessing obviousness, the invention must be considered as a whole without the benefit of hindsight, and the claims must be considered in their entirety. *Rockwell Intern. Corp. v. United States*, 147 F.3d 1358, 1364 (Fed. Cir. 1998) (citing *W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d

1540, 1551 (Fed. Cir.1983) and *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1567 (Fed. Cir.1983)). Indeed, the Supreme Court in *KSR* recognized that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. *KSR*, 127 S. Ct. at 1741. It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Additionally, although a "combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results," a combination of elements is not obvious if the combined elements work together "in an unexpected and fruitful manner." *Id.* at 1739-40. When challenging the validity of a patent for obviousness based on a combination of prior art references, the burden falls on the patent challenger to show by clear and convincing evidence that one of ordinary skill in the art would have had reason to attempt to make the combination and would have had a reasonable expectation of success in doing so. *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007).

Cisco first contends that Synchronous Residual Time Stamp method ("SRTS"), the subject matter claimed in the '633 patent, was obvious because it was an obvious solution to a known problem that existed at the time of invention. During the trial, Cisco offered testimony from Dr. Anthony Acampora ("Dr. Acampora"). According to Dr. Acampora, a deadlock in the standard clock recovery techniques for circuit emulation, the Synchronous Frequency Encoding Technique ("SFET") and Time Stamp ("TS") methods, existed prior to the development of the SRTS method. (D.I. 356 at 1551.) An effort to find a compromise was initiated, with an attempt to break such a deadlock. (Id.) A series of exchanges of communications, ideas, and discussions then took place between two groups of scientists, and finally the SRTS technique came to fruition. (Id. at 1551-58.) According

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to Cisco, the development of the SRTS technique was merely a natural flow from addressing the concerns that each group had against the other group's approach. (D.I. 376 at 26.) However, during cross examination at trial, Dr. Acampora also testified regarding differences between the TS and SRTS techniques, including the sublayer that contains the CSI bit. (D.I. 356 at 1679-83.) Thus, a reasonable jury could have concluded that the SRTS technique did not naturally flow from the two existing techniques, nor was it an obvious solution to the so-called deadlock.

Cisco further contends that the SRTS technique was obvious in view of the knowledge of the art because the concept of shortening time stamp was taught in the Gonzales paper ("Gonzales") and it was desirable and common sense to one skilled in the art to avoid locking the information into a particular sublayer. Specifically, Cisco offered Dr. Acampora's testimony showing the rigidly defined communication protocols that existed in the telecommunications, which in turn, would motivate one of ordinary skill in the art to deliver the timing information some place other than in a structured layer. (Id. at 1549-50.) Dr. Acampora further testified that Gonzales teaches a technique for reducing the number of bits needed to carry the timing information. (Id. at 1559-60.) As mentioned above, Dr. Acampora's testimony further identified the different sublayer containing the CSI bit in the time stamp and SRTS technique. (Id. at 1679-83.) Dr. Acampora, however, did not testify regarding how one of ordinary skill in the art, when motivated by the existing rigidly defined communication protocols, would have implemented all the modifications necessary to arrive at the SRTS method from the shortened time stamp technique as taught by Gonzales. Thus, when considering the claimed invention "as a whole," the court finds that a reasonable jury could have concluded that Cisco failed to establish by clear and convincing evidence that the subject matter of the '633 patent would have been obvious over the prior art.

Cisco additionally contends that there are no secondary considerations supporting a finding

of nonobviousness. Specifically, Cisco relies on Dr. Acampora's testimony that there was no long

felt need for an alternative technique, no failure of others, no indication of commercial success, no

professional recognition, no copying, and no teaching away with regard to the SRTS technique. (Id.

at 1562-65.) Directly contrary to this testimony, however, was the testimony from various witnesses

for Telcordia. (See, e.g., I.D. 354 at 1180-1187; I.D. 356 at 1697-1701.) Because it is the jury and

not the court that must weigh the credibility of each party's witnesses, the court is not persuaded that

the jury's finding on this issue should be overturned. Accordingly, the court concludes that the jury

could have reasonably found that Cisco had not proven the lack of secondary consideration of

obviousness by clear and convincing evidence. The court, therefore, upholds the jury's finding that

the '763 patent is not obvious.

2. Improper Inventorship

Cisco contends alternatively that the '633 patent is invalid because the great weight of the

evidence established that the invention disclosed in the '633 patent was first conceived by the

scientists at France Telecom, who were not named as joint inventors of the '633 patent.

