UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ALFRED E. MANN FOUNDATION FOR SCIENTIFIC RESEARCH, Plaintiff, v. COCHLEAR CORPORATION, et al., Defendants.	Case No. CV 07-8108 FMO (SHx) **ORDER RE: POST-TRIAL MOTIONS**

Having reviewed and considered all the briefing filed with respect to the parties' post-trial motions, the court concludes that oral argument is not necessary to resolve the motions and orders as follows. See Fed. R. Civ. P. 78; Local Rule 7-15; Willis v. Pac. Mar. Ass'n, 244 F.3d 675, 684 n. 2 (9th Cir. 2001).

BACKGROUND

Plaintiff Alfred E. Mann Foundation for Scientific Research ("AMF" or "plaintiff") brings this action, alleging that defendants Cochlear Corporation and Cochlear Ltd. (collectively, "Cochlear" or "defendants") infringed two patents directed to cochlear implant technology. (See First Amended Complaint for Patent Infringement ("FAC") at ¶¶ 17 & 21-23; Reply and Counterclaims-in-Reply to Cochlear Americas and Cochlear Limited's Counterclaims ("Pl.'s Supp. Claims") at 13-14) (Document Nos. 164 & 171). AMF alleges that Cochlear infringed U.S. Patent No. 5,938,691, entitled "Multichannel Implantable Cochlear Stimulator" ("the '691 patent"), and U.S. Patent No.

5,609,616, entitled "Physician's Testing System and Method for Testing Implantable Cochlear Stimulator" ("the '616 patent") (collectively, "the patents-in-suit"). (See FAC at ¶¶ 21-23; Pl.'s Supp. Claims at 13-14).

The '691 patent is generally directed to a cochlea stimulation system comprising of: (1) an audio signal receiving device, i.e., a microphone; (2) a wearable processor ("WP") that receives and processes audio signals; and (3) an implanted cochlea stimulator ("ICS") that receives data representing the audio signals and stimulates electrodes. (See '691 patent at Abstract, col. 3:9-39 & 34:51-35:6). By stimulating the electrodes located within the cochlea, the implant can also stimulate locations of the auditory nerve, so that the hearing impaired person's brain can perceive sound. (See id. at col. 1:24-27; Reporter's Transcript ("RT"), Jan. 14, 2014, vol. 2, at 79:13-15 & 85:18-25). The '616 patent is generally directed to a system and a method for testing such a system. (See '616 patent at Abstract, col. 34:23-61 & 35:43-36:7).

The court, with the consent of the parties, appointed a Special Master for claim construction. (See Order re: Joint Status Report Regarding Appointment of Special Master at 1) (Document No. 179). The Special Master conducted a claim construction hearing, and issued a Report and Recommendation. (See Special Master's Report and Recommendation on Claim Construction ("R&R") at 5) (Document No. 200). After considering the parties' objections to the R&R, the court issued its Claim Construction Order on June 18, 2012.[1] (See Order re: Parties' Objections to the Special Master's Report on Claim Construction ("Claim Construction Order")) (Document No. 212). Advanced Bionics, LLC ("Advanced Bionics"), the exclusive licensee of the asserted patents, (see Pl.'s Supp. Claims at 13), was joined as an involuntary plaintiff on January 13, 2014. (See Final Pretrial Conference Order ("PTO") at 1) (Document No. 399).

The court conducted a jury trial, in which the jury found that Cochlear infringed claims 1 and 10 of the '616 patent, and claims 6 and 7 of the '691 patent. (See Verdict Form at 1-4 & 5-8) (Document No. 460). The jury also found willful infringement of both asserted patents. (See id.

[1] The case was transferred to the undersigned judge on January 18, 2013. (See Order of the Chief Judge, dated Jan. 18, 2013) (Document No. 232).

at 4 & 8). In addition, the jury found that the asserted claims are not invalid based on Cochlear's obviousness and anticipation defenses. (See id. at 4-5 & 8-9). The jury awarded $131,216,325 damages, based on royalty rate of 7.5 percent. (See id. at 10). Finally, the jury provided an advisory verdict in favor of AMF on inequitable conduct. (See id. at 9-10).

Pending before the court are the parties' post-trial motions. Cochlear filed a Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. [] 50 ("JMOL"), with respect to: (1) direct and contributory infringement of the asserted claims; and (2) willful infringement of the asserted patents, (see JMOL at 1) (Document No. 507),[2] and a Motion for New Trial pursuant to Fed. R. Civ. P. 59 ("Rule 59 Motion") with respect to (1) infringement, (2) invalidity, and (3) damages issues. (See Defendants' Notice of Motion and Motion for New Trial at 1) (Document No. 508).[3] Involuntary plaintiff Advanced Bionics moved to revise the proposed judgment, to state that judgment is in favor of both AMF and Advanced Bionics. (See Motion of Plaintiff Advanced Bionics, LLC to Alter or Amend Judgment Pursuant to Federal Rule of Civil Procedure 59 at 2) (Document No. 504).

