JS-6

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ALFRED E. MANN FOUNDATION FOR SCIENTIFIC RESEARCH, et al., Plaintiffs, v. COCHLEAR CORPORATION, et al., Defendants.	Case No. CV 07-8108 FMO (SHx) **JUDGMENT**

Pursuant to Rule 58 of the Federal Rules of Civil Procedure and in consideration of the Jury Verdict delivered on January 23, 2014, (Dkt. 460); the decision and mandate of the U.S. Court of Appeals for the Federal Circuit, dated November 17, 2016, (Dkt. 557), and January 17, 2017, (Dkt. 558), respectively; the Court's Order Re: Pending Motions, filed on November 4, 2018, (Dkt. 634); and the entirety of the record in this case, IT IS HEREBY ORDERED, ADJUDGED AND DECREED THAT:

1. Judgment is entered in favor of plaintiffs Alfred E. Mann Foundation for Scientific Research and Advanced Bionics, LLC (collectively, "plaintiffs") as to the validity and infringement of claims 1 and 10 of U.S. Patent No. 5,609,616 ("the '616 patent").

2. Judgment is entered in favor of plaintiffs as to defendants Cochlear Corporation's and Cochlear Ltd.'s (collectively, "Cochlear") willful infringement of the '616 patent.

3. Plaintiffs are hereby awarded compensatory damages against Cochlear in the amount of $134,028,539, comprised of the jury award of $131,216,325 and supplemental damages of $2,812,214. The award of compensatory damages is based on a reasonable royalty rate of 7.5% for Cochlear's willful infringement of the '616 patent.

4. Plaintiffs' compensatory damages against Cochlear are hereby enhanced by the additional amount of $134,028,539, such that plaintiffs are hereby awarded combined compensatory and enhanced damages against Cochlear in the amount of $268,057,078.

5. Plaintiffs are the prevailing parties.

6. Pursuant to 28 U.S.C. § 1961, plaintiffs are awarded post-judgment interest on all sums awarded herein, at the statutory rate, until the Judgment is satisfied.

Dated this 9th day of November, 2018.

/s/
Fernando M. Olguin
United States District Judge

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

Having reviewed and considered all the briefing and exhibits filed with respect to: (1) Defendant's Renewed Motion for Judgment as a Matter of Law of No Infringement of Claim 1 of the '616 Patent (Dkt. 580-1, "JMOL Motion"); (2) Plaintiff's Motion for Judgment Entering the Jury Damages Award (Dkt. 579, "Damages Motion"); (3) Plaintiff's Motion for Enhanced Damages (Dkt. 602, "Enhanced Damages Motion"); and (4) Plaintiff's Motion to Strike Defendant's Supplemental Brief Regarding Damages from January 1, 2014, to March 11, 2014 (Dkt. 616, "Motion to Strike"), the court finds that oral argument is not necessary to resolve the motions, see Fed. R. Civ. P. 78; Local Rule 7-15; Willis v. Pacific Maritime Ass'n, 244 F.3d 675, 684 n. 2 (9th Cir. 2001), and concludes as follows.

BACKGROUND

Plaintiff Alfred E. Mann Foundation for Scientific Research ("plaintiff," "AMF," or "Foundation") filed this action, alleging that defendants Cochlear Corporation (n/k/a Cochlear Americas) and Cochlear Ltd. (collectively, "Cochlear" or "defendant") infringed two patents directed

to cochlear implant technology. (See Dkt. 164, First Amended Complaint ("FAC") at ¶¶ 17 & 21-23). Plaintiff 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").[1] (See id. at ¶¶ 15 & 17-23). Advanced Bionics, LLC ("AB"), the exclusive licensee of the patents-in-suit, was joined as an involuntary plaintiff on January 13, 2014. (See Dkt. 399, Court's Final Pretrial Conference Order of January 13, 2014 ("Final Pretrial Order") at 1).

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 Dkt. 460, Jury Verdict at 1-4 & 5-8). The jury also found willful infringement of both patents, (see id. at 4 & 8), and that the patents were not invalid based on defendant's obviousness and anticipation defenses. (See id. at 4-5 & 8-9). The jury awarded $131,216,325 in damages, based on a royalty rate of 7.5%, and provided an advisory verdict in favor of plaintiff on inequitable conduct. (See id. at 9-10).

On March 31, 2015, the court issued its findings of fact and conclusions of law following the bench trial, and determined that all claims except claim 10 of the '616 patent were invalid for indefiniteness. (See Dkt. 539, Court's Order of March 31, 2015, at 23-32). Also, on March 31, 2015, the court issued its Order Re: Post-Trial Motions, which granted defendant's Rule 50[2] motion in part and set aside the jury's finding of willful infringement. (See Dkt. 540, Court's Order of March 31, 2015, Re: Post-Trial Motions at 12-13). The court also granted Cochlear's Rule 59 motion for a new trial on damages. (See id. at 16-17). The court entered judgment pursuant to Rule 54(b), (see Dkt. 548, Judgment), and the parties cross-appealed. (See Dkt. 550, Cochlear's Notice of Appeal; Dkt. 552, AMF's Notice of Appeal; Dkt. 553, AB's Notice of Appeal).

On November 16, 2016, the Federal Circuit Court of Appeals issued its decision, which affirmed the court's finding that the '691 patent was invalid for indefiniteness, but reversed the

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[1] The '691 patent is generally directed to a cochlea stimulation system. (See Dkt. 581-7, '691 patent). The '616 patent is generally directed to a system and a method for testing such a system. (See Dkt. 580-4, '616 patent).

[2] Unless otherwise noted, all "Rule" references are to the Federal Rules of Civil Procedure.

court's indefiniteness finding as to claim 1 of the '616 patent. See Alfred E. Mann Foundation v. Cochlear Corp., 841 F.3d 1334, 1341-45 (Fed. Cir. 2016) ("Alfred Mann"). The Federal Circuit also vacated the court's finding that Cochlear's infringement was not willful, in light of the Supreme Court's decision in Halo Electronics, Inc. v. Pulse Electronics, Inc., 136 S.Ct. 1923 (2016) ("Halo"). See id. at 1345-46. Finally, the Federal Circuit determined that it lacked jurisdiction to review the court's Rule 59 order granting defendant's motion for a new trial on damages. See id. at 1346-48.

DISCUSSION

I. NON-INFRINGEMENT OF CLAIM 1 OF THE '616 PATENT.

Defendant asserts that the court's invalidity ruling "rendered Cochlear's post-trial JMOL motion with respect to claim 1 of the '616 patent moot[,]" and that the Federal Circuit's remand does not prevent the court from "address[ing] the open issue of JMOL of non-infringement as to claim 1 of the '616 patent." (Dkt. 580-1, JMOL Motion at 2). Plaintiff responds that by not appealing the denial of its motion for judgment of non-infringement as to claim 1 of the '616 patent, defendant waived its right to renew its JMOL Motion. (Dkt. 584, Plaintiff's Opposition to Defendant's Renewed Motion for Judgment as a Matter of Law [] ("JMOL Opp.") at 4-7).

The Rule 54(b) judgment entered by the court states that "[e]xcept for the issue of damages for infringement of claim 10 of U.S. Patent No. 5,609,616, this Judgment resolves all claims, counterclaims and defenses of all the parties." (Dkt. 548, Judgment at 2) (emphasis added). This judgment is consistent with the court's intent in entering a Rule 54(b) judgment, i.e., that all issues and claims other than the issue of damages for claim 10 had to be disposed of completely before they could be appealed to the Federal Circuit. Had Cochlear made it clear to the court that it intended to preserve its non-infringement argument as to claim 1, the court would not have agreed to enter the Rule 54(b) judgment pursuant to the parties' stipulation, as it would have undermined the purpose of entering the Rule 54(b) judgment in the first place, i.e., to resolve all liability claims and issues other than damages as to claim 10.

"If the district court enters judgment on something less than a final disposition of an entire claim, the Rule 54(b) judgment is improper, and the court of appeals is without jurisdiction to hear the appeal." 10 Moore's Federal Practice § 54.22[2][a][i] at 54-38 (2018). Here, when the court

decided that claim 1 was invalid, it necessarily adjudicated plaintiff's entire patent infringement claim.[3] See W.L. Gore v. Int'l Medical Prostethetics Research, 975 F.2d 858, 863-64 (Fed. Cir. 1992) (when district court decided that patent was invalid, it necessarily adjudicated plaintiff's entire patent infringement claim, even though affirmative defense of patent misuse was never explicitly addressed). Cochlear's non-infringement argument as to claim 1 of the '616 patent is nothing more than an alternative defense theory as to why plaintiff should not prevail on its patent infringement claim. But considering the merits of Cochlear's alternative non-infringement argument necessarily implies that the court's Rule 54(b) judgment was not final with respect to plaintiff's patent infringement claim as to claim 1 of the '616 patent. See, e.g., In re Ishihara Chemical Co., 251 F.3d 120, 123-34 n. 1 (2nd Cir. 2001) (court of appeals may not, under Rule 54(b), review order deciding only part of a single claim, or decision that denies relief pursuant to one theory of recovery, where alternative theories have been presented). In other words, the logical implication of defendant's argument is that the Federal Circuit did not have authority to address claim 1 of the '616 patent because the court's Rule 54(b) judgment did not fully decide that patent infringement claim. "Rule 54(b) was implemented to specifically avoid the possible injustice of delay[ing] judgment on a distinctly separate claim [pending] adjudication of the entire case." Alfred Mann, 841 F.3d at 1347 (internal quotation marks omitted). Here, the court's Rule 54(b) "Judgment resolve[d] all claims, counterclaims and defenses of all the parties[,]" (Dkt. 548, Judgment at 2), and Cochlear never argued to the Federal Circuit that this court had improperly entered a Rule 54(b) judgment. Also, nothing prevented Cochlear from arguing, in the alternative,

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[3] Cochlear's reliance on Laitram Corp. v. NEC Corp., 115 F.3d 947 (Fed. Cir. 1997), (see Dkt. 580-1, JMOL Motion at 2; Dkt. 591, JMOL Reply at 2 & 8), is unpersuasive. Laitram did not involve a Rule 54(b) judgment, and thus there was no issue as to the finality of a particular claim. See also 10 Moore's Federal Practice § 54.22[2][a][i] at 54-37 (2018) ("[A]n order partially adjudicating a . . . multi-claim action may be certified for appeal under Rule 54(b) only if the order meets [28 U.S.C.] § 1291's standard of finality as to the matters adjudicated. Stated another way, a district court has the power to enter a Rule 54(b) judgment only if the adjudication is a 'final decision' under § 1291, but is not immediately appealable solely because of pending, unadjudicated claims in the district court."). Also, in Laitram, the JMOL motions were expressly denied as "moot," see 115 F.3d at 949, whereas here, the "Judgment resolve[d] all claims, counterclaims and defenses of all the parties." (Dkt. 548, Judgment at 2).

that substantial evidence did not support the jury's verdict. See, e.g., Warner Chilcott Co., LLC v. Lupin Ltd., 578 F.Appx. 994, 996 (Fed. Cir. 2014) (explaining that where a party appeals a validity decision, the appellee "may . . . make its arguments regarding non-infringement and indefiniteness in its response brief as an appellee").

Finally, the Federal Circuit found that the court's order granting a new trial on damages was not a final order within the meaning of Rule 54(b). See Alfred Mann, 841 F.3d at 1348. The Federal Circuit implicitly found, as the Judgment expressly states, that the court's Rule 54(b) judgment encompassed all claims and issues relating to the claims and patents upon which the jury rendered a verdict. Had the appellate panel believed that any issues of liability remained as to any of the patent claims, it would have indicated as much and found that the court had improperly entered a Rule 54(b) judgment. See, e.g., In re Ishihara Chemical Co., 251 F.3d at 123-34 n. 1; In re Lull Corp., 52 F.3d 787, 788-89 (8th Cir. 1995) (because court did not address sufficiency of defendant's affirmative defense of set-off, summary judgment on some of plaintiff's claims could not be final and court erred in entering judgment under Rule 54(b)).

In short, the court finds that Cochlear waived its non-infringement argument by not raising it on appeal. See Retractable Technologies, Inc. v. Becton Dickinson & Co., 757 F.3d 1366, 1371 (Fed. Cir. 2014), cert. denied, 135 S.Ct. 1843 (2015) (while a court is "free to take action consistent with the mandate, . . . that does not mean that it [is] likewise free to disturb matters that were within [that] mandate."). Still, given the age and extensive procedural history of this case, the court will, out of an abundance of caution, assume that defendant may still challenge the jury's infringement verdict as to claim 1 of the '616 patent and proceed to address defendant's JMOL Motion on the merits.

A. Legal Standard.

Under Rule 50, a district court may grant judgment as a matter of law[4] "when the evidence permits only one reasonable conclusion and the conclusion is contrary to that reached by the jury."

[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).

Ostad v. Oregon Health Sciences University, 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 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). "[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." EEOC v. Go Daddy Software, Inc., 581 F.3d 951, 961 (9th Cir. 2009), cert. denied, 562 U.S. 827 (2010) ("Go Daddy") (citations and internal quotation marks omitted).

B. Applicable Law.

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). "[T]he accused device infringes if it incorporates every limitation of a claim, either literally or under the doctrine of equivalents." MicroStrategy Inc. v. Business Objects, S.A., 429 F.3d 1344, 1352 (Fed. Cir. 2005) (internal quotation marks omitted).

"To prove literal infringement, the patentee must show that the accused device contains every limitation in the asserted claims." WMS Gaming, Inc. v. Int'l Game Technology, 184 F.3d 1339, 1350 (Fed. Cir. 1999) (internal quotation marks omitted). "If even one limitation is missing or not met as claimed, there is no literal infringement." Id. (internal quotation marks omitted). Literal infringement can also be demonstrated under structural equivalents, pursuant to 35 U.S.C. § 112(f) ("§ 112(f)").[5] See Dawn Equipment Co. v. Kentucky Farms Inc., 140 F.3d 1009, 1018

[5] Means-plus-function treatment pursuant to § 112(f) (previously 35 U.S.C. § 112, ¶ 6) provides that a limitation of a claim "may be expressed as a means . . . for performing a specified function without the recital of structure, material, or acts in support thereof[.]" 35 U.S.C. § 112(f).

(Fed. Cir. 1998). Under structural equivalents, "when an accused product satisfies such claim limitations by way of structure equivalent to that described in the specification (and otherwise satisfies the requirements for infringement), the infringement is deemed literal infringement." Id. (emphasis in original); see Al-Site Corp. v. VSI Int'l, Inc., 174 F.3d 1308, 1320 (Fed. Cir. 1999) ("Section 112, ¶ 6 restricts the scope of a functional claim limitation as part of a literal infringement analysis. Thus, an equivalent under § 112, ¶ 6 informs the claim meaning for a literal infringement analysis.") (internal citation 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."[6] Crown Packaging Technology, Inc. v. Rexam

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When so expressed, "such claim [limitation] shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." Id. To determine whether a claim is subject to such means-plus-function treatment, the court applies the following framework. "If the word 'means' appears in a claim [limitation] in association with a function, th[e] court presumes that § 112, ¶ 6 applies." Micro Chemical, Inc. v. Great Plains Chemical Co., 194 F.3d 1250, 1257 (Fed. Cir. 1999) ("Micro Chemical"). "This presumption collapses, however, if the claim itself recites sufficient structure, material, or acts to perform the claimed function." Id. "Without the term 'means,' a claim [limitation] is presumed to fall outside means-plus-function strictures." Id. "Once again, however, that presumption can collapse when an element lacking the term 'means' nonetheless relies on functional terms rather than structure or material to describe performance of the claimed function." Id.

[6] "[T]here are two differences between the equivalence determination made for literal infringement purposes under§ 112(f) and a doctrine of equivalents determination for the same limitation: timing and function." Ring & Pinion Service Inc. v. ARB Corp. Ltd., 743 F.3d 831, 835 (Fed. Cir. 2014). "Equivalence under section 112(f) is evaluated at the time of issuance," while "[e]quivalence under the doctrine of equivalents . . . is evaluated at the time of infringement." Id. "Hence, an after-arising technology, a technology that did not exist at the time of patenting, can be found to be an equivalent under the doctrine of equivalents even though it cannot be an equivalent under the literal infringement analysis of § 112(f)." Id. In addition, "[f]or literal infringement [pursuant to § 112(f)], the accused structures must perform the function recited in the claim (identical function)," while "[t]he doctrine of equivalents covers accused structures that perform substantially the same function in substantially the same way with substantially the same results." Id. "The doctrine of equivalents thus covers structures with equivalent, but not identical, functions." Id.

Beverage Can Co., 559 F.3d 1308, 1312 (Fed. Cir. 2009) (citations omitted); see Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 733, 122 S.Ct. 1831, 1838 (2002) ("The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes.").

Ordinarily, 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. But "[o]n occasion the issue of literal infringement may be resolved with the step of claim construction, for upon correct claim construction it may be apparent whether the accused device is within the claims." Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1476 (Fed. Cir. 1998). "Similarly, the determination of infringement under the doctrine of equivalents may be limited as a matter of law." J & M Corp. v. Harley-Davidson, Inc., 269 F.3d 1360, 1366 (Fed. Cir. 2001). For example, "[t]he scope of equivalents may also be limited by statements in the specification that disclaim coverage of certain subject matter." Id.

C. Claim Construction.

Claim 1 of the '616 patent, in relevant part, states as follows:

> A physician's testing system for testing a multichannel cochlear stimulating system, comprising a physician's tester, an external headpiece/transmitter, and an implanted cochlear stimulator (ICS),
>
> the external headpiece/transmitter . . . ;
>
> the ICS comprising: (a) receiving means for receiving the data-containing signals, (b) processor means for processing the data-containing signals to generate stimulation signals, (c) a plurality of tissue-stimulating electrodes for receiving the stimulation signals, (d) monitor means in the processor means and responsive to the data-containing signals for (1) selectively monitoring at least one pair of the tissue-stimulating electrodes as one of the stimulation signals is applied thereto to measure a voltage associated with said pair of electrodes, and (2) generating stimulator status-indicating signals, and (e)

telemetry means for transmitting the stimulator status-indicating signals to the external headpiece/transmitter means; and

the physician's tester . . . .

(Dkt. 580-4, '616 patent col. 34) (emphasis added).

The court appointed a special master for claim construction, (see Dkt. 179, Court's Order of April 6, 2011, at 1), who conducted a hearing and issued a report and recommendation. (See Dkt. 200, Special Master's Report and Recommendation on Claim Construction) ("Claim Construction Report"). After considering the parties' objections to the Claim Construction Report, the court issued its final claim construction order. (See Dkt. 212, Court's Order of June 18, 2012) ("Claim Construction Order"). The parties' objections to the Claim Construction Report, however, did not concern the relevant claim construction at issue in this Order.

During claim construction, the special master construed the limitation, "the ICS comprising: (a) receiving means for receiving the data-containing signals," (Dkt. 580-4, '616 patent col. 34), as a means-plus-function claim limitation. (See Dkt. 200, Claim Construction Report at 56); see also Alfred Mann, 841 F.3d at 1344-45 (citing '616 patent col. 34 ll. 23-61 and referring to it as a means-plus-function limitation). In addition, the special master construed the corresponding structure as "a receiver connected to a main coil/antenna[,]" and determined that "such claim shall be construed to cover the corresponding structure . . . and equivalents thereof." (Dkt. 200, Claim Construction Report at 55) (internal quotation marks omitted). The special master construed the limitation as "[t]he receiver connected to a main antenna/coil is [sic] separate structure from the telemetry transmitter and telemetry antenna/coil." (Id.).

