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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	CV 07-8108-GHK (SHx)	Date	June 18, 2012
Title	*Alfred E. Mann Foundation for Scientific Research v. Cochlear Corp., et al.*		

Presiding: The Honorable	**GEORGE H. KING, U. S. DISTRICT JUDGE**	
Beatrice Herrera	N/A	N/A
Deputy Clerk	Court Reporter / Recorder	Tape No.

Attorneys Present for Plaintiffs:	Attorneys Present for Defendants:
None	None

Proceedings: **(In Chambers) Order re:** Parties' Objections to the Special Master's Report on Claim Construction; Motion to Set Case Schedule Through Trial

Plaintiff Alfred E. Mann Foundation for Scientific Research ("AMF") brings this action asserting two patents, U.S. Patent No. 5,609,616, entitled "Physician's Testing System and Method for Testing Implantable Cochlear Stimulator" ("'616 Patent") and U.S. Patent No. 5,938,691, entitled "Multichannel Implantable Cochlear Stimulator" ("'691 Patent"). AMF alleges infringement by Defendants Cochlear Corporation and Cochlear, Ltd. (collectively, "Cochlear"). The '691 Patent is generally directed to an implantable, multichannel cochlear implant, and the '616 Patent is generally directed to a method and system for testing such implant. The claimed invention includes an implantable cochlear stimulator ("ICS"), a wearable processor ("WP"), and a physician's tester for testing the ICS. Given the technical nature of the patents in suit, and with the consent of the Parties, we appointed Gale Peterson as Special Master to oversee the claim construction process. The Special Master conducted a *Markman* hearing on May 3, 2011, and issued a Report and Recommendation on Claim Construction ("R&R"). AMF filed one objection to the R&R, (Dkt. No. 204), and Cochlear filed numerous objections, (Dkt. No. 203). We have thoroughly reviewed and considered all of the relevant materials, including the Parties' Joint Brief on Claim Construction (Dkt. No. 59), the Special Master's R&R (Dkt. No. 200), the Parties' objections and responses thereto (Dkt. Nos. 203, 204, 208, 209), and the transcript of the *Markman* hearing, (Grunfeld Decl., Dkt. No. 209, Exh. 2). Accordingly, we rule as follows.

I. Standard of Review

Pursuant to Federal Rule of Civil Procedure 53(f)(3)-(4), we review *de novo* those portions of the Special Master's R&R to which objections have been filed. *See also Hochstein v. Microsoft Corp.*, 730 F. Supp. 2d 714, 717 (E.D. Mich. 2010), *aff'd* 430 F. App'x 898 (Fed. Cir. 2011) ("The Court reviews de novo factual findings and legal conclusions of the Special Master to which a specific objection has been made. *See* Fed. R. Civ. P. 53(f)."). We "may accept, reject, or modify, in whole or in part the findings or recommendations of a special master." *3D Systems, Inc. v. Envisiontec, Inc.*, 694 F. Supp. 2d 674, 676 (E.D. Mich. 2010) (quoting 28 U.S.C. § 636(b)(1)(B)) (quotation mark omitted). The

Special Master provided a helpful and detailed discussion of the numerous claim constructions that were agreed upon by the Parties, claim construction principles, and the '616 and '691 Patents. (R&R 2-16). Neither Party objected to any portion of this discussion. We adopt this discussion in full and do not restate it here for brevity's sake.

II. AMF's Objection

AMF objects only to the Special Master's recommended construction of "the results of the measurements made within the implanted stimulator," which is part of the Group 14 claim terms from claim 10 of the '616 Patent. The Special Master construed this claim as "the voltage measurement across the pair of tissue-stimulating electrodes." (R&R 165). AMF argues that because this language is part of a "whereby" clause, it merely states the intended result of the "displaying" limitation, rather than create an additional limitation.

"[A] 'whereby' clause generally states the result of the patented process. However, when the 'whereby' clause states a condition that is material to patentability, it cannot be ignored in order to change the substance of the invention." *Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329 (Fed. Cir. 2005); *see also Minton v. Nat'l Ass'n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1381 (Fed. Cir. 2003) ("[A] whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited."). It is undisputed that the disputed language is part of a whereby clause, as it is part of the following claim term: "displaying the processed status-indicating signals, whereby the status of the implanted stimulator, including the results of the measurements made within the implanted stimulator, may be made known." Therefore, if AMF is correct, then this claim term need not be construed at all. *See Lonestar Inventions LP v. Nintendo of Am., Inc.*, No. 6:07CV261, 2009 WL 1011734, at *11 (E.D. Tex. Apr. 14, 2009) ("No construction is necessary for 'enhanced capacitor structure' because this term in the 'whereby' clause states only the result of the limitations found in claim 1.").

We agree with AMF that the disputed language requires no construction, as the whereby clause – making known "the status of the implanted stimulator, including the results of the measurements made within the implanted stimulator" – merely provides a more illustrative expression of the "displaying the status-indicating signals" limitation. It provides no additional restrictions to the claim's already-existing requirement that the signals obtained by the testing of the implanted stimulator must be displayed for view by the physician.

Cochlear argues that the whereby clause "was critical to the patentability of claim 10" and thus cannot be ignored. (Dkt. No. 208, at 2). Thus, the claim must be construed, and it must be construed to require that the display be in voltage form. Cochlear notes that the '616 patent did not have the whereby clause when it was first submitted to the Patent Office, and the Patent Office rejected this claim as unpatentable in light of prior art. Following this rejection, AMF amended the claim by, among other things, adding the "displaying" claim term. In doing so, AMF stated that it was amending the claim term to distinguish the claimed invention over the prior art, an implantable pacemaker. (Patent

Prosecution History ("PPH"), Dkt. No. 60-20, at B–277-79). The Patent Examiner, in response, stated that the amended claim was "allowable over the prior art of record since the prior art does not show or suggest the measuring of the electrode voltage for external display." (*Id.* at B-285). As a result of this exchange, Cochlear contends that "the 'whereby clause' could not have been more material to patentability. It was, in AMF's own words, added to claim 10 as part of the language necessary 'to clearly limit the claimed invention' to distinguish from prior art pacemakers. It was, even more significantly, the sole reason why the Patent Office allowed the claim." (Dkt. No. 208, at 5).

We disagree. AMF did not emphasize or even refer to the whereby clause in making clear to the Patent Office that it was amending the claim to distinguish its invention from a pacemaker. Instead, it noted the *displaying capability* of its invention. AMF stated that its invention was novel because rather than downloading histogram data that has accumulated in the invention over a period of time (the technology employed in an implantable pacemaker), its invention deals with a physician's tester that measures signals in real time, which are "sent back to the physician's tester as part of a feedback signal" where they are "displayed or otherwise processed." (PPH, Dkt. No. 60-20, at B–279). Likewise, the Patent Examiner did not emphasize the measuring and displaying of the electrode voltage *in voltage form*. Rather, the Patent Examiner focused on the fact that this invention, as opposed to a pacemaker, allowed for a *display* of the data measurements that are taken in real time. Accordingly, while it is clear that the "displaying" claim term was material to patentability, the "whereby" clause was not.

In light of the foregoing, we conclude that the whereby clause is only a further elaboration of the material limitation contained in this clause, *i.e.*, a result of the patented process (the "displaying" function). As such, the disputed language is not itself a separate limitation, and we therefore modify the Special Master's R&R inasmuch as we conclude that this claim term need not be construed.