COCHLEAR'S MOTION FOR JUDGMENT AS A MATTER OF LAW

I. LEGAL STANDARD.[4]

Federal Rule of Civil Procedure 50 permits a district court to grant judgment as a matter of law "when the evidence permits only one reasonable conclusion and the conclusion is contrary to that reached by the jury." Ostad v. Or. Health Scis. Univ., 327 F.3d 876, 881 (9th Cir. 2003). If there is substantial evidence to support the jury's verdict, the court should deny a motion for

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[2] The parties' Joint Brief Re Defendants' Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. [] 50 ("JMOL Joint Br.") was filed in its original form as Document No. 507-1, and in re-formatted form as Document No. 511-2. For convenience, the court refers to the pagination in Document No. 511-2, unless otherwise specified.

[3] The parties' Joint Brief Re Defendants' Motion For New Trial ("Rule 59 Joint Br.") was filed in its original form as Document No. 508-1, and in re-formatted form as Document No. 511-3. For convenience, the court refers to the pagination in Document No. 511-3, unless otherwise specified.

[4] A motion for judgment as a matter of law "is not a patent-law specific issue, so regional circuit law applies." Harris Corp. v. Ericsson, Inc., 417 F.3d 1241, 1248 (Fed. Cir. 2005).

judgment as a matter of law. See Wallace v. City of San Diego, 479 F.3d 616, 624 (9th Cir. 2007). "Substantial evidence is such relevant evidence as reasonable minds might accept as adequate to support a conclusion even if it is possible to draw two inconsistent conclusions from the evidence." Maynard v. City of San Jose, 37 F.3d 1396, 1404 (9th Cir. 1994); see Wallace, 479 F.3d at 624. "[T]he court must not weigh the evidence, but should simply ask whether the plaintiff has presented sufficient evidence to support the jury's conclusion." Wallace, 479 F.3d at 624. The court must "view the evidence in the light most favorable to the nonmoving party . . . and draw all reasonable inferences in that party's favor." E.E.O.C. v. Go Daddy Software, Inc., 581 F.3d 951, 961 (9th Cir. 2009) (internal quotations and citations omitted). Because a post-verdict Rule 50(b) motion is "a renewed motion," it is "limited to the grounds asserted in the pre-deliberation Rule 50(a) motion." Id.

II. INFRINGEMENT.

Cochlear contends that AMF failed to present substantial evidence that it infringed the asserted claims. (See JMOL Joint Br. at 3-35). A finding of patent infringement involves a two-step analysis. "First, the claims of the patent must be construed to determine their scope. Second, a determination must be made as to whether the properly construed claims read on the accused device." Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1304 (Fed. Cir. 1999) (internal citation omitted); Carroll Touch, Inc. v. Electro Mechanical Sys., Inc., 15 F.3d 1573, 1576 (Fed. Cir. 1993). The first step of claim construction is a question of law; the second step is a question of fact. See Pitney Bowes, 182 F.3d at 1304.

A. Applicable Law.

"Infringement is assessed by comparing the accused device to the claims; the accused device infringes if it incorporates every limitation of a claim, either literally or under the doctrine of equivalents. If, however, even one claim limitation is missing or not met, there is no literal infringement." MicroStrategy Inc. v. Business Objects, S.A., 429 F.3d 1344, 1352 (Fed. Cir. 2005) (quotation marks and brackets omitted); Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1317 (Fed. Cir. 2009) ("To infringe a method claim, a person must have practiced all steps of the

claimed method."); Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 775 (Fed. Cir. 1993) ("A method claim is directly infringed only by one practicing the patented method.") (emphasis omitted).

"A finding of infringement under the doctrine of equivalents requires a showing that the difference between the claimed invention and the accused product was insubstantial. One way of doing so is by showing on a limitation by limitation basis that the accused product performs substantially the same function in substantially the same way with substantially the same result as each claim limitation of the patented product." Crown Packaging Tech., Inc. v. Rexam Bev. Can Co., 559 F.3d 1308, 1312 (Fed. Cir. 2009) (citations omitted); see also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 732, 122 S.Ct. 1831, 1837-38 (2002) (explaining that prosecution history estoppel limits the range of equivalents). "Infringement, either literal or under the doctrine of equivalents, is a question of fact." Brilliant Instruments, Inc. v. GuideTech, LLC, 707 F.3d 1342, 1344 (Fed. Cir. 2013) (citing Crown Packaging Tech., 559 F.3d at 1312). "[P]laintiff has the burden of proving infringement by a preponderance of the evidence." Kegel Co. v. AMF Bowling, 127 F.3d 1420, 1425 (Fed. Cir. 1997).