D. Whether There Was Substantial Evidence That Claim 1 Of The '616 Patent Was Infringed.[7]

The parties do not dispute that defendant's accused products contain a single antenna/coil in the ICS. (See Dkt. 580-1, JMOL Motion at 3 ("Cochlear's accused cochlear implants all use a

[7] Because Cochlear's challenge to the jury's finding of contributory infringement relies solely on its argument regarding direct infringement, (see Dkt. 580-1, JMOL Motion at 7), it is unnecessary to address its argument regarding contributory infringement.

single antenna[.]"); Dkt. 584, JMOL Opp. at 12 ("Cochlear's single-antenna implant is insubstantially different from the two-antenna implant disclosed in the ['616] patent[.]")). Claim 1 of the '616 patent, however, has been construed to require two antennas/coils in the ICS. (See Dkt. 200, Claim Construction Report at 55) ("The receiver connected to a main antenna/coil is [sic] separate structure from the telemetry transmitter and telemetry antenna/coil."). Defendant contends that, under structural equivalents or the doctrine of equivalents, "the '616 patent [] bars Plaintiffs from arguing that one antenna is equivalent to two because the '616 patent [] disclaim[s] the use of the single antenna approach by criticizing it as inferior to the two antenna approach." (Dkt. 580-1, JMOL Motion at 3-4; see id. at 4 ("[Plaintiff] cannot . . . rely on equivalent structure and/or the doctrine of equivalents to argue that the disclaimed structure infringes."); id. at 6 ("[A] structure that was criticized as inadequate in the '616 . . . patent[] cannot be considered equivalent structure under 35 U.S.C. § 112, ¶ 6 or the doctrine of equivalents.")). The court is not persuaded.

The specification of the '616 patent states the following regarding the prior art in Professor McDermott's U.S. Patent No. 4,947,844 ("'844 patent" or "McDermott Patent"):

> The system described in the [']844 patent also includes in the implanted receiver/stimulator a transmitter for telemetering one electrode voltage, measured during stimulation, to an external receiver for monitoring and analysis as an indicator of proper operation of the implanted stimulator. The transmitter comprises an oscillator operating at a frequency of about 1 MHZ. The output of the oscillator is coupled to the implant's receiving coil and demodulated to recover the selected voltage waveforms. Unfortunately, such a telemetry system is not only limited to the monitoring of one voltage, but the simultaneous transmission of the telemetry signal and reception of the input carrier signal as described will result in undesired modulation and possible loss of input data.

(Dkt. 580-4, '616 patent col. 2).

"The standard for disavowal is exacting, requiring clear and unequivocal evidence that the claimed invention includes or does not include a particular feature. Ambiguous language cannot

support disavowal." Cisco Systems, Inc. v. Int'l Trade Commission, 873 F.3d 1354, 1361 (Fed. Cir. 2017) (internal citation omitted); see Teleflex, Inc. v. Ficosa N. America Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002) ("The patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope."). "[R]igid formalism is not required," Astrazeneca AB, Aktiebolaget Hassle, KBI-E, Inc. v. Mutual Pharmaceutical Co., Inc., 384 F.3d 1333, 1340 (Fed. Cir. 2004); rather, a clear disavowal may be "express or implied[.]" SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 1345 (Fed. Cir. 2001). In addition, "disparaging comments alone do not necessarily show a manifest or express disavowal of the criticized subject matter." Epistar Corp. v. Int'l Trade Commission, 566 F.3d 1321, 1336 (Fed. Cir. 2009); see, e.g., Micro Chemical, 194 F.3d at 1260-61 (although specification called prior art device using "weigh dump method" too slow and inaccurate, patentee did not disavow since patentee did not assert that "weigh dump method" was reason for slowness or inaccuracies).

A court first considers the language of the claim itself. See i4i Ltd. Partnership v. Microsoft Corp., 598 F.3d 831, 843 (Fed. Cir. 2010), aff'd, 564 U.S. 91 (2011) ("i4i Ltd.") ("We begin again with the claim language" in evaluating claim limitation, disclaimer, or disavowal.). "[W]hen a specification excludes certain prior art alternatives from the literal scope of the claims and criticizes those prior art alternatives, the patentee cannot then use the doctrine of equivalents to capture those alternatives." L.B. Plastics, Inc. v. Amerimax Home Products, Inc., 499 F.3d 1303, 1309 (Fed. Cir. 2007); see J & M Corp., 269 F.3d at 1368 ("Structure expressly disclaimed in the specification [] cannot be considered an equivalent under the doctrine of equivalents."); Gaus v. Conair Corp., 363 F.3d 1284, 1291 (Fed. Cir.), cert. denied, 543 U.S. 927 (2004) ("[T]he patentee cannot reclaim that surrendered claim coverage by invoking the doctrine of equivalents.").

Reviewing the '616 patent as a whole, the court is not persuaded that plaintiff made a clear disavowal of the single antenna approach. As an initial matter, none of the '616 patent's 14 claims contain a single reference to "antenna" or "coil." (See, generally, Dkt. 580-4, '616 patent, cols. 34-36). Further, nowhere does the '616 patent, (see, generally, id.), expressly or implicitly, state that

it is not possible to practice the '616 patent, because of a flaw in the prior art described in the '844 patent, cf. Schwing GmbH v. Putzmeister Aktiengesellschaft, 305 F.3d 1318, 1329 (Fed. Cir. 2002) (embedded metal ring in accused device could not be deemed equivalent of mechanism described in patent, as patent specifically identified and criticized use of embedded metal rings in the prior art), or that a device incorporating more or less than one antenna is "incapable" of achieving the desired results of the '616 patent by using that prior art. Cf. Signtech USA, Ltd. v. Vutek, Inc., 174 F.3d 1352, 1357 (Fed. Cir. 1999) ("[B]y stating that the accused structure was 'incapable' of achieving the desired results of the invention, the patentee expressly excluded it as an equivalent of the disclosed structure."). Nor does the '616 patent state that "all embodiments" of its invention rely solely on the two-antenna approach, see SciMed Life Systems, 242 F.3d at 1344, or emphasize the "novel construction" of the two-antenna approach over a single-antenna approach. Cf. L.B. Plastics, Inc., 499 F.3d at 1309-10 (patentee cannot claim adhesives under the doctrine of equivalents when it disavowed adhesives in the specification in favor of its novel construction of continuous welding). Indeed, Figure 1 of the '616 patent, which is described as "comprising a preferred embodiment of the present invention," displays a single antenna that both receives and transmits data. (See Dkt. 580-4, '616 patent fig. 1 & col. 3-4) (describing "an antenna 20 for transmitting and receiving electromagnetic energy"); Micro Chemical, 194 F.3d at 1260-61 (no disavowal when the specification included the criticized prior art as a component of the combination claim). In short, plaintiff's statements concerning the prior art merely note some drawbacks of the '844 patent, specifically, and not the single antenna approach, generally. (See Dkt. 580-4, '616 patent col. 2 (specification notes that, "as described" in the '844 patent, "simultaneous transmission of the telemetry signal and reception of the input carrier signal" will lead to undesirable results)); see, e.g., Micro Chemical, 194 F.3d at 1260-61 (patentee's statements about "certain inefficiencies" in a method utilized in prior art did not constitute clear disavowal of that method in general); Epistar, 566 F.3d at 1336 ("[T]he single, passing reference to ITO as a relatively unsatisfactory transparent electrical contact in the specification does not disavow the use of ITO as a transparent window layer.").

Further, although defendant asserts that "[t]he record . . . lacks any substantial evidence from which the jury could conclude that Cochlear directly infringed or contributed to infringement[,]" (Dkt. 580-1, JMOL Motion at 3), Cochlear ignores the evidence presented at trial. The standard here is whether there was sufficient evidence to support the jury's conclusion. See Wallace, 479 F.3d at 624. Application of that standard requires the party challenging the jury's verdict to set forth in detail and discuss the evidence that supports the jury's verdict and show that the supporting evidence is so inadequate that it does not qualify as substantial. Here, other than one reference to trial testimony, (see Dkt. 580-1, JMOL Motion at 3), defendant's entire argument is that the '616 patent specifically disavowed the prior art set forth in the '844 patent. (See id. at 3-7). Cochlear's moving papers made no effort to address the testimony of the parties' experts or other evidence introduced during the trial. (see, generally, id.). Further, while plaintiff's Opposition discusses the evidence presented at trial that supports the jury's verdict of infringement of claim 1 of the '616 patent, (see Dkt. 584, JMOL Opp. at 11-14), Cochlear's Reply fails to respond to plaintiff's assertions or otherwise mention or reference the evidence presented at trial. (See, generally, Dkt. 591, JMOL Reply). Under these circumstances, Cochlear's failure to respond to the most critical argument relating to its JMOL Motion constitutes a concession on Cochlear's part that there was substantial evidence of infringement presented to the jury. See, e.g., GN Resound A/S v. Callpod, Inc., 2013 WL 1190651, *5 (N.D. Cal. 2013) (stating, when plaintiff failed to oppose a motion as to a particular issue, that "the Court construes as a concession that this claim element [is] not satisf[ied]"); Hall v. Mortgage Investors Group, 2011 WL 4374995, *5 (E.D. Cal. 2011) ("Plaintiff does not oppose Defendants' arguments regarding the statute of limitations in his Opposition. Plaintiff's failure to oppose . . . on this basis serves as a concession[.]").

In any event, the record contains substantial evidence to support the jury's verdict, i.e., that defendant's single-antenna approach infringed the '616 patent under structural equivalents and/or the doctrine of equivalents. For example, plaintiff's expert, Dr. Darrin Young, testified that Cochlear's accused devices "have a data receiver that can receive the data that's transmitted from outside to the inside, receiving the data-containing signal." (Dkt. 464, January 15, 2014, P.M. Trial Tr. at 98-99). Dr. Young also testified that the '616 patent's disclosure of both: (1) one antenna

that receives and transmits data; and (2) two antennas where one antenna receives and the other transmits data simply means that the difference between one antenna and two antennas is an "insubstantial" "design choice." (See Dkt. 464, January 15, 2014, P.M. Trial Tr. at 107-08; see also Dkt. 466, January 17, 2014, P.M. Trial Tr. at 88 (testimony of defendant's expert Dr. Gerald Loeb testifying that prior art teaches that the single antenna and two-antenna approach can be used interchangeably)). Also, there was evidence that Cochlear's accused devices use a single-antenna approach that is different from that set forth in the '844 patent. (Compare Dkt. 496, January 17, 2014, A.M. Trial Tr. at 75-77 (describing accused devices), with Dkt. 580-4, '616 patent col. 2); see, e.g., Micro Chemical, 194 F.3d at 1260-61 (infringement can be found under doctrine of equivalents when the specification included the criticized prior art as a component of the combination claim). Finally, even defendant's expert, Dr. Robert Stevenson, admitted that an infringer can use separate structures – "separate carrier waves" – on a single antenna to "creat[e] multiple channels."[8] (Dkt. 497, January 21, 2014, A.M. Trial Tr. at 131-32).

In short, assuming Cochlear may challenge the jury's infringement verdict, the court denies defendant's renewed motion for judgment as a matter of law as to non-infringement of claim 1 of the '616 patent.

II. DAMAGES.

Following the verdict, the court vacated the jury's damages award and granted a new trial on damages with respect to infringement of claim 10 of the '616 patent. (See Dkt. 540, Court's Order of March 31, 2015, Re: Post-Trial Motions). The court stated that "in light of the . . . court's contemporaneous finding of indefiniteness with respect to three of the asserted claims, the court believes it must grant the motion for new trial so as to allow a damages trial with respect to claim 10 of the '616 patent" because "the damages awarded by the jury were not broken down as to each claim or patent[.]" (Id. at 17). On appeal, the Federal Circuit affirmed the jury's finding of infringement of claim 10, reversed the court's finding that claim 1 was invalid for indefiniteness,

[8] Dr. Stevenson testified that the disadvantage of this particular kind of single-antenna approach is that it is "less efficient[.]" (Dkt. 497, January 21, 2014, A.M. Trial Tr. at 132).

and reversed the court's determination that Cochlear's infringement of the '616 patent was not willful. See Alfred Mann, 841 F.3d at 1341 & 1345-46. Lastly, the Federal Circuit held that it lacked jurisdiction to consider the court's order granting a new trial with respect to damages. See id. at 1346.

The Federal Circuit's decision effectively reinstated the jury's verdict as to infringement of both asserted claims of the '616 patent, and plaintiff now seeks reconsideration of the court's order granting Cochlear's Rule 59 motion for new trial as it relates to damages. However, the parties dispute the procedural basis for reconsidering the court's prior order. (See Dkt. 579, Damages Motion at 7; Dkt. 581, Damages Opp. at 2-4).

Under the circumstances, the court is persuaded that it can reconsider its Order of March 31, 2015, under Local Rule 7-18. The Federal Circuit refused to consider the court's order granting defendant's Rule 59 motion for new trial as to damages because the court's order was not "a final decision on the damages issue." Alfred Mann, 841 F.3d at 1346. "The authority of district courts to reconsider their own orders before they become final, absent some applicable rule or statute to the contrary, allows them to correct not only simple mistakes, but also decisions based on shifting precedent, rather than waiting for the time-consuming, costly process of appeal." United States v. Martin, 226 F.3d 1042, 1049 (9th Cir. 2000), cert. denied, 532 U.S. 1002 (2001). "Moreover, far from cabining the district court's inherent authority to modify its own rulings before it issues any appealable order, the Local Rules of the Central District of California provide an explicit textual source of authority[, i.e., Local Rule 7-18] for the [plaintiff's] motion for reconsideration." Id. Here, the Federal Circuit's decision constitutes sufficient justification to invoke Local Rule 7-18, i.e., the court may reconsider its decision based on either "a material difference in fact or law from that presented to the Court before such decision that in the exercise of reasonable diligence could not have been known" or "the emergence of new material facts or changes of law occurring after the time of such decision." Local Rule 7-18(a) & (b); see, e.g., Martin, 226 F.3d at 1049 ("We see no reason that this local rule, which imposes no time limits on motions made under its auspices, could not have permitted the district court to decide the Government's motion, which was indisputably based on an intervening change in the law.").

A. Legal Standard.

Under Rule 59, a motion for new trial 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."[9] Molski v. M.J. Cable, Inc., 481 F.3d 724, 729 (9th Cir. 2007). The court has "the duty to weigh the evidence as the court saw it, and to set aside the verdict of the jury, 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 Metropolitan Police Dep't, 556 F.3d 1075, 1087 (9th Cir. 2009) (citation and internal quotation marks omitted).

B. Alleged Defects in the Verdict Form.

Plaintiff contends that, although the '691 patent was found to be invalid, it is nevertheless entitled to reinstatement of the entirety of the jury's award of $131,216,325.00, "[b]ecause the damages verdict is fully supported by the '616 patent alone, and because the Federal Circuit has now held that both claims-in-suit of this patent are valid[.]" (Dkt. 579, Damages Motion at 2; see id. at 7-18 (arguing for award reinstatement)). Plaintiff also contends that "[e]ven if the evidence of infringement of a single patent did not support reinstatement of the jury's damages award, . . . Cochlear forfeited the right to a new damages trial by proposing and accepting the general damages verdict form given to the jury." (Id. at 13; see id. at 14 (defendant "cannot complain about reinstatement of the verdict based on the form it proposed")). Cochlear disputes this characterization as "not accurate." (Dkt. 581, Damages Opp. at 9).

As explained below, the record supports a finding of waiver or forfeiture on Cochlear's part because the "verdict form offered by [Cochlear] tracked the language in the form ultimately given." Jules Jordan Video, Inc. v. 144942 Canada Inc., 617 F.3d 1146, 1160 (9th Cir. 2010). Even

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[9] In patent cases, the law of the regional circuit applies in determining whether to grant a new trial. See Wordtech Systems v. Int'l Networks Solutions, Inc., 609 F.3d 1308, 1312 (Fed. Cir. 2010). In the Ninth Circuit, the district court's "determination that the verdict was not against the clear weight of the evidence" is "virtually unassailable." Crowley v. Epicept Corp., 883 F.3d 739, 751 (9th Cir. 2018) (internal quotation marks omitted). A district court commits "clear abuse of discretion" in denying a Rule 59 motion "only where there is an absolute absence of evidence to support the jury's verdict." Id. (emphasis in original) (internal quotation marks omitted).

assuming the final verdict form did not track Cochlear's proposed language, the issue is still waived because "[t]he record does not reveal any alternate form offered by [Cochlear] separating the [different] bases for infringement." Id.

Cochlear's original Proposed Verdict Form included the following language with respect to the subject damages questions:

> B. Royalty Rate.
>
> 1. If you find that defendants have infringed a valid claim of either the '616 patent or '691 patent, what is the reasonable royalty rate that defendants should pay to plaintiffs?
>
> _____%
>
> 2. If you find that defendants have infringed a valid claim of either the '616 patent or '691 patent, what are the total damages that defendants should pay to plaintiffs?
>
> $_____

(Dkt. 330, Defendant's Proposed Verdict Form at 4-5) (emphasis added).

Cochlear's Proposed First Amended Special Verdict Form included the following language with respect to the subject damages questions:

> B. Royalty Rate
>
> 1. If you find that defendants have infringed a valid claim of either the '616 patent or '691 patent, what is the reasonable royalty rate (if any) that defendants should pay to plaintiffs?
>
> _____%
>
> 2. If you find that defendants have infringed a valid claim of either the '616 patent or '691 patent, what are the total damages that defendants should pay to plaintiffs?
>
> $_____

(Dkt. 359, Defendant's Proposed First Amended Special Verdict Form at 6-7) (emphasis added).

Cochlear's Proposed Second Amended Special Verdict Form included the following language with respect to the subject damages questions:

B. Reasonable Royalty

1. If you find that defendants have infringed a valid claim of either the '616 patent or the '691 patent, what is the reasonable royalty rate (if any) that defendants should pay to plaintiffs based on the making, using, selling, offering for sale or importing into the USA any of the accused products?

PRODUCT	Rate, if any
Nucleus 24 (CI24 series) cochlear implants	
Nucleus Freedom (CI24RE series and CI422) cochlear implants	
Nucleus 5 (CI500 series) cochlear implants	
Sprint (SP5) sound processors	
Freedom (SP12) sound processors	
Nucleus 5 (SP15) sound processors	
WinDPS software	
Custom Sound software	

2. If you find that defendants have infringed a valid claim of either the '616 patent or the '691 patent, what are the total damages that defendants should pay to plaintiffs based on the making, using, selling, offering for sale or importing into the USA any of the accused products?

PRODUCT	Total Damages, if any
Nucleus 24 (CI24 series) cochlear implants	
Nucleus Freedom (CI24RE series and CI422) cochlear implants	
Nucleus 5 (CI500 series) cochlear implants	
Sprint (SP5) sound processors	
Freedom (SP12) sound processors	
Nucleus 5 (SP15) sound processors	
WinDPS software	
Custom Sound software	

(Dkt. 382, Defendant's Proposed Second Amended Special Verdict Form at 14-15) (emphasis added).

Cochlear's Proposed Third Amended Proposed Special Verdict Form included the following language with respect to the subject damages questions:

> B. Reasonable Royalty
>
> 1. If you find that defendants have infringed a valid claim of either the '616 patent or the '691 patent, what is the reasonable royalty rate (if any) that defendants should pay to plaintiffs based on the making, using, selling, offering for sale or importing into the USA any of the accused products?