A person is entitled to a patent unless he himself did not invent the subject matter sought to

be patented. 35 U.S.C. § 102(f). To be a joint inventor, one must "contribute in some significant

manner to the conception of the invention." *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1473

(Fed. Cir.1997). Specifically, each person claiming to be an inventor must have contributed to the

conception of the invention. *Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1379

(Fed. Cir. 2001). "Conception is defined as the 'formation in the mind of the inventor, of a definite

and permanent idea of the complete and operative invention, as it is hereafter to be applied in

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practice.'" *Stern v. Trustees of Columbia Univ.*, 434 F.3d 1375, 1378 (Fed. Cir. 2006) (citations omitted). "Conception is complete when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation." *Id.* (citing *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994)). Beyond conception, the purported inventor must demonstrate that he made "a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and [did] more than merely explain to the real inventors well-known concepts and/or the current state of the art." *Acromed Corp.*, 253 F.3d at 1379. However, every issued patent receives the presumption that its inventors are the true and only inventors. *See, e.g., id.* Invalidity for failure to name an inventor must be established by clear and convincing evidence. *See id.*

Cisco contends that the two key aspects of the '633 patent – (1) a shortened time stamp, and (2) transmission of that time stamp outside the convergence sublayer overhead – were conceived by France Telecom and communicated to the named inventors at Bellcore, now Telcordia. (D.I. 376 at 29.) Cisco relies primarily on the August 26, 1991 facsimile (the "August fax") from Pierre Adam ("Adam") to Bellcore to support its contention that France Telecom was the first to propose a shortened time stamp and transporting a time stamp in the Segmentation and Reassembly ("SAR") header without any frame at the convergence sublayer. (Id. at 30.) During the trial, Adam testified in the form of a videotaped deposition, that the spirit of the August fax was to agree on the principle compromise (between TS and SFET methods) first and the technical aspect was to be left for subsequent discussion. (D.I. 355 at 1456.) Adam further testified that the August fax proposed to move the time stamp information to the "Bellcore layer" (*i.e.* the SAR header), but did not address

the issue of how many bits ought to be used in the proposed compromise. (Id. at 1448, 1455-56.) According to Adam, the August fax did not address the length of the time stamp, which was several steps forward after the parties agreed upon the principle. (Id. at 1475-76.) Because conception is not complete until the idea in the inventors' mind is so clear that only ordinary skill would be necessary to reduce the invention to practice, a reasonable jury could conclude that the August fax was insufficient to show that the scientists at France Telecom were the first to conceive the invention disclosed in the '633 patent.

Furthermore, during the trial, Telcordia produced, among others, the testimony of Dr. Richard Lau ("Dr. Lau"), one of the named inventors in the '633 patent. Dr. Lau testified that France Telecom did not propose changing the time stamp or residual time stamp in the August fax. (D.I. 353 at 688-89; D.I. 357 at 795.) Dr. Lau further testified that the SAR layer was used to carry the encoded information in Bellcore's SFET method prior to France Telecom's proposal in the August fax. (D.I. 353 at 689; D.I. 357 at 807.) According to Dr. Lau, there was no back and forth idea exchange and cooperative process between France Telecom and Bellcore that led to SRTS. (D.I. 357 at 789.) Given the foregoing, the court concludes that a reasonable jury could find that Cisco had not met its burden to prove improper inventorship by clear and convincing evidence.

D.   Cisco's Renewed JMOL Motion Regarding Invalidity of the '306 Patent

Cisco additionally argues that the '306 patent is invalid as being anticipated by two prior art publications, or in the alternative, rendered obvious over a combination of the same prior art publications in view of one or more further references.[4]

35 U.S.C. § 102 provides that "[a] person shall be entitled to a patent unless, . . . (b) the

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[4] The obviousness standard is discussed in Section IV.C.1, and will not be reiterated here.

invention was patented or described in a printed publication in this or a foreign country or in public

use or on sale in this country, more than one year prior to the date of the application for patent in the

United States. . . ." Anticipation is a question of fact that is shown only by rigorous proof and

reviewed under a clearly erroneous standard. *See*, *e.g.*, *Rapoport v. Dement*, 254 F.3d 1053, 1057-58

(Fed. Cir. 2001). Invalidity by anticipation "requires that the four corners of a single, prior art

document describe every element of the claimed invention, either expressly or inherently, such that

a person of ordinary skill in the art could practice the invention without undue experimentation."

Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000) (citations

omitted). "If it is necessary to reach beyond the boundaries of a single reference to provide missing

disclosure of the claimed invention, the proper ground is not § 102, but § 103 obviousness." *Scripps

Clinic & Res. Found. v. Genentech Inc.*, 927 F.2d 1565, 1577 (Fed. Cir. 1991). Only claims, as

opposed to specifications, may be anticipated. Consequently, the anticipation inquiry must begin

with a proper claim construction. *State Contracting & Eng'g Corp. v. Condotte Am. Inc.*, 346 F.3d

1057, 1067-68 (Fed. Cir. 2003). Because a patent as a whole is entitled to the presumption of

validity, 35 U.S.C. § 282, an accused infringer seeking to prove that a patent is anticipated, and

therefore invalid, must do so by clear and convincing evidence. *Id.* at 1067.