B. Claim 10 of the '616 Patent.[5]

1. **Claim Construction.**

Claim 10 of the '616 patent states as follows:

> 10. A method of testing an implantable tissue stimulating system comprising:
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> transmitting data-containing signals to an implanted stimulator from an external transmitter;
>
> selectively controlling the data-containing signals as they are thus transmitted;
>
> receiving the data-containing signals within the implanted stimulator, the implanted stimulator having a multiplicity of tissue-stimulating electrodes;

[5] In its bench trial order issued contemporaneously with this Order, the court found that claim 1 of the '616 patent and claims 6 and 7 of the '691 patent are invalid for indefiniteness. Accordingly, the discussion in this section will be limited to claim 10 of the '616 patent.

processing the data-containing signals within the implanted stimulator to generate stimulation signals;

applying the stimulation signals to at least one pair of the multiplicity of tissue stimulating electrodes;

selectively monitoring the at least one pair of the multiplicity of electrodes to measure a voltage associated therewith at the same time the stimulation signals are applied thereto;

generating stimulator status-indicating signals representative of the measurements made within the implanted stimulator;

transmitting the stimulator status-indicating signals to an external receiver coupled to the external transmitter;

receiving and processing the status-indicating signals to produce processed status-indicating signals which convey information regarding the status of the implanted stimulator, including the measurements made within the implanted stimulator; and

displaying the processed status-indicating signals, whereby the status of the implanted stimulator, including the results of the measurements made within the implanted stimulator, may be made known.

('616 patent, col. 35:43-36:7) (emphasis added).

For claim construction, the parties agreed that there was no need to construe the term "implanted cochlear stimulator." (See R&R at 2). Accordingly, there is no need to construe the equivalent term, "implanted stimulator." Per the parties' agreement, the court construed the phrase, "selectively controlling the data-containing signals as they are thus transmitted," as "adjusting the data-containing signals which contain data used to set the stimulation signals." (Id. at 8). With respect to the "receiving the data-containing signals" limitation, the court construed the term "tissue-stimulating electrodes" as "electrodes used in stimulating tissue." (Id. at 82). The court found that the term "multiplicity of tissue-stimulating electrodes" should be given its plain and ordinary meaning. (See id.). As for the "applying the stimulation signals" limitation, the court

found that the term "applying the stimulation signals" does not require construction. (See R&R at 96; Claim Construction Order at 23-24). The court also found that "tissue-stimulating electrodes" should be construed as "electrodes used in stimulating tissue." (R&R at 82; Claim Construction Order at 18-19). In addition, the court found that "one pair of the multiplicity of tissue-stimulating electrodes" should be given its plain and ordinary meaning. (See R&R at 82).

With respect to the "selectively monitoring" limitation, the court found, per the parties' agreement, that "at the same time the stimulation signals are applied thereto" should be interpreted as "the measurement of the voltage is made at the same time the stimulation signal is applied." (R&R at 8). Likewise, per the parties' agreement, the court found that "voltage associated therewith" should be construed as "voltage across a pair of electrodes." (Id.).

As for the "generating stimulator status-indicating signals" limitation, the court found, per the parties' agreement, that "[t]he measurements made within the implanted stimulator" should be interpreted as "voltage across a pair of electrodes." (R&R at 8). As for the "transmitting the stimulator status-indicating signals" limitation, the court found that the term, "transmitting the stimulator status-indicating signals to an external receiver coupled to the external transmitter," should be given its plain and ordinary meaning. (See R&R at 118-21; Claim Construction Order at 19-20). The court further explained that this limitation does not require a separate antenna. (See Claim Construction Order at 19-21). Finally, for the "displaying the processed status-indicating signals" limitation, the court found that no construction was necessary regarding the "whereby" clause. (See id. at 2).

2. **Overview of AMF's Infringement Theory.**

During trial, AMF's expert, Dr. Darrin Young, Ph.D. ("Young"), testified regarding AMF's infringement theory. AMF also presented documentary evidence and witness testimony, such as the testimony of Dr. Ginger Stickney, Ph.D. ("Stickney"), an audiologist who worked with Cochlear's accused products, and Dr. David Kelsall ("Kelsall"), an ear surgeon who also worked with Cochlear's implants and related products. (See RT, Jan. 15, 2014, vol. 2, at 30-62).