PRODUCT	Rate, if any
Nucleus 24 (CI24 series) cochlear implants	
Nucleus Freedom (CI24RE series and CI422) cochlear implants	
Nucleus 5 (CI500 series) cochlear implants	
Sprint (SP5) sound processors	
Freedom (SP12) sound processors	
Nucleus 5 (SP15) sound processors	
WinDPS software	
Custom Sound software	

> 2. If you find that defendants have infringed a valid claim of either the '616 patent or the '691 patent, what are the total damages that defendants should pay to plaintiffs based on the making, using, selling, offering for sale or importing into the USA any of the accused products?

PRODUCT	Total Damages, if any	Date range for damages, if any	
Nucleus 24 (CI24 series) cochlear implants		`616 patent:	`691 patent:
Nucleus Freedom (CI24RE series and CI422) cochlear implants		`616 patent:	`691 patent:
Nucleus 5 (CI500 series) cochlear implants		`616 patent:	`691 patent:
Sprint (SP5) sound processors		`616 patent:	`691 patent:
Freedom (SP12) sound processors		`616 patent:	`691 patent:
Nucleus 5 (SP15) sound processors		`616 patent:	`691 patent:
WinDPS software		`616 patent:	`691 patent:
Custom Sound software		`616 patent:	`691 patent:

(Dkt. 422, Defendant's Proposed Third Amended Special Verdict Form at 14-16) (emphasis added).

Ultimately, the actual verdict form given to the jury had the following questions relating to damages:

B. Reasonable Royalty

25. If you find that the Cochlear Defendants have infringed a valid claim of either the '616 patent or the '691 patent, what is the reasonable royalty rate that the Cochlear Defendants should pay the Foundation?

26. If 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?

(Dkt. 450, Final Verdict Form at 10).

All the verdict forms submitted by Cochlear included the general damages verdict questions given to the jury. All the verdict forms submitted by Cochlear contained the same language for the subject damages questions: (1) "If you find that the Cochlear Defendants have infringed a valid claim of either the '616 patent or the '691 patent, what is the reasonable royalty rate that the Cochlear Defendants should pay to the Foundation?" and (2) "If 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?" That is, the interrogatories submitted to the jury simply asked the jury to find the royalty rate and total damages if Cochlear infringed "a valid claim of either the '616 patent or the '691 patent." (Dkt. 460, Jury Verdict at 10). The jury's verdict – even after the Federal Circuit's decision – is consistent with the verdict form and confirms that infringement of any one claim or of any one patent is sufficient to support the jury's damages verdict.

Although the first two verdict forms Cochlear submitted did not include any charts, (see, generally, Dkt. 330, Defendant's Proposed Verdict Form; Dkt. 359, Defendant's Proposed First Amended Special Jury Verdict), Cochlear relies heavily on its second proposed verdict form and asserts that its "proposed verdict form explicitly apportioned damages for each of the accused products[.]" (Dkt. 581, Damages Opp. at 10) (emphasis omitted). However, the language of the substantive damages questions remained virtually the same throughout the four versions of the verdict form submitted by Cochlear.[10] In crafting the final verdict form, the court used the damages

[10] Also, the record indicates that the charts breaking down damages by product were incorporated at the court's direction, (see Dkt. 500, January 13, 2014, Pretrial Conf. Tr. at 18), not

questions set forth in all of Cochlear's proposed verdict forms and decided to use the format, i.e., without the charts breaking down damages by product, proposed by Cochlear in its original and first amended proposed verdict forms. (Compare Dkt. 450, Final Verdict Form, with Dkt. 330, Defendant's Proposed Verdict Form, and Dkt. 359, Defendant's Proposed First Amended Special Verdict Form). The court issued its "tentative" verdict form that contained the subject damages questions – without any charts – to allow the parties to review and comment on the court's proposed verdict form. (See Dkt. 443, [Tentative] Verdict Form, at 10). Although Cochlear filed "Comments" to the court's tentative final verdict form, it did not voice any concerns or objections with respect to the damages questions it now challenges. (See, generally, Dkt. 447, Defendant's Comments re the Court's [Tentative] Verdict Form).

Even assuming the charts were included at Cochlear's behest, the fact remains that these charts only sought to apportion by product, not by patent or claim. And there is no dispute that all of the accused products were found to infringe the '616 patent. (See Dkt. 460, Jury Verdict at 1-3). Indeed, Cochlear conceded on appeal that "[t]he evidence . . . did not give the jury any way to assess a royalty rate assuming infringement of fewer claims or patents." Alfred Mann, 841 F.3d at 1353 (Newman, J., concurring and dissenting in part).

Courts do not "allow litigants to play procedural brinkmanship with the jury system and take advantage of uncertainties they could well have avoided." McCord v. Maguire, 873 F.2d 1271, 1274 (9th Cir. 1989) (defendant who did not request special verdict as to each factual theory is prohibited from arguing general verdict erroneously rests on "unsubstantiated factual theories"); see Mitsubishi Electric Corp. v. Ampex Corp., 190 F.3d 1300, 1304 (Fed. Cir. 1999), cert. denied, 529 U.S. 1054 (2000) (party forfeited post-trial challenge on the ground that a special verdict should have been obtained, by proposing and accepting a verdict form that did not separate the potential grounds for invalidity). Because the court used the language in the damages questions proposed by Cochlear and because Cochlear failed to request a special verdict that allocated damages by patent, the court finds that Cochlear forfeited its right to challenge any potential

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because Cochlear believed that the verdict form should be apportioned by product.

ambiguity in the verdict form. See McCord, 873 F.2d at 1274; see, e.g., Goldberg v. Pacific Indemnity Co., 405 F.Appx. 177, 180 (9th Cir. 2010) ("[E]ven if plaintiffs' argument had merit, they waived any objection to the form of instruction by suggesting a substantially similar instruction at trial."); EON Corp. IP Holdings, LLC v. Landis+Gyr Inc., 2014 WL 6466663, *11-12 (E.D. Tex. 2014), rev'd on other grounds, 815 F.3d 1314 (Fed. Cir. 2016) ("EON Corp.") (finding that defendant was not entitled to new damages trial because it did not object to jury verdict form's apportionment of damages, and because expert took into account plaintiff's view that three patents-in-suit were interrelated and thus structured his damages model to remain the same regardless of number of claims or patents infringed).

C. Sufficiency of Evidence Re: Damages for '616 Patent.

Assuming Cochlear has not waived its right to challenge the verdict form, the court will now address Cochlear's other arguments. Cochlear asserts that a new trial on damages is required because "AMF failed to carry its burden and present evidence from which damages for the '616 patent alone can be determined[.]" (Dkt. 581, Damages Opp. at 6). According to defendant, the '616 patent and the '691 patent are directed to different inventions and there was no evidence from which the jury could have determined damages for the '616 patent alone. (See id. at 6-8). Cochlear's assertions are unpersuasive and insufficient to warrant granting of a new trial.

First, Cochlear attempts to mischaracterize the "'616 patent [as] limited to a physician's tester" as opposed to the entire "cochlear implant system" covered by the '691 patent. (Dkt. 581, Damages Opp. at 2 & 6-7). However, Cochlear's attempt to narrow the '616 patent to a "physician's tester" is inconsistent with this court's and the Federal Circuit's interpretation of the patents at issue. (See, e.g. Dkt. 540, Court's Order of March 31, 2015, Re: Post-Trial Motions at 9 ("AMF's infringement theory [for claim 10 of the '616 patent] generally relies on the inter-operation of the cochlear implant, the wearable processor, and the testing software running on a computer."); id. at 2 ("The '616 patent is generally directed to a system and a method for testing such a system."); id. at 2 ("The '691 patent is generally directed to a cochlea stimulation system comprising of" an audio signal receiver, processor, and stimulator.)); Alfred Mann, 841 F.3d at 1337 ("The ['616 and '691] patents are directed to an ear implant with telemetry functionality for

testing purposes, and generally describe a two-part system comprising an external wearable system with a wearable processor (WP) and headpiece, and an internal implantable cochlear stimulator (ICS).").

Second, the evidence presented at trial made it clear that both the '616 patent and '691 patent concern back telemetry. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 86-87 & 89-91 (describing function and purpose of back telemetry); Dkt. 494, January 15, 2014, A.M. Trial Tr. at 30-32 (same)). Both plaintiff's expert, Cate Elsten, and defendant's expert, Russell Parr, treated the patents together and presented one damages calculation based on back telemetry. (See Dkt. 467, January 21, 2014, P.M. Trial Tr. 28, 45-46 & 54 (Mr. Parr's testimony that he also calculated a royalty base of $1,539,472,026 for sales made between 2001 through 2012); Dkt. 325-22, Parr's Supplemental Expert Damages Opinion of January 4, 2013, at ECF 12484 ("Exhibit 5 of this report shows accused sales of $1,539,472,026.")). Cochlear has not pointed to anywhere in the record where its expert opined that a different royalty rate should be applied if fewer than all claims were infringed. (See, generally, Dkt. 581, Damages Opp. at 6-8). Indeed, both experts proposed a constant royalty rate that did not change after the '691 patent expired in 2009, and in any event, defendant's argument appears to constitute a new damages theory that should have been raised earlier. In other words, if Cochlear had taken this position at trial, then its expert should have provided a separate damages calculation with a separate analysis to support a damage award for each asserted patent.[11] Cochlear does not cite any evidence or reference any testimony from its expert to support this theory. (See, generally, id. at 6-7). Thus, even assuming it was proper to raise this damages argument at this time, there is no evidence to support the theory.

Finally, there was substantial evidence to support the jury's damages verdict based on infringement of the '616 patent alone. In the Ninth Circuit, "a jury's verdict may stand on a legally viable theory even if a legally defective theory also was presented." Webb v. Sloan, 330 F.3d

[11] Also, if Cochlear's assertion regarding the verdict form were accurate, then its expert should have presented a damages calculation that explained the damages as to each accused product. Mr. Parr did not do so. (See, generally, Dkt. 467, January 21, 2014, P.M. Trial Tr. at 20-66).

1158, 1166 (9th Cir. 2003), cert. denied, 540 U.S. 1141 (2004). As Justice Kennedy, at the time a Ninth Circuit judge, explained:

> Where more than one theory of recovery has been submitted to the jury in a civil case, and where . . . it is claimed that as to one of the theories there was a lack of evidential support or an error of law in submitting the theory to the jury, the reviewing court has discretion to construe a general verdict as attributable to another theory if it was supported by substantial evidence and was submitted to the jury free from error.

Traver v. Meshriy, 627 F.2d 934, 938 (9th Cir. 1980). The Traver court set forth four factors for the court to consider in deciding whether to uphold a general verdict: (1) "the potential for confusion of the jury which may have resulted from an erroneous submission of a particular claim"; (2) "whether privileges or defenses of the losing party apply to the count upon which the verdict is being sustained so that they would have been considered by the jury with reference to the count"; (3) "the strength of the evidence supporting the count being relied upon to sustain the verdict"; and (4) "the extent to which the same disputed issues of fact apply to one or more of the theories in question." Id. at 938-39; see Webb, 330 F.3d at 1166-67.

As an initial matter, it should be noted that Cochlear does not mention or discuss the Traver factors at all in its Opposition, (see, generally, Dkt. 581, Damages Opp.), even though AMF extensively discussed the case in its moving papers. (See Dkt. 579, Damages Motion at 14-16). In any event, consideration of the Traver factors weighs in favor of upholding the damages verdict. First, there was no potential for jury confusion because the verdict was consistent with the verdict form. Again, the damages questions put forth by Cochlear stated: "If you find the defendants have infringed a valid claim of either the '616 patent or the '691 patent," "what is the reasonable royalty rate" and "what are the total damages[.]" (Dkt. 460, Jury Verdict at 10).

Moreover, the verdict form included questions for claim specific infringement and general questions regarding damages. (See Dkt. 450, Final Verdict Form at 1-4 & 10). In other words, while the liability verdicts were claim-specific, there was no claim-specific damages evidence with respect to any of the patents, i.e., there was a clear delineation between the legally viable theory

(infringement of the '616 patent) and the theory that was found to be legally infirm (infringement of the '691 patent). Because the jury answered questions explaining the theories upon which it found in plaintiff's favor, and "[t]he only aspect of the verdict that is 'general' [wa]s the damages award, which was not apportioned among the claims[,]" Webb, 330 F.3d at 1167, there was no potential for confusion. Finally, there was no potential for jury confusion because the patents-in-suit related to back telemetry technology, and there was no evidence – and defendant has not pointed to any – of damages attributable solely to the '691 patent. As Judge Newman noted, "Cochlear concedes that the evidence . . . did not give the jury any way to assess a royalty rate assuming infringement of fewer claims or patents." Alfred Mann, 841 F.3d at 1353 (Newman, J., concurring and dissenting in part) (internal quotation marks omitted).

Second, the factor relating to whether Cochlear's defenses apply to the count upon which the verdict is being sustained appears to be neutral because Cochlear asserted the same defenses to both patents-in-suit. The jury considered Cochlear's invalidity defense to both patents, but the Federal Circuit found, as a matter of law, that this defense did not affect the viability of one of the challenged patents. See Alfred Mann, 841 F.3d at 1344-45. In other words, the Federal Circuit's decision confirmed and established a clear delineation between the legally viable theory and the legally infirm theory.

The third and fourth Traver factors are related, and both weigh in favor of upholding the jury's verdict. There was substantial evidence to support the damages verdict for infringement of the '616 patent alone because the exact "same disputed issues of fact appl[ied]" to the damages evidence related to both patents-in-suit.[12] See Traver, 627 F.2d at 939. Again, both experts: (1) agreed that the invention at issue in both patents was back telemetry; (2) used the same royalty base, (see Dkt. 467, January 21, 2014, P.M. Trial Tr. at 54-55 (Mr. Parr's testimony)); and (3) put forth a single, although different, royalty rate for the entire period (i.e., through January 2014),

[12] In discussing the evidence supporting the jury's verdict, the court incorporates the discussion below relating to the experts.

irrespective of the number of claims or patents found to be infringed.[13] As Judge Newman stated, "[t]he evidence, instructions, and damages theories presented led the jury to a single, permissible conclusion: that a reasonable royalty for the invention – back telemetry – was required to compensate [plaintiff] for infringement of even a single claim." Alfred Mann, 841 F.3d at 1353 (Newman, J., concurring in part and dissenting in part). In short, the court is persuaded that application of the Traver factors weighs in favor of upholding the jury's verdict even if one of the patents was invalidated. See Webb, 330 F.3d at 1166-67; United States v. $11,500.00 in United States Currency, 869 F.3d 1062, 1068 (9th Cir. 2017) (Ninth Circuit applies "more pragmatic approach" to general verdict rule under Traver); Goldberg, 405 Fed.Appx. at 180 ("When the jury issues a general verdict that does not specifically state the grounds on which the jury reached its verdict, . . . 'the reviewing court has discretion to construe a general verdict as attributable to another theory if it was supported by substantial evidence and was submitted to the jury free from error.'") (quoting Traver, 627 F.2d at 938). In other words, because both AMF and Cochlear presented evidence of the same royalty base and because the evidence, verdict forms and instructions treated the two patents as a singular invention of back telemetry, engaging in post hoc apportionment at this time is neither necessary nor appropriate. See, e.g., Stickle v. Heublein, Inc., 716 F.2d 1550, 1561 n. 8 (Fed. Cir. 1983) ("Since the parties treated the mechanical and process patents as a unitary licensing property, we need not consider damages for infringement of each patent individually."); TiVo, Inc. v. EchoStar Communications Corp., 516 F.3d 1290, 1312 (Fed. Cir. 2008) (upholding damages award after claim found non-infringed "[b]ecause the damages calculation at trial was not predicated on the infringement of particular claims, and because . . . all of the accused devices infringe the software claims"); Applera Corp. v. MJ Research Inc., 389 F.Supp.2d 356, 361 (D. Conn. 2005) ("Notwithstanding [a finding of non-infringement as to one claim], there is no basis for adjusting or vacating the jury's damages award. The jury's verdict of induced infringement of claim 17 and 33 of the '675 patent supports the

[13] Both experts applied the same royalty rate even though the '691 patent expired in 2009. In other words, it is undisputed that the '616 patent covers the entire period underlying the jury's damages verdict.

damage award, as there was no testimony at trial that a reasonable royalty rate for the '675 patent would be based on the number of infringing claims of the '675 patent."); EON Corp., 2014 WL 6466663, at *11-12 (finding that defendant was not entitled to a new damages trial because it did not object to jury verdict form's apportionment of damages, and because expert took into account plaintiff's view that three patents-in-suit were interrelated and thus structured his damages model to remain the same regardless of number of claims or patents infringed).

Based on the foregoing, the court is convinced that it must uphold the jury's verdict. Nevertheless, the court will, out of an abundance of caution, consider the arguments defendant raised in its original Rule 59 motion, i.e., it will assume, arguendo, that Cochlear did not waive its ability to challenge any potential ambiguity in the jury's damages verdict. (See Dkt. 581, Damages Opp. at 4 (Cochlear asserting that because court based its new trial order on the fact that only one of the patents was infringed, it never reached its argument that a "damages [trial] was needed even if there was no change in the liability verdict.")).

D. Cochlear's Rule 59 Motion.

In its Rule 59 motion, Cochlear asserts that it is entitled to a new trial because: (1) plaintiff's expert should not have been permitted to testify; and (2) the jury's finding of no invalidity goes against the great weight of the evidence.[14] (Dkt. 511-3, Joint Brief Re: Defendant's Motion For New Trial ("Rule 59 Joint Br.")[15] at 4-11). Cochlear's arguments relating to invalidity have been disposed of by the Federal Circuit's decision. Thus, the only issue that remains is whether a new trial should be granted because the court erred in admitting the testimony of plaintiff's expert.

As noted earlier, a Rule 59 motion for new trial 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

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[14] Cochlear also asserts, in the alternative, that the court should remit the damages rather than grant a new trial. (See Dkt. 511-3, Rule 59 Joint Br. at 11). However, for the reasons set forth in this Order, the court is not persuaded that the jury's verdict is clearly unsupported by the evidence nor that it exceeds the amount needed to make plaintiff whole.

[15] The parties' Rule 59 Joint Brief was filed in its original form as Dkt. 508-1, and in re-formatted form as Dkt. 511-3. For convenience, the court refers to the pagination in Dkt. 511-3 unless otherwise specified.

prevent a miscarriage of justice." Molski, 481 F.3d at 729. A district court commits a "clear abuse of discretion" in denying a Rule 59 motion "only where there is an absolute absence of evidence to support the jury's verdict." Crowley, 883 F.3d at 751(emphasis in original). Where, as here, the Rule 59 motion asserts an error of law based on an erroneous evidentiary ruling, "[a] new trial is only warranted when an erroneous evidentiary ruling substantially prejudiced a party."[16] Ruvalcaba, 64 F.3d at 1329 (internal quotation marks omitted). "The burden of showing harmful error rests on the party seeking the new trial." Boston Scientific Corp. v. Johnson & Johnson, 550 F.Supp.2d 1103, 1110 (N.D. Cal. 2008).