III. Cochlear's Objections

Cochlear objects to the Special Master's recommended constructions of twenty-eight claim terms. Cochlear groups these objections into three categories: (1) "noun means plus function claim elements"; (2) means plus function claim elements that contain "responsive to" language; and (3) "objections to certain additional recommended constructions." We largely use the same categories for organizational purposes.

A. Means Plus Function Objections

Cochlear states that there are a number of claims that included a noun before the phrase "means for" and contends that the Special Master improperly construed all of these to fall outside § 112, ¶ 6. For the reasons discussed below, we **OVERRULE** Cochlear's objections and **ADOPT** the Special Master's recommended constructions of the claim terms discussed below.

1. Legal Standard

The Patent Act provides:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6. Claim terms that fall within the ambit of this provision are called "means-plus-function" claim terms. If a term is a means-plus-function claim term, the construction of that term involves two steps. *JVW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1330 (Fed. Cir. 2005). First, we must "identify the particular claimed function." *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003). Second, we must identify the "corresponding structure in the written description that performs that function." *JVW Enters.*, 424 F.3d at 1330.

If a claim term includes the word "means," it is presumed to be a means-plus-function term to which § 112, ¶ 6 applies. This presumption can be rebutted if the claim term "recites sufficiently definite structure to avoid the ambit of § 112, ¶ 6." *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 704 (Fed. Cir. 1998); *see also Sage Prods. v. Devon Indus., Inc.*, 126 F.3d 1420, 1427-28, (Fed. Cir.1997) (stating that "where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format" even if the claim uses the term "means").

As an initial matter, we disagree with Cochlear's contention that it is improper to refer to any sources outside of the claim term (for example, dictionaries or the patent's specification) in determining whether a claim element contains sufficient structure to remove it from § 112, ¶ 6. (Dkt. No. 203, at 6). First, the case Cochlear cites in support of its argument, *TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256 (Fed. Cir. 2008), itself cited, with approval, a case in which the court *used a dictionary* to determine that the phrase at issue, "baffle means," was structural rather than functional. *See Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1365 (Fed. Cir. 2000) ("Although using the word 'means' to describe the second baffle, the '395 claims also recite sufficient structure to rebut the presumption that the term is in means-plus-function form. . . . The dictionary definition of the word 'baffle' is 'a device (as a plate, wall or screen) to deflect, check, or regulate flow.' Webster's Ninth New Collegiate Dictionary 124 (1990). Because the term 'baffle' itself imparts structure, meaning a surface which deflects air, its use in the claims rebuts the presumption that § 112, ¶ 6 applies.") (cited in *TriMed*, 514 F.3d at 1260). Additionally, for years before and after *TriMed*, the Federal Circuit has referred to dictionaries and the specification in making this structural determination. *See, e.g., Mass. Inst. of Tech. v. Abacus*, 462 F.3d 1344, 1355 (Fed. Cir. 2006); *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) ("Technical dictionaries, which are evidence of the understandings of persons of skill in the technical arts, plainly indicate that the term 'circuit' connotes structure."); *Optimal Recreation Solutions LLP v. Leading Edge Techs., Inc.*, 6 F. App'x 873 (Fed. Cir. 2001) ("Contrary to the position of the

dissent, resort to the specification is appropriate in making this determination."); *Inventio AG v. ThyssenKrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1356-57 (Fed. Cir. 2011). Therefore, it is clear that reference to sources beyond the language of the disputed claim term is appropriate in determining whether the term is governed by § 112, ¶ 6.

2. "Receiver Means" Language: '616 Patent Claim 12

Cochlear objects to the Special Master's recommended construction of "receiver means for receiving data-containing signals," in claim 12 of the '616 Patent. The Special Master recommended that the claim term not be construed as a means-plus-function limitation. Cochlear makes two arguments for why the Special Master's recommendation is in error. First, Cochlear argues that such a construction is "at odds with the Special Master's construction of the almost identical element 'receiving means for receiving,' which the Special Master believes should be construed as subject to § 112, ¶ 6. The only difference is the use of the noun form 'receiver' instead of 'receiving.'" (Dkt. No. 203, at 12). Second, Cochlear argues "'receiver' is functional and . . . the term does not identify sufficient structure such that the claim element can be removed from the scope of 35 U.S.C. § 112, ¶ 6." (*Id.*).

Having reviewed this claim term *de novo*, we agree with the Special Master's well-reasoned conclusion that it recites sufficiently definite structure and is not a means-plus-function claim term. The claim includes the terms "receiver means" and "transmitter means" and clearly states that the transmitter transmits data-containing signals, and the receiver receives those data-containing signals, which are then processed to generate stimulation signals. Thus, the claim language viewed as a whole provides sufficient structure to make clear that the disputed claim term refers to a receiver of radio waves, as commonly understood by persons of ordinary skill in the art. This claim term is quite similar to a claim term discussed in *Globespanvirata, Inc. v. Tex. Instrument, Inc.*, No. Civ.03–2854(GEB), 2005 WL 984346 (D.N.J. Apr. 7, 2005). That case included a claim for a "multicarrier communication system comprising: a transmitter means and a receiver means communicatively linked together by a datalink, the signal carrying characteristics of which are randomly variable . . . ." *Id.* at *13. The district court agreed with the plaintiff that "transmitter means" and "receiver means" are not governed by § 112, ¶ 6 because of the use of the terms "transmitter" and "receiver," which were referenced throughout the claim and throughout the specification and figures. *Id.* So too in the '616 patent, whose figures and specification repeatedly refer to "receiver" and "transmitter" as structures rather than function, and even by name: "receiver 40," "telemetry receiver 36," "receiver 200," and so forth. At the *Markman* hearing, Cochlear's counsel similarly used the term "receiver" in a structural, rather than functional, manner when describing AMF's purported solution with respect to issues in the prior art's technology: "And the solution that AMF came up with was a telemetry receiver – I mean a receiver and a telemetry transfer in the implant both of which had their own coils . . . ." (*Markman* Hr'g Tr. 34:7-10).

Furthermore, we disagree with Cochlear's argument that it is at odds with construction of the term "receiving means for receiving." Unlike "receiver means for receiving," "receiving means for receiving" contains *no* structural language and is phrased in purely functional language. Therefore, this

claim term cannot be construed as exempt from § 112, ¶ 6. *See Verizon Cal. Inc. v. Ronald A. Katz Tech. Licensing, P.A.*, 326 F. Supp. 2d 1060, 1067-68 (C.D. Cal. 2003) ("[S]ection 112, ¶ 6 operates to restriction claim limitations drafted in purely functional language . . . ."). However, because Claim 12 does include structural language ("receiver"), the Special Master properly proceeded to examine the claim language, as well as the specification and technical dictionaries, to determine whether the claim includes sufficient structure to fall outside the bounds of § 112, ¶ 6. Construing "receiving means" as a means-plus-function term, but not "receiver means," is wholly consistent with courts' different treatment of these terms. Indeed, in many cases, parties generally seem to agree that "receiving means" is a means-plus-function clause. *See, e.g., ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1087 (Fed. Cir. 2003) ("In the present case, neither party disputes that the receiving means, decoding means, and interpreting means claim limitations of the patents are written in means-plus-function form, as defined in 35 U.S.C. § 112, ¶ 6."); *Elbex Video, Ltd. v. Axis Commc'ns, Inc.*, No. 05 CV 3345(CBA), 2008 WL 5779782, at *14 (E.D.N.Y. Aug. 19, 2008) ("Elbex and Axis agree that ['receiving means'] should be construed in accordance with 35 U.S.C. §112, ¶ 6 . . . ."). In contrast, "receiver means" has been construed as not being a means-plus-function term where the claim term as a whole recites sufficient structure. *See, e.g., Optimal Recreation Solutions LLP v. Leading Edge Techs., Inc.*, 6 F. App'x 873, 878 (Fed. Cir. 2001) (concluding that the term "global positioning receiver" was sufficiently structural and thus is not subject to § 112, ¶ 6); *Globespanvirata, Inc.*, 2005 WL 984346, at *13 (determining that "receiver means" and "transmitter means" were not subject to § 112, ¶ 6).