Cisco first contends that the claims of the '306 patent are anticipated by two prior art

publications: (1) Description of FasNet ("FasNet") by Limb *et al.*, and (2) "A packet/circuit switch"

by Budrikis *et al.* ("Budrikis"). To this end, Cisco points to Dr. Acampora's testimony to support

its position that FasNet and Budrikis each teach every limitation of the asserted claims of the '306

patent. In response, Telcordia argues that, at least the "empty payload field" limitation is not taught

in either FasNet or Budrikis.

The term "empty payload field" was construed by the court to mean "a payload field that is empty of source data, but including bit signals of some kind, *i.e.* garbage bits." (D.I. 179 ¶ 27.) During the cross examination at trial, Dr. Acampora defined "garbage bits" to be bits that are valueless and not intentionally inserted to accomplish some purpose. (D.I. 356 at 1715.) Dr. Acampora further explained that any bits that are located anywhere in the frame and have some purpose – meaning someone will look at those bits and do something from them – would not be garbage bits. (Id.) Similarly, if the bits are intentionally placed with an objective of having them processed to accomplish some objective, according to Dr. Acampora, they are not garbage bits. (Id. at 1716.) With regard to the prior art publications, Dr. Acampora testified that FasNet puts all 0's in the empty payload field in order to write (other) data into that payload. (Id. at 1717-18.) Dr. Acampora also testified that Budrikis uses a similar scheme. (Id. at 1718) ("How else would it insert its data? Unless its data coincidentally happened to be all 0's.") Based on the foregoing testimony, it was not unreasonable for the jury to have found that the bits used in FasNet and Budrikis were intentionally placed with some purpose, and thus, were not garbage bits. It is, therefore, not unreasonable for the jury to have found that the two prior art references did not teach the element of "empty payload field" and did not anticipate the claims of the '306 patent. In addition, the court concludes that it was not unreasonable for the jury to have found that, since one of the elements of the claims was not taught in the primary references (*i.e.* FasNet and Budrikis), the combination of these references together with the additional references cited by Cisco would not have rendered the claims of the '306 patent obvious. Accordingly, Cisco's motion for JMOL of invalidity of the '306 patent is denied.

E.   **Cisco's Motion for a New Trial on Willfulness**

Cisco also requests that the court order a new trial on willfulness, because the jury's willfulness finding was based on a jury instruction that is erroneous under the Court of Appeals for the Federal Circuit's intervening decision in *In re Seagate Technology, LLC*, 497 F.3d 1360 (Fed. Cir. 2007) (en banc). In *Seagate*, which issued during the post-trial stage of this litigation, the Federal Circuit overruled the long-standing willfulness "due care" standard adopted in *Underwater Devices Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380 (Fed. Cir. 1983). Under the *Seagate* standard, "proof of willful infringement permitting enhanced damages requires at least a showing of objective recklessness." *Seagate*, 497 F.3d at 1371. Specifically, the Federal Circuit held that "to establish willful infringement, a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." *Id*. In addition, "the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer." *Id.*

The Federal Circuit decided *Seagate* after trial in this case, but before the entry of final judgment. Further, the *Seagate* opinion was issued after the parties had completed their post-trial briefing on Cisco's motion for a new trial on willfulness. The crux of Cisco's motion, however, is that the court's willfulness instruction, which referenced factors set out in *Read v. Portec*, 970 F.2d 816 (Fed. Cir. 1992), was erroneous. After the parties briefed Cisco's motion, Cisco filed a citation of subsequent authority, raising the *Seagate* opinion and arguing for a new trial under its willfulness standard. In its citation to *Seagate*, Cisco points out that the court's willfulness instruction "specifically stated that Cisco was under an 'affirmative duty to use due care,' . . . and thus expressly included the now-abrogated 'due care' standard." (D.I. 416 at 1 n.1.)

A district court applies the law of the regional circuit, here the Third Circuit, to challenges to jury instructions *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1359 (Fed. Cir. 2004). In determining whether the district court's jury instructions stated the correct applicable law, the Third Circuit reviews them de novo. *Aircraft Repair Services v. Stambaugh's Air Services, Inc.*, 175 F.3d 314, 318 (3d Cir. 1999). The Third Circuit applies a two-part test when considering whether a jury instruction was legally erroneous. First, the court must determine whether the instruction was legally erroneous. *See Hill v. Reederei F. Laeisz G.M.B.H.*, 435 F.3d 404, 410-11 (3d Cir. 2006). If the court concludes that the jury instruction is legally erroneous, it must "ask whether that error was harmless. An error [is] deemed harmless only if it is highly probable that the error did not affect the outcome of the case." *Id.* at 411 (citations omitted).