Cochlear contends that Ms. Elsten's opinion should have been excluded because it was "not the result of reliable principles and methods reliably applied to the facts of the case." (Dkt. 511-3, Rule 59 Joint Br. at 1). However, Cochlear's arguments challenge only the propriety of the facts and data Ms. Elsten incorporated into her analysis. (See id. at 5-11). Further, contrary to defendant's contention, Ms. Elsten's opinion is based on well-accepted valuation principles and methodologies such as the market approach and the income approach. See, e.g., ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 869 (Fed. Cir. 2010) (using market approach and comparing similar licensing activity); Lucent Technologies, Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009), cert. denied, 560 U.S. 935 (2010) ("Lucent Technologies") ("[T]he analytical method[] focuses on the infringer's projections of profit for the infringing product."); TWM Manufacturing Co., Inc. v. Dura Corp., 789 F.2d 895, 899 (Fed. Cir.), cert. denied, 479 U.S. 852 (1986) (same); Inline Connection Corp. v. AOL Time Warner Inc., 470 F.Supp.2d 424, 432 n. 38 (D. Del. 2007) ("The 25% Rule of Thumb and the Analytical Approach are two variations of the Income Approach."); Aqua Shield v. Inter Pool Cover Team, 774 F.3d 766, 772 (Fed. Cir. 2014) ("[A]nticipated incremental profits under the hypothesized conditions are conceptually central to constraining the royalty negotiation[.]")). Thus, the only remaining inquiry with respect to Cochlear's evidentiary

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[16] The admissibility of evidence is reviewed under the law of the regional circuit. See Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456, 1465 (Fed. Cir.), cert. denied, 525 U.S. 923 (1998). In the Ninth Circuit, "[d]istrict courts are granted broad discretion in admitting evidence, and their rulings are reviewed only for an abuse of discretion." Ruvalcaba v. City of Los Angeles, 64 F.3d 1323, 1328 (9th Cir. 1995), cert. denied, 517 U.S. 1216 (1996).

challenge is whether Ms. Elsten's testimony was based on sufficient facts or data. (See Dkt. 511-3, Rule 59 Joint Br. at 5-11).

1. **Whether Ms. Elsten Improperly Valued AB's Stock and/or Improperly Relied on the AB-AMF License**.

Under a 1999 licensing agreement between AMF and AB ("1999 License"),[17] AB paid AMF a 2-3% running royalty of $23.1 million, (see Dkt. 495, January 16, 2014, A.M. Trial Tr. at 128; Dkt. 465, January 16, 2014, P.M. Trial Tr. at 31-33), and 1,000,000 shares, which were assigned a book value of $2.80 per share. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 36). Ms. Elsten analyzed the 1999 License under the market approach, (see Dkt. 495, January 16, 2014, A.M. Trial Tr. at 126-33), and opined that plaintiff and defendant would have reached a 7.5% royalty rate for the '616 and '691 patent in June 1998. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 18-20; see also Dkt. 495, January 16, 2014, A.M. Trial Tr. at 123-30 (explaining reasoning for setting the range between 4.6% and 8.8%). She found the 1999 license to be the most useful because it dealt with the same licensor, was close in time to the hypothetical negotiation and included the subject patent. (See Dkt. 495, January 16, 2014, A.M. Trial Tr. at 126). Although the 1999 license covered multiple patents and know-how, (see id. at 126-27), based on conversations with the Foundation's knowledgeable employees, (see id. at 127), Ms. Elsten concluded that its value was largely driven by the back telemetry technology in the '616 and '691 patents.[18] (See id. at 126-27; Dkt. 465, January 16, 2014, P.M. Trial Tr. at 28-29).

The parties renegotiated the license in 2004 and AMF received an additional 1.1 million shares of AB stock in exchange for a reduced royalty rate. (See Dkt. 495, January 16, 2014, A.M. Trial Tr. at 88-89 & 96) (AMF CEO David Hankin's testimony). Ms. Elsten took into account the

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[17] In addition to the 1999 License, Ms. Elsten also analyzed other less comparable licenses. For example, she considered a license between the University of Melbourne and Cochlear, (see Dkt. 495, January 16, 2014, A.M. Trial Tr. at 135-136), and a 1988 license between UCSF and a predecessor to AB, as well as three other Foundation licenses for medical device technologies. (See id. at 137).

[18] Because the '691 patent is no longer relevant to the discussion at hand, any reference to the subject patents or patents-in-suit should be construed as referring only to the '616 patent.

value of the shares based on the acquisition of AB by Boston Scientific to come up with a range of effective royalty rates. (See id. at 128-130). The low end of the range came from Boston Scientific's offer of $21 per share, for an effective rate of 4.6%, whereas the high end rate of 8.8% came from what the Foundation actually received which was $11 per share plus earnout payments based on AB's continued success. (See id. at 129-130). Based on the market approach, Ms. Elsten concluded that the appropriate royalty rate should be between 4.6% and 8.8%. (See id. at 137-138).

Ms. Elsten also conducted an alternative analysis using the income approach, (see Dkt. 465, January 16, 2014, P.M. Trial Tr. at 5-6); TWM Manufacturing Co., 789 F.2d at 899, and concluded that Cochlear made additional profits of 16% to 33% over industry for gross profits and 18% for operating profits. (See Dkt. 495, January 16, 2014, A.M. Trial Tr. at 140-143; Dkt. 465, January 16, 2014, P.M. Trial Tr. at 5-6). Based on the income approach, Ms. Elsten opined that the range was 16% to 18% even though there was evidence to support profits up to 33%. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 5-6). Finally, Ms. Elsten analyzed the factors set forth in Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F.Supp. 1116 (S.D. N.Y. 1970), modified and aff'd, 446 F.2d 295 (1971), cert. denied, 404 U.S. 870 (1971), and concluded that factors 3, 4, 5, and 7 favored an increased royalty rate.[19] (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 8-18).

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[19] The Federal Circuit describes the Georgia-Pacific factors as: "(1) royalties the patentee has received for licensing the patent to others; (2) rates paid by the licensee for the use of comparable patents; (3) the nature and scope of the license (exclusive or nonexclusive, restricted or nonrestricted by territory or product type); (4) any established policies or marketing programs by the licensor to maintain its patent monopoly by not licensing others to use the invention or granting licenses under special conditions to maintain the monopoly; (5) the commercial relationship between the licensor and licensee, such as whether they are competitors; (6) the effect of selling the patented specialty in promoting sales of other products of the licensee; (7) the duration of the patent and license term; (8) the established profitability of the product made under the patent, including its commercial success and current popularity; (9) the utility and advantages of the patent property over old modes or devices; (10) the nature of the patented invention and the benefits to those who have used the invention; (11) the extent to which the infringer has used the invention and the value of that use; (12) the portion of profit or of the selling price that may be customary in that particular business to allow for use of the invention or analogous inventions; (13) the portion of the realizable profit that should be credited to the invention as opposed to its non-patented elements; (14) the opinion testimony of qualified experts; and (15) the results of a hypothetical negotiation between the licensor and licensee." i4i Ltd., 598 F.3d at 853 n. 3.

Ms. Elsten calculated the average of the low points of the market and income approaches to be 9%, and based on her professional judgment and experience, she reduced that number to 7.5%. (See id. at 19-20). She then applied that rate to the appropriate royalty base, i.e., the revenue that Cochlear received from the sale of the accused products. (See id. at 21-24).

Defendant contends that Ms. Elsten: (1) should not have "consider[ed] the future sale of AB to Boston Scientific plus earn-out payments" because "a sale occurring six years in the future would impact what the parties believed AB's stock was worth in 1998 when included in the AB-AMF license," (Dkt. 511-3, Rule 59 Joint Br. at 7); and (2) "[i]mproperly [r]elied on the AB-AMF [l]icense[.]" (Id. at 8-9). Defendant's contentions are unpersuasive.

"[F]actual developments occurring after the date of the hypothetical negotiation can inform the damages calculation[.]" Lucent Technologies, 580 F.3d at 1333; see Honeywell Int'l, Inc. v. Hamilton Sundstrand Corp., 378 F.Supp.2d 459, 464 & 480 (D. Del. 2005) ("It is important to note, however, that the ascertainment of this date does not rigidly foreclose the factfinder from considering subsequent events."). This "book of wisdom" allows for the correction of "uncertain prophec[ies]" in reconstructing the hypothetical negotiation. See Sinclair Refining Co. v. Jenkins Petroleum Process Co., 289 U.S. 689, 698, 53 S.Ct. 736, 739 (1933) ("But a different situation is presented if years have gone by before the evidence is offered. Experience is then available to correct uncertain prophecy. Here is a book of wisdom that courts may not neglect. We find no rule of law that sets a clasp upon its pages, and forbids us to look within."); see also Aqua Shield, 774 F.3d at 772 (Fed. Cir. 2014) (citing Sinclair Refining Co., 289 U.S. at 698, 53 S.Ct. at 739, and stating that "[e]vidence of the infringer's actual profits generally is admissible as probative of his anticipated profits[]"). "Consideration of evidence of usage after infringement started can, under appropriate circumstances, be helpful to the jury and the court in assessing whether a royalty is reasonable." Lucent Technologies, 580 F.3d at 1333-34.

Plaintiff's expert took into account the Foundation's business model which typically involved receiving an equity component as well as a royalty component,[20] (see Dkt. 465, January 16, 2014,

[20] AMF's business model incorporates aspects of venture capitalism through its "IP for equity" strategy. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 54 (Mr. Mann: "The foundation is

P.M. Trial Tr. at 39 (Ms. Elsten's testimony that she "underst[oo]d that [AMF] regularly take[s] equity as part of their royalties")), and noted that during the time AB was acquired, there was "a very hot market" for medical device companies. (Dkt. 495, January 16, 2014, A.M. Trial Tr. at 132). Although Cochlear did not dispute that AMF pursued an "IP for equity" business model during trial, it now challenges Ms. Elsten's decision to eschew the $2.80 book value for the value captured in the 2004 Boston Scientific transaction as the basis for her calculations. (See Dkt. 511-3, Rule 59 Joint Br. at 5-7). According to defendant, Ms. Elsten should have taken the same approach as defendant's expert who used the $2.80 book value to calculate his proposed "reasonable royalty" rate of "not more than 1.2 percent" (or approximately $22 million). (See Dkt. 467, January 21, 2014, P.M. Trial Tr. at 48 & 55). But Mr. Parr's valuation, whether by design or defect, never fully contemplated the practical realities and concerns confronting patients or their attending doctors.[21] (See Dkt. 467, January 21, 2014, P.M. Trial Tr. at 60-

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really an incubator that identifies unmet or poorly met needs and then addresses technology and develops – tries to develop a product up to a point, and then it licenses it out to an existing company in return for royalties or stock in the company, or it spins it out to a start-up company and gets equity in that stock.")). AMF's "IP for equity" strategy is similar to the one Microsoft pursued through its Microsoft IP Ventures arm, which "seeks to capitalize [on its IP portfolio by licensing it] in exchange for an equity stake in a potentially high growth start-up company." Ash Nagdev, et al., IP as Venture Capital A Case Study of Microsoft IP Ventures, 8 WAKE FOREST INTELL. PROP. L.J. 197, 208-09 (2008); see also Cynthia M. Ho, Patents, Patients, and Public Policy: An Incomplete Intersection at 35 U.S.C. § 287(c), 33 U.C. DAVIS L. REV. 601, 613 n. 56 (2000) ("Indeed, the medical community has previously recognized the potential for patents to finance research."). In determining the value of the parties' expectations for equity, Ms. Elsten testified that she took into account the nature of the Foundation's business model, i.e., to accept equity in licenses to fund other projects. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 39).

[21] Again, both experts relied on the same royalty base to come up with their calculations. (See Dkt. 467, January 21, 2014, P.M. Trial Tr. at 53-55 (Mr. Parr agreeing he found no fault with the $1.8 billion royalty base and stating, "[i]t's the only royalty base we could come up with.")). However, Mr. Parr's characterization of back telemetry as merely "incremental technology," (id. at 64), was undermined by his adoption of the entire market value of $1.8 billion as the operative royalty base, since the entire market value may not be attributed to merely "incremental" improvements that do not form the basis for consumer demand. Also, the analysis conducted by defendant's expert suffered from other deficiencies the jury could have taken into account in rejecting his opinion. For example, because the hearing device must be surgically implanted into a patient's head, an expert's valuation arguably should have considered pre-patent realities such as the difficulty of creating a hermetic seal (to maintain device sterility) after testing the device during surgery (to make sure it was working properly), or the necessity of "hav[ing] to go back into

64 (Mr. Parr's testimony that he was "standing by [his] interpretation")). The income approach's valuation methodology, however, derives present discounted value of a patent by calculating estimated "income stream derived over the life of the patent" and applying a discounted cash flow analysis to aggregate future income. See John E. Dubiansky, An Analysis for the Valuation of Venture Capital-Funded Startup Firm Patents, 12 B.U. J. SCI. & TECH. L. 170, 175 (2006). As Ms. Elsten testified, "once you decide to accept equity as compensation, you by definition accept the future consequences of the future value of that. Stock has a future value; money does not. So by taking stock instead of cash in hand, you're introducing an element of the future. And if you're evaluating what that's worth, you have to take those future expectations into account." (Dkt. 465, January 16, 2014, P.M. Trial Tr. at 39). Here, future expectations were particularly salient because AMF sought to license its patent rights to potential startups in return for an equity stake. Thus, the court is persuaded that Ms. Elsten properly factored the value of the AB stock into her analysis.

There was evidence presented – some of it from around the time of the hypothetical negotiation – that correlated, in some respect, to the extent the back telemetry technology set forth in the '616 patent was used by Cochlear. For example, after the U.S. Food & Drug Administration ("FDA") approved the first commercial cochlear implant with back telemetry – the Clarion – in March 1996,[22] Cochlear's market monopoly came to an unceremonious end. In virtually the blink

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a man's or woman's skull, open it again [and] check to see what[] [was] going on" in the unfortunate post-surgery circumstance where the implant appeared to be malfunctioning. (Id.). Mr. Parr's testimony did not demonstrate an understanding of these circumstances; rather, he appeared to not take them into consideration. During questioning regarding the specialized microsurgery required to implant such devices into a patient's head, Mr. Parr stated, "I don't know where the implant – where the cutting occurs. I just know it has to be implanted." (Id. at 60). Mr. Parr's tenuous grasp of relevant context was highlighted by the unseemly analogy drawing purported similarities between popping open the hood of a car and cutting open a patient's head during implant surgery. (See id. at 45 & 60-65). While "any reasonable royalty analysis necessarily involves an element of approximation[] and uncertainty[,]" i4i Ltd., 598 F.3d at 857-58, value must still be assessed in light of context, not despite it. The jury's determination that Ms. Elsten was more credible than Mr. Parr is supported by record.

[22] Chapter 16 of Mr. Parr's book, Intellectual Property: Valuation, Exploitation, and Infringement Damages, John Wiley & Sons, Inc. (4th ed. 2018), entitled, "Royalty Rates for Licensing," discusses a compilation of 458 pharmaceutical and biotech licenses which found the

of an eye, the newly-introduced Clarion took a significant 30% of Cochlear's market share. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 17 (Ms. Elsten's testimony that "Cochlear's market share plummeted dramatically by 30 percent in that first year" that Clarion was sold)). Plaintiff's Clarion enjoyed significant sales growth until 1998 when the FDA approved the Nucleus 24, which was Cochlear's first implant with back-telemetry capability. (See id. (Ms. Elsten's testimony that "in '98 the infringement started, and that stabilized the market share loss for Cochlear"); Dkt. 493, January 14, 2014, A.M. Trial Tr. at 70 (stipulated fact that Cochlear's Nucleus 24 received FDA approval on June 25, 1998)). During trial, the jury was told about the excitement and anticipation generated by the Clarion's clinical trials, (see Dkt. 463, January 14, 2014, P.M. Trial Tr. at 96 (Thomas Santogrossi's testimony regarding the Clarion's much-anticipated release)), but heard no testimony about the excitement and anticipation generated by the infringing product's clinical trials. The jury, in fact, heard no evidence about any clinical trials relating to the Nucleus 24. In other words, the jury could have concluded that Cochlear, having lost 30% of its market in one year to the device that incorporated the patented technology, would have been more than willing to pay a royalty rate larger than the one to two percent defendant believes is appropriate and that the value of AB stock at the time of the Boston Scientific transaction was an objective data point to consider in determining what the reasonable royalty should be.

Further, although there was evidence suggesting that Cochlear began infringing the '616 patent from the very beginning, see infra at § III.B., Cochlear claims that it was not notified of potential infringement until 2003. (See Dkt. 613, Enhanced Damages Opp. at 6). Accepting Cochlear's assertion as to when it was advised of any potential breach of the '616 patent, it stands to reason that the 2004 Boston Scientific transaction provides valid and useful information relating to the appraisal of the value of the '616 patent at the time of the breach in 2003. The book of

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average royalty rate to be 7%, and the high-low range was 50% to 0%. See id. at 246. Concerning the 50% royalty rate, Mr. Parr observed, "it is likely the deal involving a 50% royalty rate is for a finished product that has successfully completed all FDA trials and is a commercial success." Id. Given this, Mr. Parr's proposed 1.2% royalty rate for the patented technology in the Clarion – a finished, FDA-approved product that immediately took 30% of the market share – appears to be inconsistent with his own theories.

wisdom is particularly appropriate where, as here, events that affected the value of the patented technology occurred after the infringement began. "If the hypothetical negotiation could not be informed by post-negotiation information, then prospective infringers might perceive that blatant, blind appropriation of inventions . . . is the profitable, can't-lose course." Honeywell Int'l, Inc., 378 F.Supp.2d at 465 (internal quotation marks omitted). As discussed below, see infra at § III., this is a case where an infringer engaged in "blatant, blind appropriation" of another party's invention because the invention threatened to undermine the infringer's entire business. In short, the evidence was sufficient to support the expert's consideration of the circumstances underlying the Boston Scientific transaction. See, e.g., Function Media, LLC v. Google, Inc., 2010 WL 272409, *3 (E.D. Tex. 2010) ("The increased value of Google's stock is relevant to the jury's determination of the overall value of the Stanford license."); Syntrix Biosystems, Inc. v. Illumina, Inc., 2013 WL 593801, *5 (W.D. Wash. 2013) (finding that it was "reasonable" for expert to incorporate into his methodology the "inference that Tufts University received a lower royalty rate from [the licensee company] in return for its doctor receiving a partial stake" and that "[a]ttacking this inference goes to the weight of [the expert's] opinion and not to any fundamental deficiency").

Cochlear also argues that beyond improperly considering the circumstances of the Boston Scientific transaction, plaintiff's expert should not have relied on the 1999 License at all. (See Dkt. 511-3, Rule 59 Joint Br. at 8-9 & 27). According to Cochlear, the AB-AMF licensing agreement covered multiple patents and know-how and Ms. Elsten erred in "attribut[ing] all of the value of the license to the patents-in-suit."[23] (Id. at 8) (emphasis omitted). Under the circumstances here, the court is persuaded that plaintiff's expert's opinion as to the value of the 1999 License is not against the clear weight of the evidence.

[23] "Actual licenses to the patents-in-suit are probative not only of the proper amount of a reasonable royalty, but also of the proper form of the royalty structure." LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 79-80 (Fed. Cir. 2012). As noted earlier, under the 1999 License, AB paid AMF a 2-3% running royalty of $23.1 million, (see Dkt. 495, January 16, 2014, A.M. Trial Tr. at 128; Dkt. 465, January 16, 2014, P.M. Trial Tr. at 31-33), and 1,000,000 shares with a book value of $2.80. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 36).

First, as noted earlier, the significance of the back telemetry technology caused Cochlear to lose 30 percent of its market share when AB introduced the Clarion with the patented technology. Based on this, the jury certainly could have concluded that the back telemetry technology in the subject patent drove the value of the 1999 License. Second, Ms. Elsten testified as to why she believed the subject patent drove the value of the 1999 License, (see Dkt. 495, January 16, 2014, A.M. Trial Tr. at 126-27), and Cochlear aggressively cross-examined her on that point. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 24-65). Ms. Elsten testified that she had discussions with the then-CFO of the Foundation and a vice president of marketing as to the value of the subject patent. (See Dkt. 495, January 16, 2014, A.M. Trial Tr. at 127 (Ms. Elsten's testimony about these discussions)). Other witnesses confirmed the significance and value of the subject patent, such as audiologist Dr. Ginger Stickney and surgeon Dr. Robert Schindler, who each testified that they would not recommend any cochlear implant system that did not use the patented technology. (See Dkt. 494, January 15, 2014, A.M. Trial Tr. at 30-31 (Dr. Schindler's testimony that he "would never do a cochlear implant without back-telemetry device"); Dkt. 464, January 15, 2014, P.M. Trial Tr. at 47-48 (Dr. Stickney's testimony)).