In light of the foregoing, we hereby **ADOPT** the Special Master's recommended construction of this claim term and conclude that it is not a means-plus-function term. We **OVERRULE** Cochlear's objection.

3. "Processor Means" Language: '616 Patent Claim 12

Cochlear objects to the Special Master's recommended construction of "processor means for processing" in claims 1 and 12 of the '616 Patent, and claims 6 and 14 of the '691 Patent. The Special Master recommended that this claim term not be construed as a means-plus-function limitation. Cochlear argues that "'[p]rocessor means for processing . . .' is simply not a sufficiently specific structure." (Dkt. No. 203, at 13). It also notes that various dictionaries define "processor" "to mean a vast array of undefined structures – including 'any device, unit, piece of equipment, system, or mechanism' that can perform the function." (*Id.*). It argues that "[t]hese structures do *not* connote a reasonably well understood structure." Cochlear cites a number of cases that held that "computer means" did not have a sufficiently definite structure to rebut the means-plus-function presumption. Cochlear asserts that "processor means" is broader and less definite than "computer means" and argues that "processor means" likewise cannot be construed as having sufficient structure to remove it from § 112, ¶ 6.

Having reviewed this claim term *de novo*, we agree with the Special Master's well-reasoned conclusion that it recites sufficiently definite structure and is not a means-plus-function claim term. As an initial matter, we agree with the Special Master's assertion that the structural component of the claim

need not be set forth in great detail for a claim term's structure to be deemed sufficient to fall outside the ambit of § 112, ¶ 6. Rather, the *claim* must recite "sufficient structure" for performing the "functions" claimed in their entirety. *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359-60 (Fed. Cir. 2004) ("In considering whether a claim term recites sufficient structure to avoid application of section 112 ¶ 6, we have not required the claim term to denote a specific structure. Instead, we have held that it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function."); *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003) ("Th[e means-plus-function] presumption can be rebutted where the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety."). Accordingly, that "processor" "covers a broad class of structures," *Lighting World*, 382 F.3d at 1360, and the structural language is not set forth in great detail do not preclude this claim term from falling outside of § 112, ¶ 6.

Courts have fairly consistently held that claim terms referring to a general purpose processor are not subject to § 112, ¶ 6. *See, e.g.*, *Personalized Media Commc'n, LLC v. Motorola, Inc.*, No. 2:08–CV–70–CE, 2011 WL 4591898, at *36 (E.D. Tex. Sept. 30, 2011) ("[A]ny general purpose processor could perform the recited functions. As such, the court concludes that these terms are not subject to § 112, ¶ 6."); *Data Gen. Corp. v. IBM Corp.*, 93 F. Supp. 2d 89, 97 (D. Mass. 2000) (concluding that a claim, which included the term "processor means," referred to a general processor, or a "central processing unit which provides memory commands and provides and receives data items" and thus § 112, ¶ 6 did not apply). It is only claim terms referring to a microprocessor, or a processor that requires special programming to perform its processing functions, that are means-plus-function terms, because such a processor requires a specific algorithm to perform its function and thus the "processor" term cannot by itself "perform the claimed function in its entirety." For example, in *Brown v. Baylor Health Care System*, 662 F. Supp. 2d 669 (S.D. Tex. 2009), the court construed "portable processing means" to fall within § 112, ¶ 6. The court stated:

> "Processing means" in the '713 Patent describes a special-purpose computer programmed to perform an extensive set of specialized functions, including processing barcodes on patient wristbands and determining, based on patient history files, whether particular medications, goods, services, or procedures identified by the barcodes are permitted to be delivered to the particular patient identified by the wristband, at a particular time. The general-purpose structure that "portable processing means" conveys to one of ordinary skill in the art could not accomplish these functions without special programming. The term does not overcome means-plus-function analysis.

Id. at 678. Addressing this same issue in another opinion, the court distinguished the case before it from others in which "processor means" had been held to connote sufficient structure because those other cases "did not require special programming to perform the claimed function." *Brown v. Baylor Health Care Sys.*, No. H-08-0372, 2009 WL 1342933, at *5 (S.D. Tex. May 11, 2009). The Federal Circuit affirmed the district court's construction, stating that "a general purpose processor without more would

not be enough to perform the claimed function. We agree with the district court that the claim does not recite sufficient structure to overcome the presumption that section 112 ¶ 6 applies." *Brown v. Baylor Health Care Sys.*, 381 F. App'x 981, 984 (Fed. Cir. 2009); *see also Roche Diagnostics Corp. v. Apex Biotechnology Corp.*, 455 F. Supp. 2d 840, 863 (S.D. Ind. 2005) (holding that a "processor means" claim term was a means-plus-function term because "it is clear that the 'processor' of claim 1 is not a generic one, but one that runs a particular algorithm to control a sense amplifier and to calculate the concentration of an analyte").

In this case, neither Party contends that the processor referred to in the disputed claim term is a microprocessor that requires special programming to perform its general "processing" functions. Indeed, at the *Markman* hearing, Cochlear's counsel stated: "Now, one thing at this point I would like to make clear, and it probably is, we are not talking about a microprocessor in the AMF patents. . . . It's not a microprocessor." (*Markman* Hr'g Tr. 52:7-15; *see also id.* 53:10-11 (referring to the processor at issue as a "more general processor")). We agree with the Special Master that the disputed claim term "connotes some structure." (R&R at 70). It refers to a general processor as commonly understood by someone of ordinary skill in the art. In the context of the claims at issue, sufficient structure is recited to perform entirely the claimed functions. Accordingly, we hereby **ADOPT** the Special Master's recommended construction of this claim term and conclude that it is not a means-plus-function term. We **OVERRULE** Cochlear's objection.

4. "Processor" Language: '691 Patent Claim 9

Cochlear objects to the Special Master's recommended construction of "processor for processing such transmission to generate stimulation signals" in claim 9 of the '691 Patent.[1] The Special Master recommended that this claim term not be construed as a means-plus-function limitation. Cochlear objects to this recommendation for same reason that it objects to the Special Master's recommendations regarding the "processor means for processing" claim term – because "processor" connotes insufficient structure. We reject this argument as to "processor for processing" for the reasons articulated in our discussion of the "processor means for processing" claim term.[2] Accordingly, we hereby **ADOPT** the Special Master's recommended construction of this claim term and conclude that it is not a means-plus-function term. We **OVERRULE** Cochlear's objection.