Here, the court instructed the jury using the *Underwater Devices* standard for willful infringement. The court specifically instructed the jury, among other things, that "[i]n determining whether Cisco willfully infringed Telcordia's patents, you must consider the totality of the circumstances. The law requires that a potential infringer having actual notice of another's patent has an *affirmative duty to use due care*." (D.I. 343 at 18) (emphasis added). Cisco objected to the instruction at trial and seeks a new trial on willfulness under the *Seagate* standard.

In its motion, Cisco argues that a new trial is necessary because the error in the jury instruction was not harmless. Conversely, Telcordia argues that any error in the court's jury instruction did not affect the outcome of the case. Telcordia further argues that the record evidence establishes willfulness under any appropriate jury instruction.

After having considered the parties' arguments, the court concludes that its jury instruction

was erroneous,[5] but also concludes that the error was harmless in light of the evidence adduced at trial. For example, the record evidence demonstrates that Cisco knew about Telcordia's patents from the 1990's until Telcordia filed the present lawsuit, and also knew that Telcordia was actively enforcing its patents. (See, e.g., D.I. 353, at 540-70; D.I. 352, at 300-37, 341-64.). The evidence further details attempted license negotiations between the parties that failed. (See id.). The record also indicates that Cisco continued to make and sell products incorporating Telcordia's patented technology, because it didn't believe that Telcordia was going to sue, it thought that Telcordia's letter explaining intent to enforce the patents was a mistake, and it thought that Telcordia's September 2001 notice of infringement date was "an attempt to use the patent allegations to leverage into a business relationship[,]" rather than an assertion of infringement. (See D.I. 353, at 542, 553-54, 556, 561; D.I. 354, at 1026-27; D.I. 355, at 1414-18.)

Further, in April 1995, Cisco knew that Telcordia's Synchronous Residual Time Stamp clock recovery intellectual property was being considered as the industry standard by the ATM Forum, but encouraged members to vote "No" to the motion to forward the specification to final ballot, because Telcordia's (then Bellcore) terms were not RAND, or reasonable and non-discriminatory. (D.I. 391, at 24-25.) Given this record, a reasonable jury could find under the *Seagate* standard that Cisco was objectively reckless and continued to make and sell products that incorporated Telcordia's patented technology, despite an objectively high likelihood that its actions constituted infringement of a valid

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[5] Telcordia does not contend that the court should apply *Seagate* prospectively. Such an argument lacks merit, however, because the Federal Circuit has recently held that *Seagate* applies retroactively to cases still open on direct review. *See Voda v. Voda v. Cordis Corp.*,536 F.3d 1311, 1328 n.10 (Fed. Cir. 2008) (citing *Rivers v. Roadway Express, Inc.*, 511 U.S. 298, 311-12 (1994) and *Harper v. Va. Dep't of Taxation*, 509 U.S. 86, 97 (1993)).

patent.[6] Accordingly, the court will deny Cisco's motion for a new trial on willfulness.

F. Telcordia's Motion for a Permanent Injunction or Reasonable Royalty

Telcordia filed a motion for permanent injunction seeking to enjoin Cisco's continued infringement of the patents-in-suit. In the alternative, Telcordia requests the court to award a compulsory license and order Cisco to pay a lump sum and ongoing royalty in accordance with the terms of Telcordia's market rate for its continued use of the '763 and '633 patents.[7]

1. Motion for a Permanent Injunction

A district court "may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable." 35 U.S.C. § 283. "According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief." *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006). A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a

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[6] Cisco's citation of subsequent authority (D.I. 416) directs the court to the trial record recounted in its answering brief opposing Telcordia's motion to enhance damages (D.I. 391) for evidence that "confirms that [it] was anything but 'objectively reckless.'" (See D.I. 416, at 2 n. 2). The court, however, is not persuaded by this evidence, specifically because it relates to Cisco's state of mind, which is not relevant to the objective recklessness prong of the willfulness inquiry. *Seagate*, 497 F.3d at 1371 ("The state of mind of the accused infringer is not relevant to this objective [recklessness] inquiry"); *see Voda*, 536 F.3d at 1328-29 (Fed. Cir. 2008) (finding that the trial record, which consisted of the defendant's efforts to redesign the accused devices and evidence showing that the defendant obtained several opinions of counsel regarding whether the redesigned devices infringed the patents-in-suit, established that a jury instruction in accord with the objective recklessness standard may have changed the result of the jury verdict on willfulness and vacating the finding of willfulness).