2. **Whether Ms. Elsten Improperly Applied the Entire Market Value Rule**.

Cochlear also contends that a new trial should be granted because plaintiff's expert improperly applied the entire market value rule ("EMVR") in calculating the royalty base of approximately $1.8 billion. (See Dkt. 511-3, Rule 59 Joint Br. at 9-11 & 27-28). According to defendant, "nowhere in her testimony does she state that the patented technology drove the sales of the accused products[,]" and "[t]he evidence uniformly shows that features other than telemetry drive [sic] demand for cochlear implants." (Id. at 10). Defendant's assertions are unpersuasive.

First, Cochlear's criticism of Ms. Elsten's testimony regarding whether the patented technology drove market demand is somewhat disingenuous because Cochlear did not ask Ms. Elsten any questions about her royalty base, (see, generally, Dkt. 465, January 16, 2014, P.M. Trial Tr.), and Cochlear does not cite any evidence of an alternative royalty base presented during the trial. (See, generally, Dkt. 511-3, Rule 59 Joint Br.). Indeed, Cochlear's own expert used the same royalty base as Ms. Elsten and stated that was "the only royalty base that [he] could come

up with" under the circumstances of this case. (Dkt. 467, January 21, 2014, P.M. Trial Tr. at 53). What's more, less than a page after criticizing, in effect, the opinions of both experts – since both experts used the same royalty base – Cochlear argues that the court should use the same royalty base as a basis for an offer of remittitur, (see Dkt. 511-3, Rule 59 Joint Br. at 11), with no explanation as to why that royalty base is sufficient when relied on by Cochlear's expert but not plaintiff's expert. (See, generally, id.). In short, given that both experts relied on the same royalty base and Cochlear did not put forth any evidence of an alternative royalty base, the court finds that defendant waived its contentions of error in this regard. See, e.g., Versata Software, Inc. v. SAP America, Inc., 717 F.3d 1255, 1267-68 (Fed. Cir. 2013), cert. denied, 571 U.S. 1164 (2014) (upholding jury's decision on royalty base where defendants' expert agreed with royalty base provided by plaintiffs).

Second, with respect to the smallest saleable patent-practicing unit, see LaserDynamics, Inc., 694 F.3d at 67 ("[I]t is generally required that royalties be based not on the entire product, but instead on the smallest saleable patent practicing unit.") (internal quotation marks omitted), defendant does not point to any evidence from the trial showing that there is another product or basis upon which to find an even smaller saleable patent-practicing unit. (See, generally, Dkt. 511-3 at 9-11 & 27-28). In any event, the evidence was sufficient to establish that the royalty base relied on by both experts was based on the smallest saleable patent-practicing unit. For example, there was evidence that the implants and speech processors could not be mixed-and-matched between manufacturers. (See Dkt. 464, January 15, 2014, P.M. Trial Tr. at 49 (Dr. Stickney's testimony); Dkt. 495, January 16, 2014, A.M. Trial Tr. at 47 (Dr. Young's testimony); Dkt. 465, January 16, 2014, P.M. Trial Tr. at 22 (Ms. Elsten's testimony)). Also, plaintiff's expert testified that the claims covered the combination of the processor, implant and software, that the processor and implant are sold together, and that it was Cochlear's practice to license both components together. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 22). According to Ms. Elsten, there was no "smaller subassembly that you could point to and say, oh, that subassembly by itself practices the patents." (Id.; see Dkt. 463, January 14, 2014, P.M. Trial Tr. at 84 (Mr. Santogrossi's

testimony)). In short, the evidence was sufficient to establish that the cochlear implants and speech processors constituted the smallest salable patent-practicing unit.

Finally, even assuming that the entire market rule applied, the evidence was sufficient for the jury to conclude that the patented back telemetry technology drove the demand for the infringing cochlear implant systems. See Marine Polymer Technologies, Inc. v. HemCon, Inc., 672 F.3d 1350, 1360 (Fed. Cir. 2012) ("The use of the entire market value as the royalty base is acceptable to the extent that the patent owner proves that the patent-related feature is the basis for customer demand.") (internal quotation marks omitted). At trial, Ms. Elsten testified that she could not find any feature that had the significant impact that back telemetry had on either profits or market share. (Dkt. 465, January 16, 2014, P.M. Trial Tr. at 70 & 72 ("The data indicates that back telemetry had a profound impact.")). The jury heard testimony about how back telemetry was so important that patients were willing to have cables "tunneled" through their scalp and resurface through a "plug" on the other side of their head in order to have this feature. (See Dkt. 494, January 15, 2014, A.M. Trial Tr. at 51 (Dr. Schindler's testimony describing this process)). There was also unchallenged testimony from Dr. Schindler and Dr. Stickney that they would not recommend a patient receive an implant that did not have back telemetry, and, by implication, that to do so would fall below their professional standards of care. (See Dkt. 494, January 15, 2014, A.M. Trial Tr. at 31 (Dr. Schindler's testimony); Dkt. 464, January 15, 2014, P.M. Trial Tr. at 47-48 (Dr. Stickney's testimony)). Based on this evidence, it was reasonable for the jury to contemplate just how important the back telemetry feature must be for a patient to agree to undergo "tunneling," and consider how much more it would be worth to be able to forgo "tunneling" but still have this feature. Cochlear's own annual reports serve as a poignant reminder of just how important these implants are to the patients who receive them, by "changing lives" with "the gift of sound." (See Dkt. 605-26, Lyons Decl., Exh. 45, 2012 Cochlear Annual Report at ECF 29128-29).

Next, the jury was told that Cochlear lost 30% of its market share to AB immediately following the Clarion's release. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 70-71). Ms. Elsten testified that her analysis of the market data, including Cochlear's immediate 30 percent

loss in market share, indicated that back telemetry had a "profound impact" on market demand. (See id. at 70 & 72). Cochlear's executives admitted that its Nucleus 22 was not capable of back telemetry, and had been on the market for over ten years by the time the Clarion, a device with not merely back telemetry but *wireless* back telemetry, was launched. (See Dkt. 496, January 17, 2014, A.M. Trial Tr. at 17 & 47 (testimony of James Patrick, defendant's Chief Scientist and senior vice president[24])). Given the choice between a device with newly-patented, cutting-edge technology containing a feature of undisputedly vital importance, or another reiteration of a 13-year-old model lacking this vitally important feature, 30% of the market resoundingly chose the former. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 17 & 71). The Clarion, with its wireless, bi-directional telemetry capabilities, was a game changer that formed the basis of its market demand. Finally, it should be noted that Cochlear cites no evidence of features or improvements – other than the patented technology – that had the dramatic impact on market share that the Clarion did. (See, generally, Dkt. 511-3, Rule 59 Joint Br. at 9-11). In short, the evidence was sufficient to establish that the patented technology formed the basis for its market demand and contributed substantially to the value of the infringing cochlear implant systems.

D. Conclusion.

Cochlear's motion for new trial on damages can 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, 481 F.3d at 729. The court "must uphold the jury's finding of the amount of damages unless the amount is grossly excessive or monstrous, clearly not supported by the evidence, based on speculation or guesswork." Yeti by Molly, Ltd. v. Deckers Outdoor Corp., 259 F.3d 1101, 1107 (9th Cir. 2001). In applying this standard, the court must keep in mind that any reasonable royalty analysis "necessarily involves an element of approximation and uncertainty." Unisplay, S.A. v. American Electronic Sign Co., Inc., 69 F.3d 512, 517 (Fed. Cir. 1995).

[24] Mr. Patrick testified that he has worked for Cochlear since approximately 1981, and has been Chief Scientist since 2002. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 74-75).

"Doubts about the correctness of the verdict are not sufficient grounds for a new trial: the trial court must have a firm conviction that the jury has made a mistake." Landes Construction Co., Inc. v. Royal Bank of Canada, 833 F.2d 1365, 1372 (9th Cir. 1987). After giving full respect to the jury's verdict, the court cannot say that it has been "left with the definite and firm conviction that a mistake has been committed [by the jury]." Id. at 1371-72 (internal quotation marks omitted); Tortu, 556 F.3d at 1084 (a court cannot "substitute its evaluations for those of the jurors" and should not grant new trial simply "because it would have arrived at a different result.") (internal quotation marks omitted). Nor can the court say that allowing Ms. Elsten to testify was an evidentiary error "so prejudicial as to require a new trial which would [] likely [] produce a different result." Abarca v. Franklin County Water District, 813 F.Supp.2d 1199, 1209 (E.D. Cal. 2011) (internal quotation marks omitted); Ruvalcaba, 64 F.3d at 1328. Cochlear's objections to the testimony and evidence provided by plaintiff's expert relate to the weight of the evidence. Cochlear had an opportunity to aggressively cross-examine plaintiff's expert and convince the jury that her analysis should be rejected in favor of its expert. But the jury determined that the weight of the evidence favored plaintiff, and the court believes this finding to be adequately supported as a matter of law. Under the circumstances, the court is persuaded that the jury's damages verdict, rather than being clearly contrary to the weight of evidence, was a more-than-defensible resolution of the damages issues in this case.

III. WILLFULNESS AND ENHANCED DAMAGES.

The Federal Circuit "vacate[d] [this] court's determination that Cochlear's infringement of [plaintiff's] patents was not willful and remand[ed] for further proceedings" consistent with the Supreme Court's decision in Halo, a decision that was issued after this court issued its decision granting defendant's JMOL Motion. See Alfred Mann, 841 F.3d at 1345-46. On remand, this "court must consider two questions. The first of these is subjective willfulness." WesternGeco LLC v. Ion Geophysical Corp., 837 F.3d 1358, 1363 (Fed. Cir. 2016), rev'd on other grounds, 138 S.Ct. 2129 (2018). The second question is, "if the jury's finding of willful infringement is sustained, [] whether enhanced damages should be awarded." Id. at 1364.

A. Willfulness.[25]

In Halo, the Supreme Court held that the two-step Seagate inquiry was "unduly rigid" and "encumber[ed] the statutory grant of discretion to the district courts." 136 S.Ct. at 1932 (internal quotation marks omitted). "The Court rejected the Seagate test's clear-and-convincing standard of proof[.]" Alfred Mann, 841 F.3d at 1346. The Supreme Court also rejected Seagate's requirement of "a finding of objective recklessness in every case before district courts may award enhanced damages." Halo, 136 S.Ct. at 1932. However, "Halo did not disturb the substantive standard for the second prong of Seagate, subjective willfulness." WesternGeco LLC, 837 F.3d at 1362. "Rather, Halo emphasized that subjective willfulness alone . . . can support an award of enhanced damages." Id.; Halo, 136 S.Ct. at 1933 ("The subjective willfulness of a patent infringer, intentional or knowing, may warrant enhanced damages, without regard to whether his infringement was objectively reckless."). Thus, on remand, the court must determine whether substantial evidence supports the jury's finding of subjective willfulness. See Maynard, 37 F.3d at 1404 (describing substantial evidence standard).

In this case, plaintiff presented sufficient evidence to support the jury's finding of willfulness. As an initial matter and as noted earlier, see supra at § II.C., defendant misconstrues the scope of the patent at issue as well as plaintiff's argument by framing the issue as notice of the "physician's tester" as it relates to the Nucleus 24. (See, e.g., Dkt. 613, Enhanced Damages Opp. at 4 ("Plaintiffs . . . do not even allege there is any evidence that Cochlear was aware of the specific design of the physician's tester claimed in the '616 patent before Cochlear began selling its Nucleus 24 implant with back telemetry in 1998.")). But what is at issue here is whether Cochlear copied the back telemetry technology encompassed within the '616 patent. Cochlear appears to concede that it was aware of the subject back telemetry technology at least as far back as 1998, if not earlier. (See id. at 4 ("[W]hile it may be true that Advanced Bionics, using AMF's

[25] Since the court originally addressed the jury's willfulness finding pursuant to defendant's JMOL Motion, (see Dkt. 540, Court's Order of March 31, 2015, Re: Post-Trial Motions at 12-13), the court will again apply the Rule 50 standard. The court hereby incorporates the Rule 50 standard set forth above. See supra at § I.A.

technology, launched a cochlear implant with back telemetry before Cochlear and that Cochlear was aware that Advanced Bionics' implant would have back telemetry, that is completely beside the point.")). This awareness is not, as Cochlear contends, "beside the point," (see id.), because copying of patented technology does not require that all the elements of a patent claim be copied. See Read Corp. v. Portec, Inc., 970 F.2d 816, 827 & n. 7 (Fed. Cir. 1992), abrogated on other grounds by Markman v. Westview Instruments, Inc., 52 F.3d 967, 975-78 (Fed. Cir. 1995) (en banc) (referring to copying "the ideas or design of another" and stating that this "would encompass, for example, copying the commercial embodiment, not merely the elements of a patent claim").

In any event, the record contains substantial evidence from which the jury could conclude that Cochlear intentionally copied plaintiff's back telemetry technology set forth in the '616 patent. See Polara Engineering, Inc. v. Campbell Co., 237 F.Supp.3d 956, 992 (C.D. Cal. 2017) ("Polara I"), aff'd in part, vacated in part, 894 F.3d 1339 (Fed. Cir. 2018) (evidence of deliberate copying may be circumstantial). For example, the jury heard testimony that if Cochlear's devices were actually based on Professor McDermott's noninfringing design, only one voltage monitoring line, not two, should have registered. (See Dkt. 464, January 15, 2014, P.M. Trial Tr. at 83-92 (Dr. Young's testimony explaining his basis for concluding that Cochlear's products were not based on the McDermott patent); Dkt. 496, January 17, 2014, A.M. Trial Tr. at 75-77 (cross-examination of Tony Nygard, Cochlear's head of implant development, over why Cochlear's infringing designs produced two instead of one voltage monitoring line); Dkt. 498, January 22, 2014, A.M. Trial Tr. at 22 (Dr. Young's testimony that "[t]he voltage crossover pair is being monitored, amplified by this telemetry sensor amplifier, whereas in Professor McDermott's article, it's only one line. [McDermott's device] only measures one voltage, not a pair.")). There was also evidence in the form of internal Cochlear communications reflecting Cochlear's serious concerns with the imminent threat to its market leadership. (See Dkt. 496, January 17, 2014, A.M. Trial Tr. at 17 & 47 (Mr. Patrick's testimony that the Nucleus 22 was not capable of back telemetry and had been on the market since 1984); id. at 20 (internal memorandum stating that "Cochlear has been challenged competitively for the first time, and our research and our market leadership is at stake,"

and expressing concern that the Clarion could "obsolete" the Nucleus 22); id. at 33 (internal memorandum dated May 28, 1991, identifying Mini Med, AB's predecessor, as a potential competitor and assessing the competitive landscape); Dkt. 463, January 14, 2014, P.M. Trial Tr. at 96 (Mr. Santogrossi's testimony regarding the Clarion's much anticipated release)). Based on this evidence, the jury could have reasonably inferred that Cochlear knew about the '616 patent or, at a minimum, the technology practiced by the patent. See, e.g., i4i Ltd., 598 F.3d at 860 (internal email communications by the defendant's employees discussing marketing email sent by the plaintiff constituted circumstantial evidence of knowledge).

Indeed, based on evidence that Cochlear – the worldwide leader in hearing implants – lost 30 percent of its market share in the year after the Clarion was introduced, (see Dkt. 465, January 16, 2014, P.M. Trial Tr. at 70-71 (Ms. Elsten's testimony that Cochlear's market share fell from 100% in 1996 to 70% in 1997)), the jury could have inferred that Cochlear had a motive and intent to deliberately copy plaintiff's back telemetry technology. Faced with a 13-year drought in introducing a replacement for the Nucleus 22, its aging flagship product, coupled with the excitement generated by the Clarion's clinical trials, a dramatic loss in market share was in the cards for Cochlear. Until 1997, Cochlear had a virtual monopoly on the U.S. market, and was unaccustomed to free market forces or competition. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 78 (Mr. Santogrossi's testimony that Cochlear "was the predominant market leader at that time" and "had pretty much a monopoly on the market[]")). Then, the Clarion was introduced and Cochlear was now facing strong competition in the U.S. market from an American startup. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 99 &105 (Mr. Santogrossi's testimony)). In response to this threat, the Nucleus 24 was launched, but despite this being Cochlear's first new hearing implant product in more than 13 years, the jury heard no evidence at all about any clinical trials relating to the Nucleus 24 or any excitement and anticipation generated by the Nucleus 24's clinical trials. Under the circumstances, the court is persuaded that there was substantial evidence for the jury to conclude that Cochlear had a strong motivation to copy plaintiff's patented back telemetry technology and that it did so through the Nucleus 24. See Arctic Cat Inc. v. Bomardier Recreational Products, Inc., 198 F.Supp.3d 1343, 1350 (S.D. Fla. 2016) ("That [defendant]

developed a very similar system under these circumstances is strong evidence of copying and favors enhanced damages."); Omega Patents, LLC v. CalAmp Corp., 2017 U.S. Dist. LEXIS 55846, *25-26 (M.D. Fla. 2017) (enhancing actual damages by threefold upon finding, among other things, that the infringer "cho[se] not to design around [the patents-in-suit], . . . elected to sell infringing products and continues to do so to this day," was motivated by customer demand, and attempted to conceal its illegal conduct through affirmative misrepresentations).

Cochlear relies on the same defense to copying that the jury rejected at trial, namely, that "Cochlear collaborated with Hugh McDermott in the design and testing of a Cochlear implant that used back telemetry."[26] (Dkt. 613, Enhanced Damages Opp. at 6). But the jury heard evidence that allowed it to infer that defendant did not use the non-infringing single-electrode monitoring of McDermott but rather copied plaintiff's patented dual-electrode monitoring back-telemetry system. For example, during plaintiff's cross-examination of Mr. Nygard, the jury learned that Professor McDermott's single-electrode design should produce only one voltage monitoring line, and that even though Cochlear claimed to have used this single-electrode design, its infringing devices produced two voltage monitoring lines. (See Dkt. 496, January 17, 2014, A.M. Trial Tr. at 75-76

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[26] Instead of discussing why the evidence does not support the jury's verdict, as Cochlear should do in seeking to aside the verdict, see supra at § I.D., it cherry-picks a portion of the plaintiff's expert's testimony and asserts that "Plaintiffs' allegation of copying is really nothing more than an argument that Cochlear infringes[.]" (Dkt. 613, Enhanced Damages Opp. at 5). Cochlear quotes the following portion of plaintiff's expert's testimony:

> Q. What evidence do you have that Cochlear copied?
> A. Okay, so, let's presume the patent is valid. In my infringement analysis, I show that the claims in the '616 and the '691 patent were all found in the products.
> Q. Okay. So, that's infringement, right?
> A. That's infringement.
> Q. So, what evidence do you have that Cochlear copied what AMF did?
> A. When you infringe, didn't you copy somebody's stuff?
> Q. So, that's it? Infringement, you have no evidence of copying besides that, correct? Besides your infringement opinion?
> A. That's right.

(Id.) (quoting Dkt. 498, January 22, 2014, A.M. Trial Tr. at 36). This excerpt does not undermine the substantial evidence that was presented to the jury, and the jury was free to conclude that the analysis and testimony of plaintiff's expert was sufficient to show both infringement and copying.