[1] Technically, this term is not a "noun + means for" claim term. However, we include it in this first category of Cochlear's objections because it is related to Cochlear's arguments regarding the "processor means for processing" claim term.

[2] Moreover, since this claim does not include the term "means," there is a presumption that § 112, ¶ 6 does *not* apply. *See Personalized Media*, 161 F.3d at 704-05 ("[T]he failure to use the word 'means' creates a presumption that § 112, ¶ 6 does not apply.").

B. "Responsive to" Objections

There are a number of claim terms that the parties stipulate are means-plus-function limitations that contain "responsive to" clauses within the disputed terms. Cochlear contends that the Special Master improperly "ignored" the "responsive to" clauses when construing the function of those claim elements. (Dkt. No. 203, at 8).

1. Legal Standard

Construction of a means-plus-function limitation involves two steps. *JVW Enters.*, 424 F.3d at 1330. First, the Court must "identify the particular claimed function." *Med. Instrumentation*, 344 F.3d at 1210. In doing so, we "may not import [from the embodiment] functional limitations that are not recited in the claim." *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001).

Second, the Court must identify the "corresponding structure in the written description that performs that function." *JVW Enters.*, 424 F.3d at 1330. "[S]tructure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997) (internal quotation marks omitted). In identifying the corresponding structure, it is improper to include "structural limitations from the written description that are unnecessary to perform the claimed function." *Wenger Mfg.*, 239 F.3d at 1233; *see also Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1352 (Fed. Cir. 2003) ("Features that do not perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations."). Additionally, structure is not necessary to perform the function merely because it is a prerequisite to the function. Indeed, "[i]t is well established that it is not necessary to claim in a patent every device required to enable the invention to be used. An electrical outlet enables a toaster to work, but the outlet is not for that reason considered part of the toaster. The corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended. . . ." *Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1371 (Fed. Cir. 2001) (citation and quotation marks omitted).

2. '691 Patent, Claims 7 and 14

Claims 7 and 14 of the '691 Patent refer to "means in the WP responsive to at least a portion of the status indicating signals for controlling the power level of transmissions to the ICS." The Special Master construed the function of this term as "controlling the power level of transmissions to the ICS," (R&R 143), and identified the corresponding structure as "a switching regulator of a gate array," (*id.* at 146). He noted that this structure was clearly "responsive to at least a portion of the status indicating signals." (*Id.* at 145). Cochlear argues that the Special Master's recommended construction of the claim term's function "ignored" the "responsive to" language and recommends that we insert the language "in response to at least a portion of the status indicating signals" into the construction of the

claim term's function. (Dkt. No. 203, at 8). Cochlear further argues that because the Special Master "ignored" the "responsive to" language, he also "misidentified the corresponding structure in the specification." (*Id.* at 9). Cochlear states that the claim term "requires a microprocessor, in addition to the switching regulator of the gate array identified by the Special Master." (*Id.*).

Importantly, the Special Master's approach to this claim term appears to be entirely consistent with the approach Cochlear proffered in the Parties' Joint Brief on Claim Construction. Therein, Cochlear stated that this claim term is part of a group that relates to the transmission of power to the ICS. (Joint Br. 41, Dkt. No. 59). It characterized the function of this clause as controlling power, and stated that the corresponding *structure* must take into account the "responsive to" clause: "Claims 7 and 14 of the '691 patent require structure in the WP responsive to at least a portion of the status indicating signals *for controlling the power level of transmissions to the ICS*. . . . Thus, the *structure that controls the power level* corresponds to microprocessor, custom gate array, telemetry receiver." (*See id.* at 42 (emphasis added)). As such, the Special Master correctly stated in his R&R, based on the Parties' Joint Brief: "The parties seem to agree that the recited function is 'controlling the power level of transmissions to the ICS.' *See Joint Markman Brief* at 40, 42." (R&R 142).

Additionally, Cochlear is simply incorrect that the Special Master "ignored" the "responsive to" language. Although he did not include this clause in the construction of the claimed function, he explicitly identified a corresponding structure that included the two requirements that he identified as being contained within the claim term: a location requirement ("in the WP") and a "responsive to" requirement ("responsive to at least a portion of the status indicating signals"). (*See* R&R 145 ("[It] is clear from the foregoing that the regulator and gate array are 'in the WP' and 'responsive to at least a portion of the status indicating signals.'")).

Having reviewed these claim terms *de novo*, we agree with the Special Master's well-reasoned recommended construction of the term's function and identification of the corresponding structure. We disagree with Cochlear that the "responsive to" language should be included in the construction of the function of this clause. The '691 Patent claims, *inter alia*, means for transmitting data to the ICS, means in the ICS for receiving that data, means for processing these data transmissions to generate stimulating signals, electrodes that receive those stimulating signals, means for monitoring those electrodes and generating status-indicating signals to report data on the ICS's status back to the WP, means for transmitting those status-indicating signals back to the WP so that the means at issue can take the status of the ICS into account when controlling the power level of the transmissions to the ICS. The function of the means at issue is therefore to control the power level of the transmissions to the ICS. Although the claim term contains two additional requirements – that the structure be in the WP and that it be responsive to status indicating signals – the function of the means is neither *to be in* the WP or *to be responsive* to status indicating signals; it is to control the power level of the transmissions to the ICS. The "responsive to" clause provides context about the factors that this means takes into account when performing its function, but it does not *define* its function. Nor is it inconsistent with general principles of claim construction to interpret claim terms *in context*, as the Special Master did in identifying corresponding structure based on the context of the defined function. The means at issue is not

dissimilar from this Court's role in deciding any issue, including claim construction. We take into account parties' briefing, and our orders are responsive to the arguments of the parties, but our function is to determine the construction of disputed claims.

Courts commonly construe claim terms such as this as having a function that does not include the "responsive to" clause, and use the "responsive to" clause as a way of identifying the corresponding structure. *See, e.g., Automotive Techs. Int'l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1278-79 (Fed. Cir. 2007) (noting that the district court construed the phrase, "means responsive to the motion of said mass upon acceleration of said housing in excess of a predetermined threshold value, for initiating an occupant protection apparatus," to have a stated function of "initiating an occupant protection apparatus" and identified a structure that was moved "relative to the housing in response to the acceleration of the housing caused by a side impact crash"); *Gen. Kinematics Corp. v. Carrier Vibrating Equip., Inc.*, No. 08-C-1264, 2009 WL 2244686, at *10 (N.D. Ill. July 27, 2009) ("'[M]otor speed control means responsive to said motor speed control signal, for altering the speed of at least one of said first and second motors until said detected phase angle signal and said predetermined phase angle signal are approximately the same value' is a means-plus-function limitation in which the function is 'altering the speed of at least one motor' . . . ."); *Sun Microsystems, Inc. v. Network Appliance, Inc.*, 710 F. Supp. 2d 925, 942 (N.D. Cal. 2008) (construing "'means, responsive to the receipt of a stream of data records from said associated data processor, for writing said received stream of data records in available memory space in one of said disk drives' as a means-plus-function limitation, having the function of 'writing said received stream of data records in available memory space in one of said disk drives'").