In general, AMF's infringement theory was directed to the inter-operation of the Cochlear implant, the wearable processor, and the testing software. For the preamble, "[a] method of

testing an implantable tissue stimulating system," AMF presented evidence that the Cochlear system has a method of testing the Cochlear implant and wearable processor through the use of the Custom Sound and WinDPS software. (See, e.g., RT, Jan. 15, 2014, vol. 2, at 73:8-75:7; Exh. 182). As for the "transmitting data-containing signals" limitation, AMF presented testimony and documentary evidence that the wearable speech processor transmits data to the implant. (See RT, Jan. 15, 2014, vol. 2, at 75:8-21; Exh. 177 at COC-2089413). With respect to the "selectively controlling" limitation, AMF presented evidence that the practitioner can adjust the signals by, for instance, using the "sliders" on the Custom Sound software to adjust the current levels for the implant. (See RT, Jan. 15, 2014, vol. 2, at 75:24-78:21; Exh. 155).

For the "receiving the data-containing signals" requirement, AMF presented testimony and documentary evidence that the cochlear implant receives the data, and that there are multiple electrodes in the Cochlear implant. (See, e.g., RT, Jan. 15, 2014, vol. 2, at 79:13-80:13; Exh. 155 (disclosing 22 electrodes); Exh. 177 at COC-2089413). For the "processing the data-containing signals" limitation, AMF presented evidence that the cochlear implant processes the data to generate signals. For example, there was evidence that the implant receives the data; its input decoder decodes the command and controls the stimulus output controller to generate stimulation currents. (See RT, Jan. 15, 2014, vol. 2, at 80:14-82:2; Exh. 5 at COC-2086833). As for the "applying the stimulation signals" requirement, AMF presented evidence that the implant supplies a current to a pair of electrodes, such as an electrode in the implant and an extracochlear electrode. (See RT, Jan. 15, 2014, vol. 2, at 82:3-83:2; Exh. 155).

With respect to the "selectively monitoring" limitation, AMF presented evidence that once the electrodes are selected, the Cochlear system measures the voltage between the electrodes. (See,. e.g, RT, Jan. 15, 2014, vol. 2, at 83:3-85:11; Exh. 5) (e.g., Exh. 5 at COC-2086800) ("This amplifier measures the DC voltage between a pair of electrodes or an internal voltage of the circuit with respect to VSS."). As for the "generating stimulator status-indicating signals" limitation, AMF presented evidence that the accused products generate status-indicating signals, such as "the voltage difference between the two electrodes." (See, e.g., RT, Jan. 15, 2014, vol. 2, at 85:12-86:16; Exh. 5). With respect to the "transmitting the stimulator status-indicating signals"

limitation, there was evidence that the Cochlear implant transmits the voltage to the wearable processor. (See RT, Jan. 15, 2014, vol. 2, at 86:17-87:8; Exh. 5). As for the "receiving and processing the status-indicating signals" limitation, AMF presented evidence that the accused system creates "processed status-indicating signals" such as impedance values. (See RT, Jan. 15, 2014, vol. 2, at 87:10-89:17, Exh. 169). Finally, as for the "displaying the processed status-indicating signals" limitation, there was evidence that the computer running the Custom Sound software displays information, such as the impedance values. (See RT, Jan. 15, 2014, vol. 2, at 89:18-91:1; Trial Exhibits ("Exhs.") 155 & 101).

Thus, AMF's infringement theory generally relies on the inter-operation of the cochlear implant, the wearable processor, and the testing software running on a computer. While the jury verdict identifies infringement as to each individual product, the court interprets the verdict regarding claim 10 as a finding of infringement as to the implant, processor, and testing software running together. See Norris v. Sysco Corp., 191 F.3d 1043, 1048 (9th Cir. 1999) (the court must perform and "fair reading" and "the court must search for a reasonable way to read the verdicts as expressing a coherent view of the case.").

3. **Direct infringement by Cochlear**.

Cochlear asserts that there is no evidence that it directly infringed method claim 10. (See JMOL Joint Br. at 1 & 4). It asserts that the evidence "falls well short of the requirement that Cochlear itself perform each and every one of the method steps of claim 10." (Id. at 4). Cochlear's assertions are unpersuasive.