(Mr. Nygard's testimony)); see also Tinnus Enterprises, LLC v. Telebrands Corp., 846 F.3d 1190, 1204 (Fed. Cir. 2017) ("A patentee is entitled to rely on circumstantial evidence to establish infringement[.]"); Lucent Technologies, 580 F.3d at 1318 (same).

Further, defendant presented no evidence that it independently developed its back telemetry products using Professor McDermott's research or that it otherwise took steps to implement a non-infringing alternative. For example, Cochlear did not cite any evidence describing how it took steps to implement a non-infringing alternative or how Professor McDermott's back telemetry system was different from plaintiff's patented back telemetry system. (See, generally Dkt. 613, Enhanced Damages Opp.).

In Polara I, a case similar to the instant case, a jury found that the defendant, rather than use its "three-wire design," willfully infringed plaintiff's patented "2-wire push button station control system for a traffic light controlled intersection."[27] 237 F.Supp.3d at 980-81. In finding that there was substantial evidence to uphold the jury's verdict, the Polara I court noted that the defendant stated that it "needed a product that would compete with Polara's two-wire Navigator[,]" and that it developed its infringing system in "response to Polara's two-wire system" and that defendant "did not have the technology to compete with Polara's two-wire [system] when it was introduced[.]" Id. at 980. The Polara I court stated that the "jury could have relied on those statements to conclude that [defendant] intentionally copied [plaintiff's] two-wire device." Id. As in Polara I, the evidence here was sufficient for the jury to find that Cochlear did not have a product with the patented back telemetry technology to compete with the Clarion when it was introduced and that Cochlear's response was to infringe.[28]

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[27] The Federal Circuit affirmed the district court's denial of judgment as a matter of law as to invalidity and willfulness, i.e., it upheld the jury's willful infringement verdict. Polara Engineering Inc v. Campbell Company, 894 F.3d 1339, 1356 (Fed. Cir. 2018) ("Polara II"). It vacated and remanded the award of enhanced damages because the district court's explanation as to the fifth Read factor, the "closeness of the case," was "insufficient for [the Court] to determine why the [district] court viewed this factor as 'neutral.'" Id. at 1355.

[28] In affirming the jury's willfulness finding, the Federal Circuit stated that "[b]ased on the evidence adduced at trial, the jury reasonably could have found that [defendant] intentionally copied the '476 patent despite a significant known risk that its two-wire AAPS would infringe the

The jury's willfulness finding is also supported by Cochlear's failure to put forth good-faith pre-litigation, noninfringement defenses. Plaintiff asserted in its moving papers that

> Cochlear never offered any evidence that it had a good faith basis to believe that it did not infringe claim 10. It is undisputed that Cochlear's purported defenses from its 2003 letter do not have even theoretical application to claim 10. Cochlear's expert, Dr. Stevenson, admitted that the defenses stated in [the 2003 letter] did not apply to claim 10 of the '616 patent.

(Dkt. 602, Enhanced Damages Motion at 11-12 (citing Dkt. 497, January 21, 2014, A.M. Trial Tr. at 125)). Other than asserting that Cochlear's "letter to AMF after its initial investigation gives several reasons why it did not believe there was infringement, including: the Nucleus implant has a single coil to exchange signals with an external speech processor; and the Nucleus implant communicates in a manner very similar to the prior art references cited in the patent," (Dkt. 613 at 7) (internal quotation marks omitted), Cochlear did not respond to plaintiff's unequivocal assertion relating to whether Cochlear had a good-faith, non-infringement defense with respect to claim 10. (See, generally, id. at 6-7). The court construes Cochlear's failure to respond to plaintiff's argument with respect to claim 10 as a concession that its 2003 non-infringement arguments did not relate to claim 10. See GN Resound A/S., 2013 WL 1190651, at *5 (stating, when plaintiff failed to oppose a motion as to a particular issue, that "the Court construes as a concession that this claim element [is] not satisf[ied]"); Hall, 2011 WL 4374995, at *5 ("Plaintiff does not oppose Defendants' arguments regarding the statute of limitations in his Opposition. Plaintiff's failure to oppose . . . on this basis serves as a concession[.]"). The lack of a pre-suit, non-infringement defense to claim 10 supports the jury's finding that Cochlear infringed the '616 patent with a subjective belief that it was infringing a valid patent.

'476 patent. It is undisputed that [defendant] was aware of the '476 patent prior to developing its AAPS. [Defendant's] president testified that [defendant] developed its AAPS to compete with [plaintiff's] Navigator-2, and that [defendant] did not have a product that could compete with the Navigator-2 when [plaintiff] launched it in 2003." Polara II, 894 F.3d at 1353-54. Here, as in Polara II, there was evidence that Cochlear was aware of back telemetry technology in the '616 patent prior to developing its Nucleus 24 and Cochlear did not have a product to compete with the Clarion when it was launched in 1997.

Finally, willfulness may be shown by an infringer's refusal to stop using the patented technology even after being notified of its infringement. See i4i Ltd., 598 F.3d at 859-60 (defendant knew its product practiced the patent but "did not cease its infringing activity or attempt to design around"). As discussed below, Cochlear kept infringing even after it received the 2003 letter from the Foundation and continued infringing the patent until it expired in March 2014. See infra at § III.B.

In sum, the jury's verdict must be upheld if there is "such relevant evidence as reasonable minds might accept as adequate to support" a finding of willfulness by a preponderance of the evidence. See Maynard, 37 F.3d at 1404. "Based on its own assessment of the evidence and [Cochlear's] defenses, the jury was free to decide for itself whether [Cochlear] reasonably believed there were any substantial defenses to a claim of infringement." i4i Ltd., 598 F.3d at 860. Reviewing the record in the light most favorable to plaintiff, the court finds there was more than sufficient evidence for a reasonable jury to have found that Cochlear's infringement was willful.

B. Enhanced Damages.

Having concluded that substantial evidence supports the jury's finding of willful infringement, the court turns to whether enhanced damages should be awarded under 35 U.S.C. § 284. See WesternGeco LLC, 837 F.3d at 1364 ("[The second question is,] if the jury's finding of willful infringement is sustained, [] whether enhanced damages should be awarded."). Enhanced damages "are not to be meted out in a typical infringement case, but are instead designed as a punitive or vindictive sanction for egregious infringement behavior." Halo, 136 S.Ct. at 1932 (internal quotation marks omitted). "The Supreme Court described 'the sort of conduct warranting enhanced damages as . . . willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, [or] flagrant. . . . .'" Alfred Mann, 841 F.3d at 1346 (quoting Halo, 136 S.Ct. at 1932).

The question of enhanced damages is left to the district court's discretion. See Halo, 136 S.Ct. at 1934. "None of this is to say that enhanced damages follow a finding of egregious misconduct. As with any exercise of discretion, courts should continue to take into account the particular circumstances of each case in deciding whether to award damages, and in what amount." Id. at 1933; see Polara II, 894 F.3d at 1355 ("In exercising its discretion, the district court

must take into account the particular circumstances of each case, and consider all relevant factors in determining whether to award enhanced damages[.]") (citation and internal quotation marks omitted).

"The principal considerations in enhancement of damages are the same as those of the willfulness determination, but in greater nuance as may affect the degree of enhancement. Thus egregiousness of the infringer's conduct may receive greater emphasis, as may any mitigating factors." SRI Int'l v. Advanced Technology Laboratories, 127 F.3d 1462, 1469 (Fed. Cir. 1997). In determining whether to exercise its discretion to award enhanced damages and the amount thereof, courts usually consider the nine factors set forth in Read. "Although the district court is not required to discuss the Read factors, it is obligated to explain the basis for the [enhanced damages] award, particularly where the maximum amount is imposed." Polara II, 894 F.3d at 1355 (citation and internal quotation marks omitted).

The first Read factor is "whether the infringer deliberately copied the ideas of another[.]" Read, 970 F.2d at 827. As discussed above, the record contains evidence that Cochlear was aware of and that it deliberately copied the Foundation's back telemetry technology set forth in the '616 patent. See supra at § III.A. In other words, the evidence was sufficient for the jury to conclude that Cochlear rejected Professor McDermott's single-electrode monitoring approach and used the infringing duel-monitoring system instead. "That [defendant] developed a very similar system under these circumstances is strong evidence of copying and favors enhancing damages." Georgetown Rail Equipment Co. v. Holland, 2016 WL 3346084, *17 (E.D. Tex. 2016).

Further, the evidence that Cochlear had a non-infringing alternative, i.e., the McDermott approach, which it could have implemented but chose not to, also supports enhanced damages. As noted earlier, Cochlear did not cite to any evidence describing the steps it took to implement a non-infringing alternative or how Professor McDermott's system was different from plaintiff's invention, (see, generally Dkt. 613, Enhanced Damages Opp.), although there was evidence that the McDermott approach was less effective and not well-received. (See, e.g., Dkt. 496, January 17, 2014, A.M. Trial Tr. at 28 (Exhibit 410 stating "competitor's devices utilizing a ceramic capsula could be perceived to be of a more appropriate high tech construction" than Cochlear's Nucleus

22, which was developed with Professor McDermott's collaboration)). From this it can be inferred that Cochlear chose to copy plaintiff's patent because it did not want to give up its market share by switching to the less desirable alternative.[29] In short, this factor weighs in favor of enhanced damages. See WBIP, LLC v. Kohler Co., 829 F.3d 1317, 1325 & 1339-42 (Fed. Cir. 2016) (affirming enhancement where defendant introduced an infringing product with the same features found in plaintiff's product).

The second factor is "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[.]" Read, 970 F.2d at 827. As noted above, Cochlear did not respond to plaintiff's unequivocal assertion relating to whether Cochlear had a good-faith, non-infringement defense with respect to claim 10, an independent method claim, and the resulting inference must be that it did not.

In any event, Cochlear's only defense to this Read factor is that it explained to plaintiff, in response to plaintiff's 2003 letter, why it believed that it did not infringe. (Dkt. 613, Enhanced Damages Opp. at 12). According to defendant, its "letter to AMF after its initial investigation [gave] several reasons why it did not believe there was infringement, including: the Nucleus implant has a single coil to exchange signals with an external speech processor; and the Nucleus implant communicates in a manner very similar to the prior art references cited in the patent." (Id. at 7) (internal quotation marks omitted). However, as noted above, Cochlear's 2003 response had no bearing with respect to the infringement of claim 10.[30] Thus, the fact that plaintiff did not respond

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[29] For example, as noted earlier, after the FDA approved the Clarion, the first commercial cochlear implant with back telemetry, in March 1996, Cochlear's market dominance suffered tremendously. The newly-introduced Clarion took a significant 30% of Cochlear's market share. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 17). The Clarion enjoyed significant sales growth until 1998 when the FDA approved Cochlear's Nucleus 24, which was the first Cochlear implant with back-telemetry capability. (See id. (Ms. Elsten's testimony that "in '98 the infringement started, and that stabilized the market share loss for Cochlear"); Dkt. 493, January 14, 2014, A.M. Trial Tr. at 70 (stipulated fact that Cochlear's Nucleus 24 received FDA approval on June 25, 1998)).

[30] In Polara II, the Federal Circuit affirmed the district court's rejection of defendant's reliance on opinion of counsel as basis for a good-faith belief that the subject patent was invalid or not

to Cochlear's 2003 letter for three years is irrelevant as it relates to claim 10 and, in any event, the jury considered this evidence but found it unpersuasive.

Moreover, the fact that AMF did not respond to Cochlear's 2003 letter for three years, (see Dkt. 613, Enhanced Damages Opp. at 12), did not eliminate or suspend Cochlear's obligation to investigate the scope of the patent and determine whether there was a good-faith basis to conclude that the patent was invalid or not infringed. "The law of willful infringement does not search for minimally tolerable behavior, but requires prudent, and ethical, legal and commercial actions." SRI Int'l, 127 F.3d at 1465. Without any evidence as to what investigation Cochlear conducted during the relevant time period relating to the scope of the patent, Cochlear's reliance on plaintiff's delay in responding to its 2003 letter is an insufficient basis for Cochlear to believe that it had the right to practice the technology covered by the '616 patent.

Even assuming it was proper for Cochlear to "believe[] there was no infringement[,]" because of plaintiff's failure to respond to the 2003 letter, (Dkt. 613, Enhanced Damages Opp. at 12), that belief was clearly dispelled by plaintiff's 2006 letter, more than a year before filing suit, that set forth plaintiff's view that Cochlear was continuing to infringe and noted Cochlear's inability to articulate a defense. (See Dkt. 605-11, Lyons Decl., Exh. 30, Letter from Defense Counsel to Plaintiff's Counsel of October 24, 2006) (referencing letter from plaintiff's counsel of August 28, 2006). Cochlear has not cited or pointed to any evidence that, after the second letter, it asserted a good-faith, non-infringement defense to claim 10. (See, generally, Dkt. 613, Enhanced Damages Opp. at 6-7 & 12). It was not until after the lawsuit was filed that Cochlear asserted any sort of noninfringement defense to claim 10.

Other than the 2003 letter, there is no evidence – and Cochlear has not cited to any – as to the nature, scope and adequacy of any investigation Cochlear conducted after it learned about the '616 patent. (See, generally, Dkt. 613, Enhanced Damages Opp. at 6-7 & 12). Indeed, it is disingenuous for Cochlear to claim that it investigated the scope of the patent and formed a good-

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infringed because "[t]he only written opinion of counsel [defendant] received that it alleges shows its good faith only substantively discusses claim 11, which is not at issue in this case." 894 F.3d at 1354. Here, Cochlear's letter never addressed claim 10 even though it was clearly at issue.

faith belief that the patent was invalid when it is undisputed that Cochlear did not obtain the '616 patent file wrapper until three years after being notified that it was infringing the patent. (See Dkt. 605-11, Lyons Decl., Exh. 30, Letter from Defense Counsel to Plaintiff's Counsel of October 24, 2006) (October 2006 admission by Cochlear that it was still "in the process of obtaining the file wrappers"); see, e.g., Arctic Cat, 198 F.Supp.3d at 1351 ("Indeed, it is disingenuous at best for [defendant] to claim that it subscribed to the good-faith belief that the patents were invalid where, despite kn[owing] of both patents within a month or so of their issuance, . . . no [defendant] employee even took the time to review the 31 claims in the [subject] patent.") (citations and internal quotation marks omitted). It is also undisputed that Cochlear did not rely on the advice of counsel in developing a good-faith belief of non-infringement. (See Dkt. 399, Final Pretrial Order, Appx. A at ECF 16781).

Further, there is no evidence that Cochlear subjectively believed that the '616 patent was not infringed or invalid, or relied upon such belief in its business decisions. For example, if, as Cochlear claims, it was utilizing Professor McDermott's design in its implants, which had been available since 1988, (see Dkt. 613, Enhanced Damages Opp. at 6 ("Dr. McDermott implanted a cochlear implant with back telemetry made by Cochlear in 1988[.]")), and if the technology worked as well or better than the technology in the '616 patent, then Cochlear should have been able to produce a back-telemetry product long before the Nucleus 24 was launched in 1998. It was only after the Clarion was introduced that Cochlear introduced its own product with back telemetry technology, albeit the technology set forth in the '616 patent. Indeed, the fact that Cochlear could have utilized Professor McDermott's less desirable alternative but chose not to further undermines a finding that any reliance by Cochlear on its invalidity defense would have been in good faith.

In short, despite knowing about plaintiff's patent, Cochlear waited at least three years to investigate the patent's scope and never formed a good-faith belief of noninfringement. Moreover, the only purported non-infringement defenses it raised in its 2003 letter do not apply to claim 10 of the '616 patent, which concerns a "method of testing an implantable tissue stimulating system[.]" (Dkt. 580-4, '616 patent, col. 35; see Dkt. 605-12, Lyons Decl., Exh. 31, Reply Letter from Cochlear of October 1, 2003 (stating that the "Nucleus cochlear implant does not have a

physician's tester that can be connected directly to an external coil of a headpiece/transmitter")). Under the circumstances, the court finds that this factor weighs in favor of enhanced damages. See, e.g., Arctic Cat, 198 F.Supp.3d at 1350 (enhanced damages warranted where, among other things, trial testimony established that defendant "failed to properly investigate the scope of the patents and form a good-faith belief that the patents were invalid and/or not infringed").

Plaintiff identifies six instances of litigation misconduct to support the third Read factor, (see Dkt. 602, Enhanced Damages Motion at 17-19), that is, "the infringer's behavior as a party to the litigation." Read, 970 F.2d at 827. As to four of the six instances, the court agrees with defendant that those instances are insufficient to constitute litigation misconduct. However, the court did sanction Cochlear's counsel for failure to comply in good faith with the court's case management order as it related to the preparation of the pretrial conference order. (See Dkt. 349, December 19, 2013, Tr. at 55-56). Also, contrary to Cochlear's contention, (see Dkt. 613, Enhanced Damages Opp. at 13), the court never indicated that the stipulated facts were not useful. Rather, the court noted that for the jury to make proper use of the stipulated facts, a copy of the stipulated facts should be provided to them. In any event, the conduct of Cochlear's counsel resulted in increased costs and expenses for the parties.

The other instance of litigation misconduct relates to Cochlear's filing of an ex parte petition for reexamination of claims 1 and 10 of the '616 patent in the USPTO on June 19, 2014, after the patent expired and after the jury rendered its verdict of infringement and no invalidity on January 23, 2014. (See Dkt. 460, Jury Verdict; Dkt. 605-24, Lyons Decl., Exh. 43, USPTO's Notice of Intent to Issue Ex Parte Reexamination Certificate ("USPTO Notice")). In its petition, Cochlear raised the exact same arguments the jury rejected, (see Dkt. 605-24, Lyons Decl., Exh. 43, USPTO Notice at ECF 29091-93), and apparently attempted to block plaintiff's trial counsel from participating in the reexamination. (See Dkt. 605-23, Lyons Decl., Exh. 42, Letter from Defense Counsel to Plaintiff's Counsel of August 7, 2014, at ECF 29084-85 (defense counsel's letter requesting plaintiff's counsel to "[p]lease confirm that you and your colleagues have not and will not violate the prosecution bar by participating in either of the reexamination proceedings[]")). These efforts proved unsuccessful, as the USPTO's reexamination only reconfirmed the validity

of claims 1 and 10. (See Dkt. 605-24, Lyons Decl., Exh. 43, USPTO Notice at ECF 29092 ("Claims 1 and 10 are confirmed.")).

Cochlear makes no effort to explain why it filed the reexamination petition seven years after the case was filed or why it did not file one earlier. (See, generally, Dkt. 613, Enhanced Damages Opp. at 13-14). Cochlear's sole response to plaintiff's assertion that the filing of the petition constitutes litigation misconduct is that "the filing of requests for ex parte reexamination in the Patent Office has nothing to do with the conduct of the litigation." (Id. at 14). Cochlear's response is unpersuasive.

First, since the case was still pending, the filing of the petition – after a jury verdict of infringement and no invalidity – did nothing more than distract and raise the costs for plaintiff to continue litigating this case. Given that the jury issued a verdict against Cochlear of more than $130 million, and the fact that there would no doubt be post-trial motions and an appeal, it was incumbent upon Cochlear to provide an explanation as to why it believed it was appropriate to file a petition[31] – again, after the patent expired – that raised the same arguments that were raised during the trial.[32] Cochlear's failure to provide an explanation is particularly troubling given its assertion – its only substantive response to the sixth and seventh Read factors discussed below – that it did not knowingly infringe the subject patent because, "[b]y the time the Court ruled on the bench trial and post-trial motions on March 31, 2015 and Cochlear knew that the defense would not stand as to claim 10 of the '616 patent, the '616 patent had expired." (Dkt. 613, Enhanced Damages Opp. at 15). If Cochlear could not have knowingly infringed the subject patent because it had expired by the time the court ruled on the bench trial and post-trial motions, then why was it necessary to file a petition for reexamination of an expired patent? In any event, the only

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[31] For example, Cochlear should have explained what effect, if any, a contrary finding by the USPTO would have on the jury's verdict and why it did not wait to file the petition until after the appellate proceedings were completed.