In light of the foregoing, we hereby **ADOPT** the Special Master's recommended construction of this claim term's function and conclude that its function is "controlling the power level of transmission to the ICS." We also **ADOPT** the Special Master's recommended identification of the corresponding structure and conclude that the corresponding structure is "a switching regulator of a gate array." Our task is to identify the "corresponding structure in the written description that performs that function." *JVW Enters.*, 424 F.3d at 1330. Notably, "[t]he corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended." *Asyst Techs.*, 268 F.3d at 1371. While Cochlear seeks to include the WP's microprocessor in the corresponding structure, to do so would be inappropriate. The microprocessor processes the status-indicating signals that are transmitted and received by the telemetry transmitter and utilizes these signals "to provide indications of the operating status of the ICS." ('691 Patent, col. 8 ll. 35-36). However, the microprocessor does not itself control the power level of the transmissions to the ICS – that function is performed by the "conventional switching regulator included in the gate array." (*Id.* col. 7 ll. 55-56). Accordingly, the microprocessor "merely enable[s] the pertinent structure" – here, the switching regulator of a gate array – "to operate as intended." *Asyst Techs.*, 268 F.3d at 1371. We **OVERRULE** Cochlear's objection.

3. '691 Patent, Claims 9 and 14

Claims 9 and 14 of the '691 Patent refer to "means responsive to data from the WP for selectively monitoring at least one of the electrodes or voltages in the ICS and for generating ICS-status-indicating signals [therefrom[3]]." Before the Special Master issued his R&R, the Parties reached an agreed construction on the corresponding structure of this term: a decoder and a signal multiplexer. However, they did not specify whether they agreed that the phrase should be construed under § 112, ¶ 6, what the stated function is, and whether the agreed construction represents the structure corresponding to this function. (R&R 100). Accordingly, the Special Master analyzed this claim term independently. He construed this term as a means-plus-function limitation, (*id.* at 102), and construed this term as having two functions: a "monitoring" function and a "generating" function. He construed the functions more specifically as (1) "selectively monitoring at least one of the electrodes or voltages in the processor," and (2) "generating ICS-status-indicating signals [therefrom]." (*Id.* at 103). He expressly noted that the structure corresponding to these functions must meet a "responsive" requirement in that it must be "responsive to data from the WP." (*Id.* at 104). After a thorough technical analysis of the specification, he identified the corresponding structure as "a command decoder, a telemetry function decoder, and a multiplexer." (*Id.* at 110).

Cochlear does not object to the structure identified by the Special Master. Instead, it objects to the Special Master's recommended construction of the functions of this claim term. Cochlear states: "[T]he Special Master's recommended construction of the monitoring and generating functions omits the requirement in the claim that the monitoring and generating be in response to data from the WP." (Dkt. No. 203, at 10). Accordingly, Cochlear suggests that we "correct" this construction "by inserting the language 'in response to data from the WP' into the Special Master's recommended construction of the function." (*Id.*).

We disagree with Cochlear that the Special Master in any way "omitted" the "responsive to" requirement – he clearly and expressly included that requirement in identifying the structures corresponding to the monitoring and generating functions. Moreover, we agree with the Special Master's construction of the functions of this claim term. As with the last claim term that we addressed, the "responsive to" clause merely provides context about the factors that this means takes into account when performing its functions. In monitoring the electrode(s) or voltage(s) in the ICS and in generating ICS-status-indicating signals, the means must be responsive to data from the WP. However, the "responsive to" clause does not *define* the function of the means. Accordingly, we hereby **ADOPT** the Special Master's recommended construction of this claim term's functions and conclude that its functions are (1) "selectively monitoring at least one of the electrodes or voltages in the processor," and (2) "generating ICS-status-indicating signals [therefrom]." We **OVERRULE** Cochlear's objection.

4. '616 Patent, Claims 1 and 12

[3] Claim 14 contains the word "therefrom" at the end of this claim element, but Claim 9 does not. The Parties analyze these claims together and consider them to be identical claim terms.

Claims 1 and 12 of the '616 patent contain similar claim terms that the Parties treat as identical for purposes of claim construction. Claim 1 refers to, in relevant part:

> 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.

Claim 12 refers to, in relevant part:

> monitor means in the processor and responsive to the data-containing signals received by the receiver means for (1) monitoring a selected pair of the multiplicity of electrodes as one of the stimulation signals is applied thereto to measure a voltage associated therewith, and (2) generating stimulator status-indicating signals, said stimulator status-indicating signals including the voltage measured at the selected pair of electrodes by the monitor means as one of the stimulation signals is applied thereto.

Before the Special Master issued his R&R, the Parties reached an agreed construction on the corresponding structure of these terms: a decoder and a signal multiplexer. However, they did not specify whether they agreed that the terms should be construed under § 112, ¶ 6, what the stated function is, and whether the agreed construction represents the structure corresponding to this function. (R&R 100). Accordingly, the Special Master analyzed these claim terms independently. He construed these terms as means-plus-function limitations, (*id.* at 102), and construed them as having two functions: a "monitoring" function and a "generating" function. He construed the functions of the term in claim 1 more specifically as (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." (*Id.* at 103). He construed the functions of the term in claim 12 more specifically as (1) "monitoring a selected pair of the multiplicity of electrodes as one of the stimulation signals is applied thereto to measure a voltage associated therewith," and (2) "generating stimulator status-indicating signals, said stimulator status-indicating signals including the voltage measured at the selected pair of electrodes by the monitor means as one of the stimulation signals is applied thereto." (*Id.*). He expressly noted that the structure corresponding to these functions must meet a "responsive" requirement and a "location" requirement. For the claim 1 term, the corresponding structure must be "in the processor means" (location requirement) and "responsive to the data-containing signals" (responsive requirement). For the claim 12 term, the corresponding structure must be "in the processor" (location requirement) and "responsive to the data-containing signals received by the receiver means" (responsive requirement). (*Id.* at 104). After a thorough technical analysis of the specification, he identified the corresponding structure as "a command decoder, a telemetry function decoder, and a multiplexer." (*Id.* at 110).

Cochlear's objection regarding these claim terms is identical to its objection to the claim term we last discussed. Cochlear does not object to the structure identified by the Special Master. Instead, it

objects to the Special Master's recommended construction of the functions of these claim terms. Cochlear states: "[T]he Special Master's recommended construction of the function associated with these elements omits any requirement that the function be in any way responsive to data-containing signals." (Dkt. No. 203, at 10-11). Accordingly, Cochlear suggests that we "correct" this construction "by inserting the language 'in response to data from the WP' into the Special Master's recommended construction of the function." (*Id.* at 11).

As with the last claim term we discussed, we disagree with Cochlear that the Special Master in any way "omitted" the "responsive to" requirement – he clearly and expressly included that requirement in identifying the structures corresponding to the monitoring and generating functions. Moreover, we agree with the Special Master's construction of the functions of these claim terms. As with the last claim term that we addressed, the "responsive to" clauses (and the location requirements) merely provide context about the factors that this means takes into account when performing its functions. In monitoring pair(s) of electrodes and in generating ICS-status-indicating signals, the means must be in the processor or in the processor means, and it must be responsive to the data-containing signals. However, the "responsive to" clause does not *define* the function of the means. Accordingly, we hereby **ADOPT** the Special Master's recommended construction of these claim terms' functions. Therefore, we conclude that the functions of the relevant term in claim 1 are (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." We construe the functions of the relevant term in claim 12 as (1) "monitoring a selected pair of the multiplicity of electrodes as one of the stimulation signals is applied thereto to measure a voltage associated therewith," and (2) "generating stimulator status-indicating signals, said stimulator status-indicating signals including the voltage measured at the selected pair of electrodes by the monitor means as one of the stimulation signals is applied thereto." We **OVERRULE** Cochlear's objection.