[7] The court notes that the '763 patent expired on February 4, 2008. Thus, Telcordia's motion for a permanent injunction or ongoing royalty with respect to the '763 patent is moot.

remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. *Id.* "Courts awarding permanent injunctions typically do so under circumstances where [the] plaintiff practices its invention and is a direct market competitor." *Advanced Cardiovascular Sys. v. Medtronic Vascular, Inc.*, --- F. Supp. 2d ---, 2008 WL 4397476, at * 3 (D. Del. 2008).[8]

Telcordia argues that it will suffer irreparable harm if Cisco's infringement were to continue, because its "lifeblood is its ability to enforce its patents and continue to generate innovative solutions and provide patent protection for its engineers' novel improvements and pioneering inventions." (D.I. 367, at 2.) According to Telcordia, it's "leverage in the market will be harmed if it cannot advise potential licensees that infringement of its patents can result in a permanent injunction." (Id. at 3.) The court is not persuaded by Telcordia's argument, especially given the fact that it is not supported by any evidence of irreparable harm due to Cisco's infringement, such as lost sales,

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[8] Before turning to the *eBay* factors, the court addresses Cisco's argument regarding the jury's damages award. Cisco argues that Telcordia is not entitled to a permanent injunction because "the jury verdict is best understood as granting Cisco a fully paid-up license that compensates Telcordia through the expiration of the patents-in-suit." (D.I. 392 at 3.) The court disagrees. First, the court notes that neither party requested a special verdict from the jury. Indeed, the jury issued a general verdict after hearing from both Telcordia's and Cisco's damages experts. During the course of the damages presentation, Telcordia's expert testified that the proper damages award should be based on a running royalty rate. Cisco's expert, on the other hand, testified that the proper damages award should be based on a lump-sum, paid-up license. Cisco's expert, however, also applied a running royalty rate analysis to his numbers in order to show the differences between Telcordia's and Cisco's approaches to damages. (D.I. 359 at 1910-14.) Thus, the jurors were presented with three sets of damages award numbers, which they could chose to accept, reject, or vary. In addition, the jury's monetary award is different from the damages award advanced by both parties' experts. While the $6.5 million damages award is closer to the $5 million presented by Cisco's expert, there is nothing in either the record or verdict form from which the court could determine whether the jury based its award on a lump-sum, paid-up license; running royalty rate; some variation or combination of the two; or rejected the theories and reached its own number. The court, therefore, rejects Cisco's argument that an injunction cannot issue because the damages award is a paid-up licensing fee.

licensing, or research and development opportunities.[9] "[I]nfringing one's right to exclude, alone, is insufficient to warrant injunctive relief." *IMX, Inc. v. LendingTree, LLC*, 469 F. Supp. 2d 203, 225 (D. Del. 2007) (citing *eBay*, 126 S. Ct. at 1840)). Indeed, Telcordia's analysis of its irreparable harm is nothing more than attorney argument.

Further supporting the court's conclusion that Telcordia will not suffer (and has not suffered) irreparable harm is the fact that it licensed the patents-in-suit to two other defendants, Lucent Technologies, Inc. and Alcatel USA Inc. Thus, Cisco's infringement of the patents-in-suit has not affected Telcordia's ability to license the patents-in-suit. Telcordia's willingness to forego its patent rights for compensation, while not dispositive, is one factor for the court to consider in its irreparable harm analysis. *eBay*, 547 U.S. at 1840-41. Here, however, where Telcordia has not pointed to any evidence of irreparable harm, the only evidence that the court has before it suggests that Telcordia will not suffer irreparable harm.[10,11]

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[9] *See*, *e.g.*, *Callaway Golf Co. v. Acushnet Co.*, --- F. Supp. 2d ---, 2008 WL 4850755, at * 14-15 (D. Del. 2008) (finding irreparable harm based in part on evidence of lost market share); *Becton Dickinson & Co. v. Tyco Healthcare Gr. LP*, No. Civ. A. 02-1694 GMS, 2008 WL 4745882 (D. Del. Oct. 29, 2008) (finding irreparable harm based on evidence of lost customers and opportunities); *TruePosition Inc. v. Andrew Corp.*, 568 F. Supp. 2d 500, 531-32 (D. Del. 2008) (finding irreparable harm and noting that the defendant's sales resulted in loss of sales to the plaintiff).

[10] Telcordia's willingness to license its patents also suggests that its injury is compensable in monetary damages, which is inconsistent with the right to exclude. *IMX*, 469 F. Supp. 2d at 225 n. 24 (citing *High Tech Medical Instrumentation, Inc. v. New Image Indus., Inc.*, 49 F.3d 1551, 1557 (Fed. Cir. 1995)).