[32] Notably, Cochlear never responded to plaintiff's assertion, (see Dkt. 605-23, Lyons Decl., Exh. 42, Letter of August 7, 2014, at ECF 29084-85), that Cochlear attempted to block plaintiff's counsel from participating in the reexamination. (See, generally, Dkt. 613, Enhanced Damages Opp. at 13); see GN Resound A/S, 2013 WL 1190651, at *5; Hall, 2011 WL 4374995, *5.

inference that can be drawn is that Cochlear intended to distract and raise plaintiff's costs of litigating the case.

Second, even assuming, as Cochlear contends, that the filing of the petition had "nothing to do with the conduct of the litigation[,]" (Dkt. 613, Enhanced Damages Opp. at 14), it does constitute post-filing conduct that the court may consider for both willful infringement and enhanced damages. In Mentor Graphics Corp. v. EVE-USA, Inc., 851 F.3d 1275 (Fed. Cir. 2017), the Federal Circuit noted that after the Halo decision, rigid rules surrounding the award of enhanced damages are inappropriate. See id. at 1295-96; Halo, 136 S.Ct. at 1934 ("[W]e eschew any rigid formula for awarding enhanced damages under § 284[.]"). Under Halo, district courts have discretion to award enhanced damages in "egregious cases typified by willful misconduct" where a plaintiff demonstrates "subjective willfulness . . . at the time of the challenged conduct." 136 S.Ct. at 1933-34; see PersonaWeb Technologies v. Int'l Business Machines Corp., 2017 WL 2180980, *20 (N.D. Cal. 2017) ("District courts have, under § 284, the discretion to punish the full range of culpable behavior and courts should continue to take into account the particular circumstances of each case.") (internal quotation marks omitted). Because Halo eliminated any bright line involving the award of enhanced damages, see Mentor Graphics, 851 F.3d at 1295-96, the question is simply whether the infringing conduct constitutes "egregious misconduct," irrespective of whether the conduct occurs pre- or post-filing. In light of Cochlear's failure to explain why it filed the petition for reexamination: (1) after the patent expired; (2) seven years after the lawsuit was filed; and (3) after the jury rendered its verdict, the court finds, under the circumstances here, that the filing of the petition for reexamination coupled with Cochlear's attempt to exclude plaintiff's counsel constitute evidence of litigation misconduct. In short, the court finds that this Read factor weighs in favor of enhancement.

The fourth factor is defendant's "size and financial condition." Read, 970 F.2d at 827. A significant size disparity between plaintiff and defendant supports enhanced damages. See Radware, Ltd. v. F5 Networks, Inc., 2016 WL 4427490,*8 (N.D. Cal. 2016) (finding that large size of infringer weighed in favor of enhanced damages). Plaintiff asserts that "Cochlear is much larger than the Foundation and sought to use this disparity to avoid accountability for its infringement."

(Dkt. 602, Enhanced Damages Motion at 19). As of June 2012, Cochlear's market capitalization was $3.744 billion Australian dollars ("AUD"). (See Dkt. 605-26, Lyons Decl., Exh. 45, 2012 Cochlear Annual Report at ECF 29140). By 2016, Cochlear's market capitalization had almost doubled to $6.935 billion AUD, with annual revenue of $1.1 billion AUD (or approximately $840 billion U.S. dollars). (See Dkt. 605-27, Lyons Decl., Exh. 46, 2016 Cochlear Annual Report at ECF 29155).

The Foundation, on the other hand, is a nonprofit medical research entity that generates income by licensing its advanced medical technologies to provide significant improvements to the health, security and quality of life for people suffering from debilitating medical conditions. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 51 (Mr. Mann's testimony that he had been "very fortunate" and wanted to "give back to humanity," so he "decided to form [AMF] to try to apply its resources to develop a product to incubate products that are addressing unmet or poorly met medical needs"); Dkt. 494, January 15, 2014, A.M. Trial Tr. at 26-27 (Dr. Schindler's testimony that he met with Mr. Mann, who agreed to help develop cochlear implants and that "[he] felt privileged to be there and be a part of it, bringing hearing back to these people")). The Foundation has an endowment that has fluctuated between a high of $122.6 million in 2010 to less than $45 million in 2015. (See Dkt. 603, Declaration of Farah Boroomand[33] in Support of Enhanced Damages Motion ("Boroomand Decl.") at ¶ 5).

As for AB, it was a fledgling company when it first introduced the Clarion in 1996. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 61 (Mr. Mann's testimony that AB was formed in 1993); id. at 105 (Mr. Santogrossi's testimony that the Clarion obtained FDA market clearance in 1996)). Although it immediately gained a 30% market share when it introduced the Clarion, its market share decreased significantly when Cochlear introduced the Nucleus 24 in 1998. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 70-71 (Ms. Elsten's testimony that Cochlear's market share fell from 100% in 1996 to 70% in 1997)). Like the plaintiff in i4i Ltd., AB was "a small company practicing its patent, only to suffer a loss of market share, brand recognition, and customer

[33] Farah Boroomand has been AMF's chief financial officer since May 2010. (See Dkt. 603, Boroomand Decl. at ¶ 2).

goodwill as the result of the defendant's infringing acts." i4i Ltd., 598 F.3d at 862. AB is much smaller than Cochlear with implant revenues of approximately $147 million in the year ending March 2013. (See Dkt. 605-30, Lyons Decl., Exh. 49, 2012-13 Sonova Annual Report at ECF 29232).

Cochlear asserts two arguments as to why its size and financial condition do not warrant enhanced damages. First, Cochlear asserts that AMF's assets are understated and that they actually total $82 million instead of the $45 million plaintiff claimed in its moving papers. (See Dkt. 613, Enhanced Damages Opp. at 14-15). But even assuming Cochlear's assertion is correct, there is still a significant disparity in size and resources between Cochlear and AMF. As plaintiff noted, using Cochlear's own figures would mean that "Cochlear is more than 60 times larger in size, with annual revenues tenfold larger than everything the Foundation owns." (Dkt. 620, Plaintiff's Reply to Opp. to Enhanced Damages Motion ("Enhanced Damages Reply") at 16 n. 1). Indeed, after the $130 million dollar verdict, Cochlear stated in its annual report that the outcome of the case "will not disrupt Cochlear's business[.]" (Dkt. 605-27, Lyons Decl., Exh. 46, 2016 Cochlear Annual Report at ECF 29156).

Second, Cochlear asserts that "simply looking at AMF ignores the fact that plaintiff Advanced Bionics is a subsidiary of Sonova, a large medical device company with more than $2 billion/year in revenue." (Dkt. 613, Enhanced Damages Opp. at 15). However, that AB is a subsidiary of Sonova is irrelevant since Sonova is not a party in this case. Further, Cochlear failed to mention that AB was not acquired by Sonova until 2009, years after the alleged infringement began. (See Dkt. 620, Enhanced Damages Reply at 16 n. 1).

In evaluating this Read factor, the proper focus is on the size and financial condition of the infringer and not on the ability of a plaintiff to protect its patent. See i4i Ltd., 598 F.3d at 859 ("Under the Read factors, the district court properly considered Microsoft's size and financial condition as well as whether Microsoft investigated the patent."); Omega Patents, 2017 U.S. Dist. LEXIS 55846, at *25 (finding that the defendant had "the financial wherewithal to endure the sanction of enhanced damages"). There is no dispute that Cochlear is a multi-billion dollar enterprise and the market leader when it comes to hearing implants. There is also no dispute that

Cochlear generated significant profits and revenue from selling the infringing products – over $1.8 billion in revenue with profit between 75% and 92%. (See Dkt. 495, January 16, 2014, A.M. Trial Tr. at 140 (Ms. Elsten's testimony that the infringing products "generated gross margins of somewhere between 75 and 92 percent of sales"); Dkt. 465, January 16, 2014, P.M. Trial Tr. at 23 (Ms. Elsten's testimony that based on defendant's financial records, the infringing products generated $1,809,247,456 in sales)). Thus, no matter how meritorious an infringement claim may be, the prospect of squaring off in an American courtroom against an infringer with Cochlear's resources and market dominance remains a daunting and expensive one. (See Dkt. 468, January 22, 2014, P.M. Trial Tr. at 86 (testimony of Mr. Hankin that, given AMF's limited resources, "litigation is something that not only do we take very seriously, but we better be darn well sure that we have the appropriate resources in order to sustain what has now turned into a seven-year effort")). "Where, as here, [Cochlear] is a multi-billion dollar enterprise and the market leader – due in significant part to sales of products found to willfully infringe [AMF's] patents – enhancement of damages is particularly warranted." Arctic Cat, 98 F.Supp.3d at 1351-52 (trebling damages where the defendant was "a market leader" while the plaintiff, although it had annual sales around $700 million, was "a fraction" of the defendant's size and "the smallest company in the markets where the two compete").

The fifth factor is the "[c]loseness of the case." Read, 970 F.2d at 827. Plaintiff asserted infringement of claims 1 and 10 of the '616 patent and claims 6 and 7 of the '691 patent. The jury found that defendants infringed all four claims, (see Dkt. 460, Jury Verdict), but the court invalidated three of the four claims. (See Dkt. 539, Court's Order of March 31, 2015, at 25-32). The Federal Circuit affirmed the court's invalidation of two of the three claims and reversed this court's finding of indefiniteness as to Claim 1 of the '616 patent. See Alfred Mann, 841 F.3d at 1341-45.

Cochlear asserts that this was a close case because it "emerged from trial having invalidated three of the four patent claims[,]" and "[a]s to the one patent claim on which Cochlear lost at trial, the Court denied summary judgment to both parties on that claim." (Dkt. 613, Enhanced Damages Opp. at 15). However, Cochlear did not emerge from trial having invalidated

three patent claims. Plaintiff prevailed on all issues before the jury; it was the court that invalidated the three claims in response to post-trial motions. That is, the jury found that each asserted claim was infringed directly, contributorily, and willfully. (See Dkt. 460, Jury Verdict). The jury also rejected Cochlear's argument that the patents were invalid and awarded $130 million in damages. (See id.).

In determining whether this was a close case, it is relevant that the Federal Circuit upheld this court's finding that the asserted claims regarding the '691 patent were invalid. See Alfred Mann, 841 F.3d at 1344. However, the court also considers whether infringement of the '616 patent was a close case. As discussed in connection with the second Read factor, the evidence presented at trial established that Cochlear failed to properly investigate the scope of, or provide any good-faith, non-infringement defense to, claim 10 of the '616 patent. See, e.g., Arctic Cat, 198 F.Supp.3d at 1352 (finding Read factor 5 was not a close case based in part on trial testimony that established that defendant "failed to properly investigate the scope of the patents and form a good-faith belief that the patents were invalid and/or not infringed"). Further, the fact that the one claim – claim 10 – survived summary judgment does not necessarily mean that it was a close case, especially where, as here, the jury soundly rejected defendant's invalidity and non-infringement arguments. See Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1337 (Fed. Cir. 2009) ("[T]he fact that an issue was submitted to a jury does not automatically immunize an accused infringer from a finding of willful infringement[.]"); SSL Services, LLC v. Citrix Systems, Inc., 769 F.3d 1073, 1091 (Fed. Cir. 2014) (stating, under the Seagate standard, that willfulness finding could be sustained where "the district court did not grant summary judgment[,]" but "the jury soundly rejected [defendant's] invalidity arguments and non-infringement arguments"). In short, the court finds that this factor weighs slightly in favor of enhanced damages.

The sixth and seventh Read factors are, respectively, the "[d]uration of defendant's misconduct" and "[r]emedial action by the defendant." Read, 970 F.2d at 827. Continuing to sell infringing products after receiving notice of infringement, during the course of the litigation and/or after a finding of infringement supports an enhancement of damages. See, e.g., PPC Broadband,

Inc. v. Corning Optical Communications RF, LLC, 2016 WL 6537977, *8 (N.D. N.Y. 2016) ("[C]ontinuing to sell the infringing products after notice of infringement and during the course of litigation supports enhancement."); SynQor, Inc. v. Artesyn Technologies, Inc., 709 F.3d 1365, 1385 (Fed. Cir.), cert. denied, 571 U.S. 1024 (2013) (affirming the district court's award of enhanced damages based on willfulness of post-verdict conduct). Cochlear's assertion – its only substantive response to the sixth Read factor – that it did not knowingly infringe the subject patent because, "[b]y the time the Court ruled on the bench trial and post-trial motions on March 31, 2015 and Cochlear knew that the defense would not stand as to claim 10 of the '616 patent, the '616 patent had expired[,]" (Dkt. 613, Enhanced Damages Opp. at 15), is utterly meritless. Cochlear provides no authority for its implicit proposition that the clock on infringing activity does not start until a trier of fact definitively rules on whether the patent at issue has been infringed. Under Cochlear's approach, the sixth Read factor is unnecessary, and large corporations such as Cochlear would be incentivized to infringe a smaller entity's patent and run out the clock until the patent expires.

In any event, Cochlear was given direct notice of the '616 patent in July 2003, (see Dkt. 605-12, Lyons Decl., Exh. 31, Reply Letter from Cochlear of October 1, 2003), although evidence was presented that Cochlear had knowledge of AB (formerly Mini Med) and the Clarion's back-telemetry capabilities long before the subject patent was issued.[34] (See Dkt. 496, January 17, 2014, A.M. Trial Tr. at 28 (On cross-examination, after being shown a document dated March 15, 1991, Mr. Patrick admitted that he had been aware of Mini Med, the Clarion, and its back-telemetry capabilities since at least that date.); Dkt. 399, Final Pretrial Order, Appx. A, at ECF 16767 ("On August 17, 1998, during the prosecution of the '691 patent, patent examiner Carl H. Layno filed a Notice of References Cited that disclosed 3 references ('the 1998 Notice'). . . . The McDermott patent was cited in the 1998 Notice.")); Barry v. Medtronic, Inc., 250 F.Supp.3d 107,

[34] "The USPTO issued the '616 patent as a continuation of U.S. Patent Application Ser. No. 23,584, filed on February 26, 1993, which was a continuation of U.S. Patent Application Ser. No. 752,069, filed on August 29, 1991, which was a continuation in part of U.S. Patent Application Ser. No. 411,563, filed on September 22, 1989." (Dkt. 399, Final Pretrial Order, Appx. A, at ECF 16766).

114 (E.D. Tex. 2017) ("[C]onduct before the patents issued can be, and is, probative of copying under Read."). Infringing product sales began in 1998, (see Dkt. 467, January 21, 2014, P.M. Trial Tr. at 89), and Jan Janss, Cochlear's senior vice president for design and development, confirmed that Cochlear continued to sell these products, even after the lawsuit was filed in 2007; indeed, it continued to sell them through the patent's expiration in 2014. (See id. at 75). In other words, there was substantial evidence that Cochlear infringed for 11 years after it was directly notified of the '616 patent and seven years after this case was filed.

Finally, Cochlear provided no response to the seventh Read factor. (See, generally, Dkt. 613, Enhanced Damages Opp. at 15-16); see also GN Resound A/S, 2013 WL 1190651, at *5 (stating, when plaintiff failed to oppose a motion as to a particular issue, that "the Court construes as a concession that this claim element [is] not satisf[ied]"); Hall, 2011 WL 4374995, at *5 ("Plaintiff does not oppose Defendants' arguments regarding the statute of limitations in his Opposition. Plaintiff's failure to oppose . . . on this basis serves as a concession[.]). Nor did Cochlear provide any evidence that it "voluntarily cease[d] making or selling the infringing products at any point or take steps to implement a non-infringing alternative." Arctic Cat, 198 F.Supp.3d at 1353. In fact, not only did Cochlear take no remedial action, such as attempting to design around the patent, it also failed to inquire about licensing the technology even after plaintiff indicated in 2003 that it would like to explore a license agreement with Cochlear. (Dkt. 539, Court's Order of March 31, 2015, at 10-11). The court finds it significant that plaintiff tried to resolve the matter without immediately resorting to litigation by contacting Cochlear and offering to license the patent. See, e.g., SRI Int'l, 127 F.3d at 1465-69 (affirming district court's finding of willful infringement and award of treble damages where infringer knew of patent and possibility of infringement after, among other things, having been offered a nonexclusive license to the patent by the patentee).

United States patent law seeks to "promote [the] Progress of Science and useful Arts," U.S. Const., Art. I, § 8, cl. 8, "[t]hrough a complex system of incentive-based laws . . . [that] helps to encourage the development of, disseminate knowledge about, and permit others to benefit from useful inventions." Halo, 136 S.Ct. at 1937-38 (Breyer, J., concurring). Enhanced damages are

"a means to patent law's ends[,]" but their "role is limited" in their ability to prevent and deter infringement. See id. at 1937. Despite a strong incentive to speak, Cochlear remains silent as to what remedial action it has taken for infringing virtually the entire life of the patent-in-suit. By all indications, Cochlear deliberately chose not to take remedial action or cease making or selling the infringing products, for, as Cochlear's then-president and CEO, Dr. Christopher Roberts, testified, three-fourths of Cochlear's cumulative implant sales through 2014 took place during the preceding ten-year period of infringement. (See Dkt. 467, January 21, 2014, P.M. Trial Tr. at 87 (Dr. Roberts stating in 2014 that "around three-quarters of all the people who have ever received one of our cochlear implants actually have received it in the last ten years[]")). In short, given the duration of the infringement (11 years, using the 2003 date) and Cochlear's failure to take any remedial action, the court finds that these factors strongly support enhanced damages. See, e.g., WBIP, LLC, 829 F.3d at 1340-41 ("But as the Supreme Court explained in Halo, timing does matter. [The defendant] cannot insulate itself from liability for enhanced damages by creating an (ultimately unsuccessful) invalidity defense for trial after engaging in the culpable conduct of copying, or 'plundering,' [the plaintiff's] patented technology prior to litigation.") (emphasis in original); Novozymes A/S v. Genencor Int'l, Inc., 474 F.Supp.2d 592, 611 (D. Del. 2007) ("That Defendants failed to take remedial action and continued to infringe until after the liability trial also supports an enhanced award."); Arctic Cat, 198 F.Supp.3d at 1353 (trebling damages where "[t]estimony [] established that [defendant] had been selling potentially infringing products across their entire product line for at least a half a decade"); Wright v. E-Systems, LLC, 2016 WL 7802996, *4-5 (N.D. Tex. 2016) (enhancement where "[defendants] engage[d] in misconduct for a significant period of time and took no remedial action that the Court can discern from the record"); Omega Patents, 2017 U.S. Dist. LEXIS 55846, *25 (awarding treble damages when defendant was aware of the patents since at least 2010 and "[r]ather than take a license, and choosing not design around Omega's patents, [defendant] elected to sell infringing products and continues to do so to this day[]").

The eighth factor is the infringer's "motivation for harm." Read, 970 F.2d at 927. Cochlear asserts that "[t]he best that can be inferred from Plaintiffs' evidence is that Cochlear wanted to

compete with Advanced Bionics' implant having back telemetry." (Dkt. 613, Enhanced Damages Opp. at 17). Cochlear's assertion is unpersuasive.