5. '691 Patent, Claim 8

Claim 8 of the '691 Patent refers to "means in the ICS and responsive to the power signals for generating a plurality of voltages for powering different components in the ICS." The Special Master construed this as a means-plus-function term whose function is "generating a plurality of voltages for powering different components in the ICS." He identified the corresponding structure as a "voltage downconverter." Cochlear does not object to the Special Master's identification of the corresponding structure. Instead, it argues that the Special Master's recommended construction of this element's function ignores the "responsive to" clause. Cochlear suggests that we "correct" this construction "by inserting the language 'in response to the data-containing signals' into the Special Master's recommended construction of the function." (Dkt. No. 203, at 11).

Importantly, the Special Master's approach to this claim term appears to be entirely consistent with the approach Cochlear proffered in the Parties' Joint Brief on Claim Construction. Therein, Cochlear stated: "Claim 8 of the '691 patent requires *generating a plurality of voltages for powering different components in the ICS*. The Figure 2 structure *that performs this function* is voltage

downconverter 58." (Joint Br. 42 (emphasis added)). Therefore, it appears that Cochlear's current argument is a change in position from that which it previously proffered.

As with the other claim terms in this category, we agree with the Special Master's recommended construction of this term's function. Again, the "responsive to" clause merely provides context about the factors that this means takes into account when performing its generating function, much like the "in the ICS" clause merely provides context about the location of the structure that performs the identified function. In generating voltages for powering components of the ICS, the means must be "responsive to the power signals." However, the "responsive to" clause does not *define* the function of the means. Accordingly, we hereby **ADOPT** the Special Master's recommended construction of this claim term's function and conclude that the function of this term is "generating a plurality of voltages for powering different components in the ICS." We **OVERRULE** Cochlear's objection.

C. Additional Objections

1. '691 Patent, Claim 9: Means for Selectively Controlling the Frequency at Which Stimulating Signals are Applied to Electrodes

Claim 9 of the '691 Patent refers to "means for selectively controlling the frequency at which stimulating signals are applied to selected ones of the electrodes." The Special Master construed the function of this means-plus-function claim term as "selectively controlling the frequency at which stimulating signals are applied to selected ones of the electrodes." (R&R 123). After a thorough technical analysis of the specification, he identified the corresponding structure as:

> a data conditioner which includes a MOSFET switch, an on-chip capacitor and three inverters [**201A**];
>
> a clock decoder which includes an edge-detector circuit comprised of an XOR gate with an RC delay circuit preceding one of the inputs, a phase-lock loop (PLL) circuit of conventional design, a circuit of conventional design comprised of a D-type flip-flop and an XOR gate, and circuitry of conventional design comprising logic gates and binary counters [**201B**];
>
> a serial to parallel converter which includes logic gates, latches, D type flip-flops, counters and a shift register all of conventional design, and a 4-bit binary upcounter [**201C**]; and
>
> a word strobe generator which includes logic gates, D type flip-flops and a 9-stage Johnson counter of conventional design [**201D**].

(R&R 132-33). Cochlear argues in its objection that nothing in the ICS performs this function – "[i]nstead, it is the wearable processor that [selectively controls the frequency] and the ICS merely responds." (Dkt. No. 203, at 15). It argues that this claim thus cannot be construed because it is invalid

under § 112, ¶ 2. However, in the event we construe the claim by "recasting" the function, Cochlear does not object to the Special Master's recommended construction. (*Id.*).

Cochlear's argument appears to be that nothing in the ICS independently and autonomously decides the length of the signal frame that should be applied to electrodes. Rather, the WP provides data to the ICS instructing the ICS on the length of the data frame that should be applied and to which electrode it should be applied, and the ICS merely executes that command. Thus, although the Special Master identified the structure in the ICS that directly performs actions that result in frames of varying lengths being applied to different electrodes, it performs those actions wholly in response to directions from the WP, not by any autonomous action or decisionmaking within the ICS. As such, Cochlear's position is that the structure that the Special Master identified only responds to instruction from the WP; it does not actually perform the function of "selectively controlling the frequency at which stimulating signals are applied to selected ones of the electrodes."

Accordingly, resolution of this claim depends upon whether "selectively controlling" requires independent and autonomous action from a means in the ICS, or whether action in response to instruction from the WP is sufficient to fulfill the "selectively controlling" requirement. We need look no further than the language of the patent to conclude that the patentees intended the term "selective controlling" to encompass action that does not involve independent decisionmaking by the means taking action. The patent repeatedly refers to selective monitoring or controlling that occurs by the ICS *in response to* signals from the WP. (*See, e.g.*, '691 Patent, col. 5 ll. 19-23 ("Generally speaking, in response to control or data signals from the WP **16** the processor **46** selectively monitors voltages of the electrodes and associated circuitry in the processor and generates ICS status indicating and measured signals."); *id.* col. 9 ll. 1-7 ("The processor **46** included in the ICS **12** includes means (**88** and **90**) for *selectively controlling* the pulse width of the stimulation signals applied to the electrode **48**. . . . Such means is preferably *controlled by a command signal* [that is received from the WP [4]]. . . ." (emphasis added)); *id.* col. 34 ll. 30-33 (claiming "means in the ICS *responsive to data from the WP* for selectively monitoring at least one of the electrodes or voltages in the processor and for generating ICS status indicating signals" (emphasis added))).

Additionally, Cochlear seems to place great emphasis on the inclusion of the term "selectively" in this claim. (*See* Dkt. No. 203, at 15 ("Contrary to the plain language of this claim element, the '691 patent discloses nothing in the implanted cochlear stimulator ("ICS") to *selectively* control the frequency at which stimulation signals are applied . . . .")). However, by looking at the Patent as a whole, it is clear that the patentees did not use the word "selectively" to mean "autonomous decisionmaking." Indeed, they appeared to place little import on the inclusion of this word in a claim or description. For example, the Summary of the Invention describes the following means: "The processor in the ICS also includes means for selectively controlling the pulse widths of the stimulation signals . . . ." ('691 Patent,

[4] Technically, the command signal comes directly from the command decoder **206B**. However, the data stream that the command decoder processes in order to output the command signal comes from the data recovery section **201**, which receives its input from the receiver **200**. The receiver, in turn, receives its data from the WP. Accordingly, the command signal effectively originates in the WP.

col. 3 ll. 33-34; *accord id.* col. 9 ll. 1-3 ("The processor **46** included in the ICS **12** includes means (**88** and **90**) for selectively controlling the pulse width of the stimulation signals applied to the electrode **48**.")). However, the same structure is referred to later in the patent, without including the word "selectively," where the patentees claim a "processor means for processing such transmissions to generate stimulation pulses and for controlling the pulse width of the stimulation pulses." (*Id.* col. 34 ll. 60-62).