First, as discussed above, AMF presented substantial evidence that the steps of claim 10 were performed. In particular, AMF presented evidence that the steps would be performed automatically by clicking the "measure" button on Cochlear's diagnostic software. (See RT, Jan. 17, 2014, vol. 1, at 108:6-11; RT, Jan. 15, 2014, vol. 2, at 43, 53 & 59); see also See Vita-Mix Corp. v. Basic Holding, Inc., 581 F.3d 1317, 1326 (Fed. Cir. 2009) ("Direct infringement can be proven by circumstantial evidence."). Second, as to whether Cochlear performed the steps, Stickney testified that Cochlear representatives performed testing with her. (See RT, Jan. 15, 2014, vol. 2, at 56:14-25) ("So, for instance, just like I was mentioning, when I had this little boy

and he was just having a lot of problems . . . . [T]hat's when we contact the manufacturer to come out. And they sat down and they will assist me. Sometimes this is doing what we call an integrity test where it's like a more sophisticated measure of what we just showed you where you're actually checking the integrity of the electrode."); (see id. at 45) ("the rep then proceeded to do some additional testing, and we confirmed at that time it was a device failure"). She also testified that Cochlear representatives conducted conferences and workshops regarding impedance testing. (See id. at 55-57). In addition, AMF presented documentary evidence regarding testing, (see, e.g., Exhs. 4 & 556) (COC 2083658) (Customer Sound, User Manual 59), and evidence that Cochlear personnel trained ear surgeons such as Kelsall to perform impedance checks. (See RT, Jan. 15, 2014, vol. 2, at 34) (Q: "Where did you learn to do an impedance check intra-operatively?"; A: "My staff would have been trained at training courses provided by the manufacturer."). In short, there was more than sufficient evidence for "a reasonable mind [to] accept as adequate to support a conclusion" of direct infringement. Callicrate v. Wadsworth Mfg., 427 F.3d 1361, 1366 (Fed. Cir. 2005) (citing Gillette v. Delmore, 979 F.2d 1342, 1346 (9th Cir. 1992)).

4. **Contributory Infringement – Substantial Non-Infringing Use**.

Cochlear contends that it does not contribute to the infringement of claim 10, because the accused instrumentalities have "substantial non-infringing uses." (See JMOL Joint Br. at 5). Claim 10 recites a method that requires, among other things, "displaying the processed status-indicating signals, whereby the status of the implanted stimulator, including the results of the measurements made within the implanted stimulator, may be made known." ('616 patent at col. 36, ll. 4-7). Cochlear argues that the "accused products are capable of performing impedance testing without displaying impedance value," so performing the "displaying" step is "optional." (JMOL Joint Br. at 7). In response, AMF contends that Cochlear waived the substantial non-infringement use theory, because Cochlear failed to raise the argument in its pre-verdict motion. (See id. at 14-15).

"Because it is a renewed motion, a proper post-verdict Rule 50(b) motion is limited to the grounds asserted in the pre-deliberation Rule 50(a) motion. Thus, a party cannot properly raise

arguments in its post-trial motion for judgment as a matter of law under Rule 50(b) that it did not raise in its pre-verdict Rule 50(a) motion." E.E.O.C., 581 F.3d at 961 (internal quotations omitted); i4i Ltd. P'ship v. Microsoft Corp., 598 F.3d 831, 845 (Fed. Cir. 2010) (to preserve an issue for a post-verdict JMOL, the "party must file a pre-verdict JMOL motion on all theories . . . that it wishes to challenge with a post-verdict JMOL.").

Cochlear's pre-verdict JMOL did not address the "substantial non-infringing use" theory that it raises in its post-verdict motion. (See, generally, Pre-Verdict JMOL at 4-5 & 7) (Document No. 426). For example, with respect to contributory infringement, Cochlear's pre-verdict motion only stated that "if there is no infringement of a patent there can be no contributory infringer."[6] (Id. at 7) (citing Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 341, 81 S.Ct. 599, 602 (1961)). In short, Cochlear waived the substantial non-infringing use theory. See E.E.O.C., 581 F.3d at 961.

5. **Contributory Infringement: Sufficiency of the Evidence**.

Cochlear argues that without evidence that someone directly infringes claim 10, there can be no contributory infringement. (See JMOL at 9-10). In particular, Cochlear contends that there is no literal infringement, because claim 10 requires the display of "voltage" measurements, (id. at 9), and AMF presented evidence of the display of impedance values. (Id.). As a result, AMF has to rely on the doctrine of equivalents, which Cochlear asserts is barred by prosecution history estoppel. (Id.).