[11] Because the court has determined that Telcordia has not demonstrated that it will suffer irreparable harm or that it cannot be compensated by monetary damages, the court does not consider the balance of hardships and public interest factors.

2.   Motion for a Reasonable Royalty

In the alternative, Telcordia requests the court to order Cisco to pay a market-rate royalty until

the expiration of the '633 patent. "Under some circumstances, awarding an ongoing royalty for

patent infringement in lieu of an injunction may be appropriate." *Paice LLC v. Toyota Motor Corp.*,

504 F.3d 1293, 1314 (Fed. Cir. 2007). "But, awarding an ongoing royalty where 'necessary' to

effectuate a remedy . . . does not justify the provision of such relief as a matter of course whenever

a permanent injunction is not imposed." *Id.* at 1314-15. Indeed, the Federal Circuit has noted that

when a district court determines that an injunction is not warranted, it is apt to allow the parties to

negotiate license terms for future infringement amongst themselves instead of awarding an ongoing

royalty or compulsory license. *See id.* at 1315. The court finds this advice sound, declines to adopt

Telcordia's request for a compulsory license, and will order the parties to negotiate the terms of a

reasonable royalty rate going forward. Should the parties fail to reach an agreement, the court will

permit the filing of competing proposals.[12]

G.   Telcordia's Motion for Prejudgment Interest and an Accounting

1.   Prejudgment Interest

Telcordia moves the court to award prejudgment interest from September 7, 2001 extending

to the date of final judgment at the prime rate, compounded quarterly. Cisco disagrees, arguing that

the jury's damages award includes prejudgment interest or that Telcordia waived any request for

prejudgment interest. Additionally, Cisco argues that if the court awards prejudgment interest, it

should do so at the Treasury bill rate. The court finds Cisco's arguments unavailing.

Section 35 U.S.C. § 284 provides for the calculation of damages "together with interest . . .

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[12] The court not only orders the parties to meet and confer but, given its limited time and resources, strongly encourages the parties to be *reasonable* in their negotiations.

as fixed by the court." In patent infringement cases, "prejudgment interest should be awarded under

§ 284 absent some justification for withholding such an award." *General Motors v. Devex Corp.*, 461

U.S. 648, 657 (1983). Here, Cisco asserts that the jury's damages award includes prejudgment

interest, thereby barring its award under section 284. As previously discussed, however, there is

nothing in either the record or verdict form from which the court could determine whether the jury

based its award on a lump-sum, paid-up license; running royalty rate; some variation or combination

of the two; or rejected the theories and reached its own number. The court, therefore, rejects Cisco's

argument that awarding prejudgment interest is improper because the damages award is a paid-up

licensing fee.

The court also rejects Cisco's argument that Telcordia waived its right to prejudgment interest

because it did not make a pretrial request for such interest. Cisco has failed to cite a single authority

which stands for the proposition that a party waives its request for prejudgment interest if that request

is omitted from pretrial submissions. Indeed, quite the opposite is true, as Rule 54(c) of the Federal

Rules of Civil Procedure states, in pertinent part: "Every . . . final judgment should grant the relief

to which each party is entitled, even if the party has not demanded that relief in its pleadings."

Accordingly, Telcordia has not waived its right to request prejudgment interest.

Finally, the court must determine whether to award prejudgment interest at the prime rate or

the Treasury bill rate. "'The Federal Circuit has given district courts great discretion' when

determining the applicable interest rate for an award of prejudgment interest." *IPPV Enterprises,*

LLC v. EchoStar Comm'n Corp., No. Civ. A. 99-577-KAJ, 2003 WL 723260, at *3 (D. Del. Feb. 27,

2003) (citation omitted). "Courts have recognized that the prime rate best compensate[s] a patentee

for lost revenues during the period of infringement because the prime rate represents the cost of

borrowing money, which is 'a better measure of the harm suffered as a result of the loss of the use of money over time.'" *IMX , Inc. v. Lending Tree, LLC*, 469 F. Supp. 2d 203, 227 (D. Del. 2007) (citing *Mars, Inc. v. Conlux USA Corp.*, 818 F. Supp. 707, 720-21 (D. Del. 1993), *aff'd*, 16 F.3d 421 (Fed. Cir. 1993)). Accordingly, the court will order Cisco to pay prejudgment interest at the prime rate, compounded quarterly.

2. Accounting

Telcordia also requests an accounting of Cisco's infringing sales from January 31, 2007 to the date of judgment. Cisco opposes the request, asserting that the jury's damages award is a paid-up licensing fee. For the reasons previously discussed, the court rejects Cisco's argument.