In summary, we agree with Cochlear's premise: that the means identified by the Special Master acts in response to data provided by the WP. However, we disagree with Cochlear's conclusion – that the structure identified does not "selectively control[] the frequency at which stimulating signals are applied to selected ones of the electrodes" merely because said structure does not control those signals based on its own processing logic. Cochlear provides no authority for why autonomous action, rather than action in response to instruction from the WP, is required. In the context of the Patent as a whole, it is clear that the patentees did not use the term "selective(ly) control(ling)" or "selective(ly) monitor(ing)" to mean action taken without reliance on instruction from the WP. Indeed, it appears, as a general matter, that all of the action taken by the ICS with respect to the electrodes occur based on data instruction originating in the WP. (*See* '691 Patent, Abstract ("Based upon information received from the WP, a processor within the ICS can control both the frequency and the widths of the output stimulation pulses applied to the electrodes and may select which electrodes to monitor.")). Yet, the patent repeatedly refers to the ICS's actions in selectively controlling or selectively monitoring various aspects of the electrodes and voltages. Given that the ICS's actions are based on data instruction originating in the WP, it would be inconsistent with the entire thrust of the invention for any term describing action taken in the ICS to be construed to require autonomous control. Accordingly, we decline to employ such a restrictive understanding of this term. We conclude that structure in the ICS can "selectively control[] the frequency at which stimulating signals are applied to selected ones of the electrodes" even though it acts in response to data sent to the ICS by the WP.

Having resolved this issue, neither Party objects to the actual structure identified by the Special Master, and we agree with his thorough and careful analysis. Accordingly, we hereby **OVERRULE** Cochlear's objection and **ADOPT** the Special Master's construction of this claim term.

2. '691 Patent, Claims 6, 9, and 14; '616 Patent, Claims 1, 6, and 12: Stimulation Signals and Stimulation Pulses

Claims 9 and 14 of the '691 Patent, and claims 1 and 12 of the '616 Patent refer to "stimulation signals," and claim 6 of the '691 Patent refers to "stimulation pulses." The Special Master construed "stimulation signals" as "electrical signals" and "stimulation pulses" as "electrical signals of specified duration." (R&R 65). Cochlear objects to this construction on the grounds that it does not include "the qualification that they are applied to the intra-cochlear electrodes for stimulating the cochlea." (Dkt. No. 203, at 15).

We agree with the Special Master's well-reasoned analysis that including such a qualification in the construction of these claim terms would be redundant. These terms are part of claim's requirement the stimulation pulses and signals be received by or applied to cochlea-stimulating or tissue-stimulating electrodes. (*See, e.g.*, '691 Patent, Claim 6 (claiming "processor means for processing such transmissions to generate stimulation pulses and for controlling the pulse width of the stimulation pulses" and "a plurality of electrically isolated capacitor-coupled cochlea stimulating electrodes for receiving the stimulation pulses"); '616 Patent, Claim 12 (claiming "processor means for processing the received data-containing signals to generate stimulation signals" and "means for applying the stimulation signals to selected pairs of the multiplicity of tissue-stimulating electrodes")). Each and every claim limitation need not be restated within the construction of each individual claim term. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("The *Markman* decisions do not hold that the trial judge must repeat or restate every claim term in order to comply with the ruling that claim construction is for the court. Claim construction . . . is not an obligatory exercise in redundancy."). It is true that the stimulation signals and pulses are applied to the cochlea, but that application describes the *use* of the signals and pulses, not the *definition* of those terms. It is also true that the stimulation signals are generated by a processor means in the ICS, but Cochlear does not contend that we should, nor would it make sense to, define "stimulation signals" as "electrical signals that are generated by a processor in an ICS." We decline to incorporate unnecessary and redundant conditions into the construction of these claims.

In light of the foregoing, we hereby **ADOPT** the Special Master's recommended construction of these claim terms and conclude that "stimulation signals" are "electrical signals" and "stimulation pulses" are "electrical signals of specified duration." We **OVERRULE** Cochlear's objection.

3. '616 Patent, Claims 1 and 12: Tissue-Stimulating Electrodes

Claim 1 and 12 of the '616 Patent refer to "tissue-stimulating electrodes." The Special Master construed this term to mean "electrodes used in stimulating tissue." (R&R 82). Similar to its objection to the "stimulation signals/pulses" claim term, Cochlear argues that the construction should have included the qualification "that the tissue-stimulating electrodes be intra-cochlear electrodes." (Dkt. No. 203, at 16). It states that in the "Summary of the Invention" section of the '616 Patent, "the tissue-stimulating electrodes are always implanted within the cochlea. As such, the tissue stimulating electrodes should be construed as intra-cochlear electrodes that stimulate the cochlea, not just any electrode that stimulates any tissue."

Having reviewed this claim term *de novo*, we agree with the Special Master's well-reasoned recommendation regarding its construction. First, we disagree that the reference in the "Summary of the Invention" section of the '616 Patent compels us to adopt Cochlear's construction. This section clearly refers to the *preferred embodiment* and is not a description of the requirements of *any* embodiment of the patent. Indeed, this section begins with the words, "A preferred embodiment of the present invention comprises . . . ." ('616 Patent, col. 3 ll. 10-11). Second, at the *Markman* hearing, as the Special Master noted, and Cochlear conceded, one of the disclosed embodiments includes a non-

intracochlear electrode to which stimulation signals are applied. (*Markman* Hr'g Tr. 99:2-100:19). Accordingly, adopting Cochlear's proposed construction would exclude a disclosed embodiment, which we decline to do. *See In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1324 (Fed. Cir. 2011) (noting that "there is a strong presumption against a claim construction that excludes a disclosed embodiment" (citing *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1377 (Fed. Cir. 2005))). Third, much like Cochlear's attempt to insert a condition where none is stated with respect to stimulation signals and pulses, here Cochlear attempts to insert a location requirement (intra-cochlear) into the text where none is explicitly stated. The claim does not refer to "intra-cochlear tissue-stimulating electrodes," and thus we decline to rewrite the claim to require such a condition.

In light of the foregoing, we hereby **ADOPT** the Special Master's recommended construction of this claim term and conclude that "tissue-stimulating electrodes" are "electrodes used in stimulating tissue." We **OVERRULE** Cochlear's objection.

4. '616 Patent, Claim 10: Transmitting to an External Receiver

Claim 10 of the '616 Patent refers to "transmitting the stimulator status-indicating signals to an external receiver coupled to the external transmitter." The Special Master rejected Cochlear's argument that the claim should be construed to require that the "transmitting" function must use a telemetry coil that is separate from the main receiving coil. He noted that this claim is a method claim, not a system claim, that the claim itself "does not specify that a separate antenna be used to accomplish the 'transmitting,'" and concluded that nothing in the specification requires such construction. (R&R 119). Having resolved this issue, he stated that there was "nothing further to 'construe'" and recommended that this claim term be given its plain and ordinary meaning. (*Id.* at 121).

Cochlear asserts that this claim should be construed as "transmitting the stimulator status-indicating signals using a telemetry coil that is separate from the main receiving coil." It first argues that the '616 Patent itself "discloses a system that requires a telemetry coil . . . that is separate from the main receiving coil that receives signals from the wearable processor." (Dkt. No. 203, at 17). Thus, the claim should be construed consistent with the design disclosed in the Patent. Second, Cochlear argues that "the '616 patent criticizes prior art systems that use one antenna in the implant to both receive signals from and transmit signals to the external processor." (*Id.*). It argues that the only way to preserve this distinction is by adopting its proposed construction.