As an initial matter, the court rejected Cochlear's prosecution history estoppel argument in its bench trial order. Additionally, the evidence presented at trial was sufficient to support the jury's verdict as to claim 10. The jury heard evidence that Cochlear's software displays impedance values and that impedance and voltage measurements are closely related, due to, for instance, Ohm's law. (See Exh. 155; RT, Jan. 15, 2014, vol. 2, at 60, 90 & 95-96). While there are differences between impedance and voltage measurements, the jury reasonably could have found

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[6] Cochlear's reference to a "contributory infringer," (see Pre-Verdict JMOL at 7), was in the context of its argument that there was no indirect infringement, because AMF had failed to prove direct infringement. (See id.).

that these differences were insubstantial under the doctrine of equivalents. Moreover, the "displaying" limitation does not expressly require the display of "voltage." In other words, the jury could have found that the "displaying" step was performed.

III. WILLFUL INFRINGEMENT.

In order to establish willful patent infringement, the court performs a two-step analysis entailing an objective and a subjective inquiry. First, "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." In re Seagate Tech., LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc). For this requirement, "[t]he state of mind of the accused infringer is not relevant[.]" Id. Rather, the court's inquiry asks "whether a reasonable person would have considered there to be a high likelihood of infringement of a valid patent." Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc., 682 F.3d 1003, 1008 (Fed. Cir. 2012). This issue "should always be decided as a matter of law by the judge." Id. "If the accused infringer's position is susceptible to a reasonable conclusion of no infringement," the objective prong "cannot be met." Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1310 (Fed. Cir. 2011). Second, if the "threshold objective standard is satisfied, 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." In re Seagate Tech., LLC, 497 F.3d at 1371.

Cochlear asserts that the jury's willful infringement verdict should be set aside, because it presented several reasonable non-infringement defenses. (See JMOL at 42-43). The court agrees. While the jury's infringement verdict is supported by substantial evidence, Cochlear presented reasonable non-infringement arguments, including that Cochlear: (1) did not infringe claim 10 of the '616 patent, because its testing system did not display "voltage" measurements; and (2) it did not infringe claim 1 of the '616 patent or the asserted claims of the '691 patent because it employs a single-antenna structure. (See, e.g., RT, Jan. 16, 2014, vol. 1, at 50:17-23, 72:21-73:22 & 74:14-17; RT, Jan. 21, 2014, vol. 1, at 92-124). Cochlear's position is "susceptible to a reasonable conclusion of no infringement," so the objective prong of the Seagate inquiry has

not been met. See Uniloc USA, Inc., 632 F.3d at 1310; DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1336 (Fed. Cir. 2009) (objective prong not met, due to "substantial question of noninfringement").

With respect to the subjective prong, AMF did not provide pre-suit notice regarding the '691 patent. (See Exh. 277). Thus, Cochlear did not have the scienter required for the '691 patent. As for the '616 patent, after AMF provided notice of potential infringement, Cochlear promptly responded with reasonable non-infringement defenses, including the single-antenna non-infringement argument. (See id.). Thus, the risk was not "so obvious" that it should have been known to Cochlear. See Uniloc, 632 F.3d at 1310.

Under the circumstances, although there was sufficient evidence to support the jury's verdict of infringement with respect to claim 10 of the '616 patent, the court is persuaded that no reasonable jury could conclude that Cochlear's infringement was willful. AMF did not meet its burden of putting forth substantial evidence – let alone clear and convincing evidence – to establish willful infringement under the objective prong of the willful infringement test. Nor did it provide substantial evidence to satisfy the subjective prong of the willful infringement test. The court therefore grants Cochlear's JMOL as to willful infringement.

COCHLEAR'S POST-VERDICT RULE 59 MOTION

I. LEGAL STANDARD.[7]

A motion for new trial under Federal Rule of Civil Procedure 59(a) may be granted "only if the verdict is contrary to the clear weight of the evidence, is based upon false or perjurious evidence, or to prevent a miscarriage of justice." Molski v. M.J. Cable, Inc., 481 F.3d 724, 729 (9th Cir. 2007). "[T]he district court's denial of the motion for a new trial is reversible only if the record contains no evidence in support of the verdict." Openshaw v. FedEx Ground Package System, Inc., 576 F.App'x 685, 689 (9th Cir. 2014) (internal quotation marks omitted). The court has "the duty to weigh the evidence as the court saw it, and to set aside the verdict of the jury,

[7] In patent cases, the law of the regional circuit applies in determining whether to grant a new trial. See Wordtech Sys. v. Int. Net. Sol., 609 F.3d 1308, 1313 (Fed. Cir. 2010).

even though supported by substantial evidence, where, in the court's conscientious opinion, the verdict is contrary to the clear weight of the evidence . . . [or] to prevent, in the sound discretion of the trial judge, a miscarriage of justice[.]" Tortu v. Las Vegas Metro. Police Dep't, 556 F.3d 1075, 1087 (9th Cir. 2009) (internal quotation marks omitted).