In the alternative, Cisco argues that Telcordia has failed to properly request an accounting, because its request does not state what infringing sales should be included with the accounting and what rate should apply. The court finds that an accounting is appropriate, but also agrees with Cisco's statement regarding the threshold questions that must be resolved in order to render an accounting meaningful. Thus, the court will order the parties to meet and confer to attempt to agree on the applicable royalty base and rate for an accounting. In the absence of an agreement, the court will permit the parties to file competing proposals.

H. Telcordia's Motion to Enhance Damages

Telcordia seeks enhanced treble damages for Cisco's willful infringement of the '633 and '763 patents. Pursuant to 35 U.S.C. § 384, a court may "increase the damages up to three times the amount found or assessed." An increased damages award requires a showing of willfulness. *Seagate*, 497 F.3d at 1368. A finding of wilfulness, however, does not mandate enhanced damages, much less treble damages. *See Cybor Corp. v. FAS Techs, Inc.*, 138 F.3d 1448, 1461 (Fed. Cir. 1998) (citing

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Modine Mfg. Co. v. The Allen Group, Inc., 917 F.2d 538, 543 (Fed. Cir. 1990); *Read Corp. v. Portec,*

Inc., 970 F.2d 816, 826 (Fed. Cir. 1992). "Rather, '[t]he paramount determination [for enhanced

damages] . . . is the egregiousness of the defendant's conduct based on all the facts and

circumstances.'" *Electro Scientific Indus., Inc. v. General Scanning, Inc.*, 247 F.3d 1341, 1353 (Fed.

Cir. 2001) (citation omitted). Thus, enhancement of damages is within the discretion of the district

court and is informed by the totality of the circumstances. *See State Indus., Inc. v. Mor-Flo Indus.,*

Inc., 948 F.2d 1573, 1576 (Fed. Cir. 1991).

Factors the court may take into consideration when determining whether, and to what extent,

to exercise its discretion include: (1) whether the infringer deliberately copied the ideas or design of

another; (2) whether the infringer, when he knew of the other's patent protection, investigated the

scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed; (3)

the infringer's behavior as a party to the litigation; (4) the infringer's size and financial condition;

(5) the closeness of the case; (6) the duration of the infringer's misconduct; (7) any remedial action

by the infringer; (8) the infringer's motivation for harm; and (9) whether the infringer attempted to

conceal its misconduct. *Read Corp.*, 970 F.2d at 826. The ultimate question remains, however,

"whether the infringer, acting in good faith and upon due inquiry, had sound reason to believe that

it had the right to act in the manner that was found to be infringing." *SRI Intern., Inc. v. Advanced*

Technology Labs., Inc., 127 F.3d 1462, 1464-65 (Fed. Cir. 1997).

Telcordia argues that enhanced damages are warranted in this case for several reasons,

namely: (1) Cisco knew of Telcordia's patents and deliberately copied them; (2) Cisco willfully

infringed Telcordia's '633 and '763 patents with a highly culpable state of mind, and Cisco's actions

in the case were particularly egregious; (3) Cisco did not form a good faith belief that its activity was

noninfringing or that Telcordia's patents were invalid; (4) Cisco is a large company in good financial

condition; (5) Cisco's litigation behavior; and (6) Cisco infringed the '633 and '763 patents for many

years and has taken no remedial action.

Upon consideration of the parties' submissions and the *Read* factors, the court finds that

enhanced damages are not warranted in this case under 35 U.S.C. § 284. Although the jury found

that Cisco's infringement of the '633 and '763 patents was willful, the court finds that the evidence

was not strong enough to warrant enhanced damages. Also, the court finds that Cisco's defenses,

although ultimately unsuccessful, were not frivolous and were litigated in good faith. Moreover,

Cisco mounted a substantial challenge to Telcordia's infringement contentions.[13] *See Delta-X v.*

Baker Hughes Prod. Tools, 984 F.2d 410, 413 (Fed. Cir. 1993) ("[A]n infringer may generally avoid

enhanced damages with a meritorious good faith defense and a substantial challenge to

infringement."). The issues of infringement and invalidity were extremely close. *See*, *e.g., C.R.*

Bard, Inc. v. Medtronic, Inc., No. 96-589-SLR, 1999 WL 458305, at *14 (D. Del. June 15, 1999).

The court also finds that enhancement is inappropriate because, although the jury found that Cisco's

infringement was willful, there is evidence that Cisco's accused products were developed to comply

with Telcordia's SRTS standard, and that Telcordia did not inform the telecommunications industry

that it intended to seek patent protection for the standard. *See e.g.*, D.I. 359, at 1938:10-1940:19.