"[W]here, as here, the infringer engages in infringing conduct to gain an edge over the patentee in a competitive market, this factor favors an award of enhanced damages." Funai Electric Co., Ltd. v. Daewoo Electronics Corp., 593 F.Supp.2d 1088, 1116-17 (N.D. Cal. 2009), aff'd, 616 F.3d 1357 (Fed. Cir. 2010). Here, it is undisputed that AB and Cochlear are direct competitors in a relatively small market for hearing implants; infringement by a direct competitor in such a market militates in favor of enhanced damages. See TruePosition Inc. v. Andrew Corp., 611 F.Supp.2d 400, 412 (D. Del. 2009), aff'd, 389 Fed.Appx. 1000 (Fed. Cir. 2010).

The record reflects that when AB introduced the first implant with back telemetry in 1997, its sales increased 90%, (see Dkt. 463, January 14, 2014, P.M. Trial Tr. at 104-05 (Mr. Santogrossi's testimony that in 1997, AB's sales growth over the prior year was 90%)), and it took a significant 30% of Cochlear's market share. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 70-71). After Cochlear introduced its Nucleus 24 with the infringing technology, AB's sales fell from 90% in 1997 to 35.5% in 1998. (See Dkt. 463, January 14, 2014, P.M. Trial Tr. at 104-05 (Mr. Santogrossi's testimony that sales growth was 90% in 1997 and 35.5% in 1998)). The dramatic drop in sales was more than simple competition, especially when one considers that Cochlear lost a significant percentage of its market share to AB after it introduced the first implant with back telemetry in 1997, only to be followed a year later with Cochlear's own infringing product. (See Dkt. 465, January 16, 2014, P.M. Trial Tr. at 70-71 (Ms. Elsten's testimony confirming that Cochlear owned "just about" 100% of the market during this period); Dkt. 496, January 17, 2014, A.M. Trial Tr. at 20 (Mr. Patrick's testimony that as early as 1991, there were concerns that AB's predecessor, Mini Med, could challenge Cochlear "competitively for the first time, and [that Cochlear's] research and [its] market leadership [were] at stake."); id. at 50 (Mr. Patrick's testimony admitting that he thought "the Clarion had the potential to perform better" than Cochlear's product, the Nucleus 22, "given its high rate capacity")). And, as noted earlier, there was substantial evidence that Cochlear copied plaintiff's back telemetry technology. Also, the jury rejected Cochlear's claim that it was implementing non-infringing technology – the McDermott

design, which, in any event, was considered to be less desirable than the back telemetry technology in the '616 patent. Cochlear chose not to implement the non-infringing McDermott design because it was less effective than the '616 patent. In short, the evidence in the record indicates that Cochlear was motivated to leverage a competitive advantage against plaintiff using plaintiff's own design. In other words, "the evidence supports the conclusion that [Cochlear] preferred taking the risk of infringement over designing a non-infringing device, and that [Cochlear] did so to divert business from [plaintiff.]" Polara I, 237 F.Supp.2d at 994. This factor also weighs in favor of enhanced damages.

The ninth factor, the infringer's attempt to conceal misconduct, Read, 970 F.2d at 927, does not support enhancement. The only evidence that plaintiff points to is defendant's refusal to produce discovery regarding its latest product, the Nucleus 5, which required plaintiff to file a motion to compel. (See Dkt. 602, Enhanced Damages Motion at 24). There is nothing to indicate that this was anything more than a routine discovery dispute.

C. Conclusion.

In summary, factors one, two, three, four, and eight weigh in favor of enhanced damages; factors six and seven weigh strongly in favor of enhanced damages; factor five weighs slightly in favor of enhancement; and factor nine weighs against enhanced damages. Although the court "may increase the damages up to three times the amount found or assessed," 35 U.S.C. § 284, the court, having considered the jury's verdict, the Read factors and the high level of culpability of Cochlear's conduct, finds, in the exercise of its discretion, that doubling the damages is sufficiently punitive for Cochlear's egregious conduct in this case. In particular, the evidence that: (1) Cochlear infringed the patent for at least 11 years after receiving direct notice of infringement – although there was evidence that Cochlear had been infringing the patent throughout the patent's life without making any remedial efforts; (2) Cochlear never had a good-faith, non-infringement defense, at least as to claim 10; (3) a less desirable, non-infringing alternative was available but Cochlear, despite its massive resources, chose not to use it or develop its own non-infringing alternative; and (4) Cochlear had the motive to obtain a competitive advantage using plaintiff's technology, support the enhancement of damages in this case.

"While the Read factors remain helpful to the Court's execution of its discretion [under Halo,] an analysis focused on egregious infringement behavior is the touchstone for determining an award of enhanced damages rather than a more rigid, mechanical assessment." Imperium IP Holdings (Cayman), Ltd. v. Samsung Electronics Co., Ltd., 203 F.Supp.3d 755, 763 (E.D. Tex. 2016). Here, "the egregiousness of the defendant's conduct based on all the facts and circumstances[]" overwhelmingly supports an enhancement of damages. See Read, 970 F.2d at 826-27; see, e.g., Stryker Corp. v. Zimmer, Inc., 2017 WL 4286412, *7 (W.D. Mich. 2017)[35] (trebling damages where, among other things, defendant's infringing conduct spanned more than a decade; there was no evidence of remedial action; and the defendant acted with motive to harm its only market competitor); Arctic Cat, 198 F.Supp.3d at 1353 (trebling damages where "[t]estimony [] established that [defendant] had been selling potentially infringing products across their entire product line for at least a half a decade"); Wright, 2016 WL 7802996, at *4-5 (enhancement where "[defendants] engage[d] in misconduct for a significant period of time and took no remedial action that the Court can discern from the record"); Omega Patents, 2017 U.S. Dist. LEXIS 55846, *25 (awarding treble damages when defendant was aware of the patents since at least 2010 and "[r]ather than take a license, and choosing not design around Omega's patents, [defendant] elected to sell infringing products and continues to do so to this day"); PPC Broadband, 2016 WL 6537977, at *7 (trebling damages because defendant "has substantial resources," noting that "[a]t trial, [defendant] reported having annual revenues of approximately two billion dollars and, therefore, can afford to pay the enhanced damages up to the statutory amount[]"). Cochlear's conduct was more flagrant than most and Cochlear is the type of

[35] In Stryker, the district court found that the defendant had engaged in "egregious infringement behavior" and trebled the $77 million lost profits and supplemental damages award, resulting in enhanced damages of nearly $228 million. See 2017 WL 4286412, at *6-*7. As here, the Stryker court found that the defendant had deliberately copied the plaintiff's invention; that it did not have a good faith belief it was not infringing; that given the defendant's financial size, damages required enhancement in order to have a deterrent effect; that the defendant's infringing conduct spanned more than a decade; that there was no evidence of remedial action; and that the defendant acted with motive to harm its only market competitor. See id. at *4-*6.

egregious infringer Congress had in mind during its discussion associated with the passage of the Patent Reform Act of 2011 (Leahy-Smith America Invents Act of 2011):

> It is not uncommon that a manufacturer will find itself in a situation where it feels great pressure to copy a competitor's patented invention. In a typical scenario, the sales staff report that they are losing sales because the competitor's product has a particular feature. The manufacturer's engineers discover that the feature is protected by a valid patent, and they find that they are unable to produce the same feature without infringing the patent. The company then has two choices. It can choose to continue to try to reproduce or substitute for the patented feature, and as it does so, continue to lose market share, and in some cases, lose convoyed sales of associated products or services. Or it can choose to infringe the competitor's patent.
>
> Treble damages are authorized in order to deter manufacturers from choosing the second option. Absent the threat of treble damages, many manufacturers would find that their most financially reasonable option is simply to infringe patents. Lost-profits damages are often hard to prove or unavailable. The patent owner is always entitled to a reasonable royalty, but under that standard, the infringer often can keep even some of the profits produced by his infringing behavior. Without treble damages, many companies would find it economically rational to infringe valid patents. Section 284's authorization of treble damages is designed to persuade these companies that their best economic option is to respect valid patents.

157 CONG. REC. 3412, 3427 (2011) (statement of Sen. Kyl).

"The evidence at trial revealed a degree of dismissiveness of [plaintiff's] patent rights and disrespect of the value the law places on protection of intellectual property that was exceptional. Enhanced damages are merited to punish this conduct and deter similar behavior, and to promote appropriate regard for patent rights." Applera Corp., 372 F.Supp.2d at 247. As discussed above,

Cochlear's internal communications demonstrated its awareness as early as 1991 that plaintiff was developing technology with the potential to render its Nucleus device "obsolete," and that Cochlear viewed this competition as a serious threat. Cochlear was already under great pressure to fulfill on its promises – approximately 13 years' worth – to deliver an innovative new product.[36] (See Dkt. 496, January 17, 2014, A.M. Trial Tr. at 47 (admission by Mr. Patrick that by 1998, Cochlear had not launched a new product since 1984 and had been telling the FDA since 1994 it would bring a product with back telemetry to market)). The record indicates that after the Clarion took nearly a third of Cochlear's market, Cochlear's engineers still could not make viable use of McDermott's patent to create a competitive product. By that point, Cochlear's options were to approach AMF, and hope for a reasonable licensing deal, or infringe under the pretense of the '844 patent. The record reveals that Cochlear chose the second option.

While the jury's $130 million verdict is significant and may sound large in the abstract, it may not be enough without enhancement to deter infringing conduct given the context of this case. See Halo, 136 S.Ct. at 1932 (enhanced damages are "designed as a punitive or vindictive sanction for egregious infringement behavior") (internal quotation marks omitted). The evidence presented during the trial indicates that Cochlear's infringing products generated $1.8 billion in revenues with gross profit margins between 75% and 92%. (See Dkt. 495, January 16, 2014, A.M. Trial Tr. at 140 (Ms. Elsten's testimony that the infringing products "generated gross margins of somewhere between 75 and 92 percent of sales"); Dkt. 465, January 16, 2014, P.M. Trial Tr. at 23 (Ms. Elsten's testimony that based on defendant's financial records, the infringing products generated $1,809,247,456 in sales)). Indeed, Cochlear has publicly stated that the jury's verdict in this case "will not disrupt Cochlear's business or customers in the United States." (Dkt. 605-27, Lyons Decl., Exh. 46, 2016 Cochlear Annual Report at ECF 29156).

[36] Perhaps Cochlear was also under great pressure to meet corporate and shareholder profit expectations, as its board favored a "dividend payout ratio of 70% of net profit." (Dkt. 605-27, Lyons Decl., Exh. 46, 2016 Cochlear Annual Report at ECF 29154).

IV. SUPPLEMENTAL DAMAGES AND PLAINTIFF'S MOTION TO STRIKE.

The Court's Order of April 13, 2017, (Dkt. 593), directed the parties to meet and confer "to discuss and, if possible, resolve the calculation of damages assuming the jury had been given defendants' revenue and sales data" from January 1, 2014, to March 11, 2014, ("relevant time period"). (Id. at ¶¶ 2-3) (emphasis added). The parties were allowed to file concurrent supplemental briefs only if they were unable to come to an agreement regarding the calculation of damages. (See id. at ¶ 4).

Although there can be a "fundamental difference . . . between a reasonable royalty for pre-verdict infringement and damages for post-verdict infringement," Amado v. Microsoft Corp., 517 F.3d 1353, 1361 (Fed. Cir. 2008), it appears that plaintiff was willing to stipulate to the royalty rate – 7.5% – found by the jury in the interest of not "wasting the Court's time and wasting the parties' time and . . . belaboring these disputes." (Dkt. 616-1, Motion to Strike, Exh. A, May 19, 2017, Meet-and-Confer Tr. at 24). Thus, the parties agreed that the additional amount to be awarded for the two-month time period following the jury's verdict is $2,812,214. (See Dkt. 616, Motion to Strike at 2; Dkt. 609, Plaintiff's Notice Re: Calculation of Damages at 1; Dkt. 610, Defendant's Supplemental Brief Re: Damages from January 1, 2014 to March 11, 2014 ("Defendant's Supp. Br.") at 3 ("Using the new sales data in the same manner as at trial, the parties reached the agreed calculation of $2,812,214.")).

Although the Court's Order of April 13, 2017, simply requested a calculation of the amount of damages for the two months following the jury's verdict "assuming the jury had been given defendants' revenue and sales data," (Dkt. 593, Court's Order of April 13, 2017, at 1) (emphasis added), defendant filed a Supplemental Brief Regarding Damages from January 1, 2014 to March 11, 2014, (Dkt. 610, Defendant's Supp. Br.), arguing that Cochlear's supplemental briefing was warranted because "[t]he parties could not . . . reach an agreement that [the $2,812,214] represented damages for the relevant time period." (Id. at 2) (internal quotation marks omitted). According to Cochlear's attorney, Bruce Chapman, Cochlear "has a different interpretation of the Court's Order [of April 13, 2017]" and that "is why Cochlear asked for clarification at the status

conference[.]"[37] (Id. at 4). Given that the Court's Order of April 13, 2017, was not issued until after the status conference, attorney Chapman's assertions relating to a "different interpretation" or "clarification" of the court's order is disingenuous.[38] Moreover, even assuming the court had issued its order before the status conference, nothing in the court's response supports defendant's assertion that the court gave Cochlear the authority to file a supplemental brief raising issues or arguments beyond the calculation of the amount of damages "assuming the jury had been given [Cochlear's] revenue and sales data." (Dkt. 593, Court's Order of April 13, 2017, at 1). In short, the Court's Order of April 13, 2017, was clear and the filing of the supplemental brief was not authorized.

Even assuming the court had allowed Cochlear to file a supplemental brief that addressed issues beyond "assuming the jury had been given defendants' revenue and sales data for the relevant time period," (Dkt. 593, Court's Order of April 13, 2017, at 1), Cochlear has waived the arguments it raised in its supplemental brief. Defendant argues that the royalty base should be different for the '616 patent, (Dkt. 610, Defendant's Supp. Br. at 4), and that its expert did not agree to the royalty based calculated by plaintiff's expert. (See id. at 3 & n. 1). However, Cochlear did not raise any of these specific arguments during the trial or in any of its post-trial, pre-appeal motions. (See, generally, Dkt. 426, Defendant's Pre-Verdict Rule 50(a) JMOL; Dkt. 511-2, Joint Post-Verdict JMOL).

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[37] Cochlear quotes from the transcript of the status conference where the court responded to defense counsel Chapman's question:

> MR. CHAPMAN: I just have a question about the procedure you just mentioned, Your Honor. For the supplemental damages, what you're asking for, if I understand, is a calculation of what that amount would be not – I think Cochlear can agree to that; agreeing that it's a correct amount of damages would be more difficult.
> THE COURT: Okay. Well, I mean, that's what you need to discuss in the briefing.

(Dkt. 610, Defendant's Supp. Br. at 4-5).

[38] Of course, if attorney Chapman believed there was any confusion or ambiguity as to what the Court's Order of April 13, 2017 required, then he should have filed a request for clarification.

Moreover, Cochlear's claims as to why it did not waive these arguments are utterly meritless. First, Cochlear never explains or points out where in Cochlear's post-verdict papers he raised the subject arguments. (See, generally, Dkt. 610, Defendant's Supp. Br. at 3-5). Cochlear does state that is supplemental "[b]riefing [i]s [p]roper," (id. at 4) (bold omitted), based on the court's response – which was not a verbal court order – to a question he asked at a status conference. But as noted above, this assertion is frivolous because the court issued its order after the status conference. Second, Cochlear cites a statement made by attorney Chapman during a January 9, 2014, pretrial conference as proof that it "explicitly refused during trial to stipulate that the total sales were a correct base for calculation of damages." (See Dkt. 622, Motion to Strike Opp. at 5). Setting aside the fact that Cochlear never challenged the damages base during the jury trial, attorney Chapman's statements during a pretrial conference held several days before trial are not evidence and are plainly insufficient to establish that it somehow preserved this argument.

Third, as to defendant's argument that the royalty base is an inadequate measure of damages for infringement of the '616 patent alone, (Dkt. 610, Defendant's Supp. Br. at 4), the court rejected this argument above for several reasons, not the least of which being that defendant's argument constituted a new damages theory that should have been raised earlier. See supra at § II.C. Fourth, defendant's assertion that its expert did not agree that the royalty base calculated by plaintiff's expert was the "correct amount of damages," (Dkt. 610, Defendant's Supp. Br. at 4 & 5), is not supported by the evidence. As noted above, Cochlear's expert testified that Ms. Elsten's royalty was "the only royalty base that [he] could come up with."[39] See supra at

[39] Cochlear's assertion that "a proper calculation of damages cannot include sales revenue for sales outside the U.S.," (Dkt. 610, Defendant's Supp. Br. at 4), is rejected for the same reasons set forth above. See supra at §§ II.B. & II.C. Further, Cochlear stipulated to facts stating that Cochlear had imported all of the accused products into the United States. (See Dkt. 399, Final Pretrial Order, Appx. A at 30 & 33 (stipulating, e.g., to the facts that, "Cochlear Americas has imported Nucleus 24 (CI24 series), Nucleus Freedom (CI24RE series and CI422) and Nucleus 5 (CI500 series) cochlear implants into the United States[,]" "Cochlear Americas has imported Sprint (SP5), Freedom (SP12) and Nucleus 5 (SP15) sound processors into the United States[,]" and "Cochlear Americas has distributed, in the United States, software for use with the accused implants and sound processors (WinDPS and Custom Sound)").

§ II.D.2. In short, Cochlear's kitchen-sink approach throughout this case has been to raise arguments – many of which are unsupported or mischaracterize the record – that could have been raised earlier, with no effort to explain why they were not and why it is appropriate to raise them now. Raising untimely and unwarranted arguments only delays the case, increases the parties' costs, and depletes the court's limited resources. Contrary to what Cochlear may believe with respect to the court's availability to address any and all arguments it finds in its kitchen-sink on any given day, "[t]he court is not obligated to give parties and their counsel several opportunities to raise facts and legal arguments that could have been asserted earlier. The papers filed with this court are not first drafts, subject to revision and resubmission at the litigant's pleasure. In short, the court will disregard any arguments and evidence in [Cochlear's] supplemental papers . . . that are merely a rehash or attempt to re-frame arguments that were either presented or could or should have been presented in [Cochlear's] earlier submissions." American Rena Int'l Corp. v. Sis-Joyce Int'l Co., Ltd., 2015 WL 12732433, *34 (C.D. Cal. 2015).

CONCLUSION

Based on the foregoing, IT IS ORDERED THAT:

1. Defendant's Renewed Motion for Judgment as a Matter of Law of No Infringement of Claim 1 of the '616 Patent **(Document No. 580)** is **denied**.

2. Plaintiff's Motion for Judgment Entering the Jury's Damages Award **(Document No. 579)** is **granted**. The jury's damages award is hereby reinstated. Cochlear shall pay supplemental damages to plaintiff in the amount of $2,812,214, for January 1, 2014, to March 11, 2014.

3. Plaintiff's Motion for Enhanced Damages **(Document No. 602)** is **granted**. The jury's damages award, including the supplemental damages, shall be doubled.

4. Plaintiff's Motion to Strike Defendant's Supplemental Brief Regarding Damages from January 1, 2014 to March 11, 2014 **(Document No. 616)** is **granted**. Page 2, line 18 (beginning with the sentence, "The parties could not. . . .") through page 5, line 7 of defendant's Supplemental Brief (Dkt. No. 610) is hereby **stricken**.

5. No later than three business days after the filing date of this Order, plaintiff shall lodge a proposed form of judgment.

Dated this 4th day of November, 2018.

/s/
Fernando M. Olguin
United States District Judge