II. INFRINGEMENT.

Cochlear seeks a new trial on infringement, "for all of the same reasons judgment as a matter of law is appropriate." (Rule 59 Motion at 50). For the reasons discussed above, the jury verdict is not contrary to the "clear weight" of the evidence with respect to claim 10 of the '616 patent. See DSPT Int'l, Inc. v. Nahum, 624 F.3d 1213, 1218 (9th Cir. 2010). The court denies Cochlear's motion as to infringement.

II. INVALIDITY.[8]

"It is well recognized that the persuasiveness of the presentation of complex technology-based issues to lay persons depends heavily on the relative skill of the experts." Mitsubishi Elec. Corp. v. Ampex Corp., 190 F.3d 1300, 1313 (Fed. Cir. 1999). For its invalidity case, Cochlear relied almost entirely on the testimony of Dr. Gerald Loeb ("Loeb"), who was a former AMF employee and whose BION program had been terminated. (See RT, Jan. 17, 2014, vol. 2, at 49:13-52:20). AMF presented the rebuttal testimony of Young. (See RT, Jan. 22, 2014, vol. 1, at 17:22-29:18).

During the trial, Loeb testified that the '616 patent was anticipated and/or obvious, in view of the prior art. He testified regarding references such as U.S. Patent No. 4,947,844 to McDermott ("the '844 patent" or "the McDermott '844 patent") (Exh. 1150); U.S. Patent No. 4,612,934 to Borkan ("the '934 patent" or the "Borkan '934 patent") (Exh. 1152); the LAURA Cochlear Prosthesis Development and Description article by Peeters, which was presented at a 1987 cochlear implant symposium (Exh. 1200); and an article by McDermott entitled, "An Advanced Multiple Channel Cochlear Implant," IEEE Transactions on Biomedical Engineering, pp. 789-97,

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[8] In its bench trial order issued contemporaneously with this Order, the court found that claim 1 of the '616 patent and claims 6 and 7 of the '691 patent are invalid for indefiniteness. Accordingly, the discussion in this section will be limited to claim 10 of the '616 patent.

Vol. 36:7 (July 1989) ("the 1989 McDermott article") (Exh. 1039). (See PTO, App. A, at 46); (see RT, Jan. 17, 2014, vol. 2, at 49:13-52:20).

AMF appears to have effectively challenged the credibility of Cochlear's expert during his cross-examination. For example, while AMF previously funded Loeb's BION project, it discontinued the program in 2008, after a license fee dispute arose between Loeb an AMF. (See RT, Jan. 17, 2014, vol. 2, at 39-41 & 47-51; Exhs. 3030, 3032, 3037 & 3038). Also, Loeb admitted that the Examiner, William Kamm, (see RT, Jan. 21, 2014, vol. 1, at 35:18), had been the examiner on "many" cochlear implant patents, (id. at 35:20-22), and multiple references had been cited on the face of the patents-in-suit, including the Borkan '934 patent and the McDermott '844 patent. (See id. at 38:11-15 & 40:7-12). Finally, a reasonable jury could have discounted Loeb's credibility, based on his background – a medical doctor with no formal training in electrical engineering. (See RT, Jan. 17, 2014, vol. 2, at 37 & 44-45). Also, Loeb testified that he did not design any circuitry, and that he was not in a position to direct circuitry design. (See RT, Jan. 21, 2014, vol. 1, at 46-47).

In addition to its cross-examination of Loeb, AMF presented the testimony of its own expert, Young, who testified that he did not consider Loeb, a medical doctor with some electronics experience, to be well qualified. (See RT, Jan. 22, 2014, vol. 1, at 18:21-19:4). Young also addressed prior art issues, including the '844 McDermott patent, the '934 Borkan patent, the 1989 McDermott article, the Peeters article, (see id. at 19:5-21:5, 22:5-23:2 & 24:13-28:20), as well as secondary considerations of non-obviousness. (See id. at 28:21-29:18).

To rebut Cochlear's argument that claim 10 of the '616 patent was anticipated or rendered obvious by the 1989 McDermott article, AMF presented evidence distinguishing the prior art. For instance, AMF presented evidence that the 1989 McDermott article fails to disclose the "selectively monitoring the at least one pair of the multiplicity of electrodes" and "an external receiver coupled to the external transmitter" limitations. (See RT, Jan. 22, 2014, vol. 1, at 20:3-22). For the "selectively monitoring" limitation, Young testified that Figure 6 of the 1989 McDermott article depicts a single "V-Mon" line from the electrode array to the Voltage Monitor Telemetry Circuit, demonstrating that the 1989 McDermott article discloses the monitoring of a single electrode, not

a pair of electrodes. (See id. at 20:22-22:13) (e.g., "in McDermott's article, it's only one line. He only measures one voltage, not a pair."). Young also testified that the external transmitter and receiver in the 1989 McDermott article are not "coupled," as required by claim 10. (See id. at 22-23).