Therefore, the court finds that enhancement of damages is inappropriate in this case.

I.   Telcordia's Motion for Attorney Fees and Expenses

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[13] Indeed, Telcordia conceded non-infringement of the '306 patent prior to trial.

Telcordia also argues that the jury's willfulness finding, and Cisco's litigation tactics warrant a finding that this case is exceptional pursuant to 35 U.S.C. § 285. In deciding whether to award attorney's fees, the court must undertake a two-step inquiry. *Interspiro USA, Inc. v. Figgie Intern. Inc.*, 18 F.3d 927, 933 (Fed. Cir. 1994). First, the court "must determine whether there is clear and convincing evidence that the case is 'exceptional.'" *Id.* Second, the court must determine whether "an award of attorney fees to the prevailing party is warranted." *Id.* Exceptional cases include: "inequitable conduct before the PTO; litigation misconduct; vexatious, unjustified, and otherwise bad faith litigation; a frivolous suit or willful infringement." *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1034 (Fed. Cir. 2002) (citation omitted).

Although Telcordia argues to the contrary, the court finds that Cisco's trial tactics in this case did not rise to the level of bad faith or vexatious litigation.[14] Despite the verdict, Cisco put Telcordia to its proofs. The court finds that there was nothing exceptional about this infringement case. The court declines to award attorney fees based upon the jury's finding of willfulness, absent more. Accordingly, the court will deny Telcordia's motion with respect to attorney fees and costs.

IV.   CONCLUSION

For the reasons set forth herein, Cisco's renewed JMOL motion regarding non-infringement of the '763 patent is denied; Cisco's renewed motion regarding the invalidity of the '763 patent on the ground of indefiniteness is denied; Cisco's renewed JMOL motion regarding the invalidity of the '633 patent on the basis of obviousness or in the alternative, improper inventorship, is denied; Cisco's renewed motion regarding anticipation of the '306 patent is denied; Cisco's motion for a new trial

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[14] The court is somewhat perplexed by Telcordia's assertion of Cisco's litigation misconduct for the first time in its brief supporting the attorney fee motion, especially given the court's process for handling discovery disputes and the fact that the parties had at least three discovery dispute teleconferences during the course of the litigation.

on willfulness is denied; Telcordia's motion for a permanent injunction or, in the alternative, for an order requiring cisco to pay a market-rate royalty is denied; Telcordia's motion for prejudgment interest and an accounting of cisco's infringing sales since January 31, 2007 is granted; Telcordia's motion to enhance damages is denied; and Telcordia's motion for attorney fees and expenses is denied.

Dated: January 6, 2009   /s/ Gregory M. Sleet
                                                    CHIEF, UNITED STATES DISTRICT JUDGE

IN THE UNITED STATED DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TELCORDIA TECHNOLOGIES, INC.,   )
)
   Plaintiff/Counterclaim Defendant,   )
)
   v.   )   C.A. No. 04-876-GMS
)
CISCO SYSTEMS, INC.,   )
)
   Defendant/Counterclaim Plaintiff.   )

ORDER

For the reasons set forth in the court's Memorandum of this same date, IT IS HEREBY

ORDERED that:

1.   Cisco's Motion for Judgment as a Matter of Law (D.I. 375) is DENIED in all

    respects.

2.   Cisco's Motion for a New Trial on Willful Infringement Pursuant to Rule 59(a)

    (D.I. 373) is DENIED.

3.   Telcordia's Motion for a Permanent Injunction or, in the Alternative, for an Order

    Requiring Cisco to Pay a Market-Rate Royalty (D.I. 366) is DENIED. The parties

    shall negotiate the terms of a reasonable royalty rate going forward. Should the

    parties fail to reach an agreement, the parties shall simultaneously file competing

    proposals of no more than five (5) pages.

4.   Telcordia's Motion for Prejudgment Interest and an Accounting of Cisco's

    Infringing Sales since January 31, 2007 (D.I. 362) is GRANTED. The court

    awards Telcordia prejudgment interest, based on the prevailing prime rate,

    compounded quarterly. The parties shall meet and confer to attempt to agree on

    the applicable royalty base and rate for an accounting. In the absence of an

agreement, the parties shall simultaneously file competing proposals of no more than five (5) pages.

5.   Telcordia's Motion to Enhance Damages Pursuant to 35 U.S.C. § 284 (D.I. 369) is DENIED.

6.   Telcordia's Motion for Attorney Fees and Expenses Pursuant to 35 U.S.C. § 285 and/or the Court's Inherent Equitable Authority (D.I. 371) is DENIED.

Dated: January 6, 2009   /s/ Gregory M. Sleet
                                          CHIEF, UNITED STATES DISTRICT JUDGE