In short, the jury's finding with respect to the validity of claim 10 is not against the clear weight of the evidence. The jury apparently believed AMF's expert over Cochlear's expert. See Mitsubishi Elec. Corp., 190 F.3d at 1313 ("what you had in this case was two competing scientific technological witnesses, one of whom claimed that the invention was invalid . . . and the other who claimed it was not. . . . [T]he jury apparently chose to believe the one witness over the other."). This is perhaps not surprising given the credibility issues AMF raised with respect to Loeb. See, e.g., i4i Ltd. Partnership, 670 F.Supp.2d at 587 ("[u]ltimately, there was conflicting testimony regarding this precise [invalidity] issue and the determination fell upon the credibility of the parties' expert analysis"), aff'd as modified, 589 F.3d 1246, 1260-62 (Fed. Cir. 2009); Allergan, Inc. v. Barr Labs., Inc., 808 F.Supp.2d 715, 733 (D. Del. 2011) (denying post-trial invalidity argument based on credibility issues).

III. DAMAGES.

"[U]nless the amount of damages is grossly excessive, unsupported by the evidence, or based solely on speculation, the reviewing court must uphold the jury's determination of the amount." Morgan v. Woessner, 997 F.2d 1244, 1268 (9th Cir. 1993). Where the court concludes that a new trial is appropriate due to excessive damages, it may exercise its discretion to grant a new trial either without qualification, or conditioned on the winner's refusal to accept a reduction in damages, known as remittur. See Gasperini v. Center for Humanities, Inc., 518 U.S. 415, 433, 116 S.Ct. 2211, 2222 (1996).

As noted earlier, the jury awarded AMF damages in the $131,216,325.00 for Cochlear's infringement of claims 1 and 10 of the '616 patent, and claims 6 and 7 of the '691 patent.[9]

[9] The verdict form stated: "[i]f you find that the Cochlear Defendants have infringed a valid claim of either the '616 patent or the '691 patent, what are the total damages that the Cochlear Defendants should pay to the Foundation?" (Verdict Form at 10).

However, the court, based on the testimony and evidence presented during both the jury and bench trial, found claim 1 of the '616 patent and claims 6 and 7 of the '691 patent to be invalid on indefiniteness grounds.

"[W]here the jury rendered a single verdict on damages, without breaking down the damages attributable to each patent, the normal rule would require a new trial as to damages." Retractable Techs., Inc. v. Becton Dickinson & Co., 757 F.3d 1366, 1370 (Fed. Cir. 2014) (citations omitted); Accentra, Inc. v. Staples, Inc., 500 Fed. Appx. 922, 931 (Fed. Cir. 2013) (vacating and remanding damages award, as expert testimony and jury verdict were based on finding that all asserted patents were valid and infringed). Here, the damages awarded by the jury were not broken down as to each claim or patent. (See Verdict Form at 10). Therefore, in light of the foregoing and the court's contemporaneous finding of indefiniteness with respect to three of the asserted claims, the court believes that it must grant the motion for new trial so as to allow a damages trial with respect to claim 10 of the '616 patent.

ADVANCED BIONIC'S POST-VERDICT RULE 54 MOTION

Advanced Bionics, an involuntary plaintiff and an exclusive licensee to the asserted patents, filed a motion to alter or amend the judgment to reflect that "Advanced Bionics should be included as a party plaintiff." (Motion of Plaintiff Advanced Bionics, LLC to Alter or Amend Judgment Pursuant to Federal Rule of Civil Procedure [] 59 at 2). Under the circumstances, this motion will be denied as moot.

CONCLUSION

Based on the foregoing, IT IS ORDERED THAT:

1. Defendant's Motion for Judgment as a Matter of Law **(Document No. 507)** is **granted in part** and **denied in part**. The motion is **granted** and the court sets aside the jury's finding of willful infringement. The motion is **denied** as to infringement in all other respects.

2. Defendant's Motion for a New Trial **(Document No. 508)** is **granted in part** and **denied in part**. The motion is **granted** as to a new damages trial with respect to claim 10 of the '616 patent. The motion is **denied** in all other respects.

3. Involuntary Plaintiff Advanced Bionics' Motion to Amend the Judgment **(Document No. 504)** is **denied as moot**.

Dated this 31st day of March, 2015.

/s/
Fernando M. Olguin
United States District Judge