We disagree. Cochlear's argument in both its objection and the Joint Brief on Claim Construction demonstrates that it does not fully comprehend the proper approach for construing this type of claim. In the Joint Brief, Cochlear argues: "The function of these claim terms is transmitting ICS (or stimulator) status indicating signals to the WP or physician's tester. In Figures 1 and 7 of both patents, the structure for performing the recited function is telemetry transmitter 42 connected to an un-numbered telemetry antenna/coil that is separate from the antenna/coil connected to the receiver 40." This argument might be compelling if this were a means-plus-function system claim term. But it is not a system claim, it is a method claim. Accordingly, Cochlear's approach in first identifying the function of

this claim term and then proffering a corresponding structure is not the proper lens through which to approach construction of this claim term. Our role is not to determine what structure corresponds to the claim but rather what the claim term itself – which discusses transmission of status-indicating signals – means. Just because the claim term refers to transmission from a transmitter to a receiver does not mean that we must construe the details of the structure that transmits or receives the signals. *See DSW, Inc. v. Shoe Pavilion, Inc.*, 537 F.3d 1342, 1348 (Fed. Cir. 2008) (holding that "it was improper for the trial court to import limitations from the apparatus and system claims into the method claims"); *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1032 (Fed. Cir. 2002) ("The method of claim 2 does not mention structure by which the 'venting' is to be performed. Thus, Epcon is correct that the district court improperly imported language from the specification into the claim."). Cochlear fails to comprehend this nuance and fails to provide any authority for why we should focus on identifying the corresponding structure for this method claim. At best, Cochlear's argument is an inappropriate attempt to import a limitation from the specification where none exists in the claim itself. However, "[w]e do not read limitations from the specification into claims; we do not redefine words." *Thorner v. Sony Comp. Entm't Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir 2012); *see also Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004) ("[I]t is improper to read a limitation from the specification into the claims.").

Additionally, while AMF did criticize the prior art's use of only one coil to transmit and receive signals, ('616 Patent, col. 2 ll. 48-61), "[m]ere criticism of a particular embodiment encompassed in the plain meaning of a claim term is not sufficient to rise to the level of clear disavowal." *Thorner*, 669 F.3d at 1366. This is not a case "[w]here the general summary or description of the invention describes a feature of the invention . . . and criticizes other products . . . that lack that same feature." *Astrazeneca AB v. Mut. Pharm.*, 384 F.3d 1333, 1341 (Fed. Cir. 2004). In contrast, the '616 Patent does not refer to the use of multiple coils when it discusses the deficiencies that the '616 Patent was intended to meet:

> [T]here is a continuing need for an improved multi-channel system particularly useful as a cochlear stimulator system and which is characterized (i) by a high operating speed in analog and pulsatile operation, (ii) freedom from charge imbalance, (iii) complete isolation of its electrode pairs for each channel, and (iv) the externally controllable monitoring and selective control a plurality of operating parameters and power supply to and currents and voltages developed within the implanted stimulator unit of the system to optimize system operation and power efficiency. The present invention satisfies such needs.

('616 Patent, cols. 2-3 ll. 63-5; *see also* R&R 120 ("And, the patentees' statement of the needs met by their invention does not refer to separate antennas.")). This clear statement includes no mention of the "continuing need" for separate transmission and receiver coils in the ICS. Accordingly, the patent's earlier criticism of a dual transmitting/receiving antenna cannot be interpreted as a clear disavowal of such structure.

We agree with the Special Master's conclusion that "[n]othing in the claim language requires what Cochlear urges." (R&R 119). Accordingly, we hereby **ADOPT** the Special Master's

recommendation and conclude that this claim term requires no construction and should be given its plain and ordinary meaning. We **OVERRULE** Cochlear's objection.

5. '691 Patent, Claims 6, 9, and 14: Electrically Isolated Capacitor-Coupled Electrodes

Claims 6, 9, and 14 of the '691 Patent refer to "electrically isolated capacitor-coupled cochlea stimulating electrodes for receiving the stimulation [signals/pulses[5]]." In the Joint Brief on Claim Construction, the Parties disputed the meaning of "electrically isolated" and "capacitor-coupled." AMF contended that "electrically isolated" meant that the electrodes had to be isolated from the current flow in other electrodes or other ICS circuitry, (Joint Br. 24-25), while Cochlear argued that electrically isolated meant that the electrodes had to be isolated from the power supplies, from logic circuitry, and from other channels within the ICS tissue-stimulating electrodes, (*id.* at 28). Cochlear also argued that "capacitor-coupled" meant that the electrodes had to be "directly connected" to capacitors, (*id.*), while AMF insisted during the *Markman* hearing that the capacitor and electrode must be coupled, but not directly connected, (*Markman* Hr'g Tr. 69:22-25 ("[A]nyone skilled in the art would understand that you could take that capacitor and put it anywhere in the circuit as long as it's in the series of the circuit.")). (*Id.*). After an extremely thorough analysis of this claim term and the specification, the Special Master agreed with Cochlear that "electrically isolated" should be construed to mean "that the electrodes are electrically isolated from the power supplies, from the logic circuitry and from other channels in the ICS." (R&R 94). He construed "capacitor-coupled" to "not require a direct electrical connection between capacitor and electrode." (*Id.*).

Cochlear only objects to the Special Master's failure to require a direct connection between a capacitor and electrode in construing this claim term. Cochlear asserts that "such a direct connection was a critical distinction between the patent and the prior art" that "should be preserved in the claim construction." (Dkt. No. 203, at 16-17). We disagree. In support of its assertion, Cochlear cites the Background section, which states, referring to the prior art: "Further, this system lacks output coupling capacitors *in series with* each electrode." ('691 Patent, col. 2 ll. 45-46 (emphasis added)). Such language, if anything, *supports* AMF's proposed construction and the construction recommended by the Special Master. Indeed, the patent criticizes the prior art as lacking coupling capacitors in series with each electrode, not as "lack[ing] output coupling capacitors [directly connected to] each electrode." Moreover, having thoroughly reviewed the '691 Patent, we find nothing distinguishing this invention from the prior art on the basis of a direct connection between a capacitor and an electrode. No language in the patent refers to "direct coupling" or a "direct connection" between capacitors and electrodes. The criticism of the prior art focused on AMF's concern of current leakage flowing *through* electrodes, not the lack of a direct connection between electrode and capacitor. (*See* '691 Patent, col. 2 ll. 45-49 ("Further, this system lacks output coupling capacitors in series with each electrode. This omission *may lead to net DC current flow through the electrodes* in the event of misprogramming or under circuit fault conditions.")). The description of various aspects of the invention likewise focuses on this concern.

[5] Claim 6 uses the term "pulses," while claims 9 and 14 use the term "signals." The Parties analyze these claims together and appear to consider them to be identical claim terms.

(*See id.* at col. 8 ll. 59-66 (stating that the use of "floating" current sources "eliminates any concern of undesired currents flowing between any of the output stages")). Cochlear does not argue that indirect coupling would have such an effect, and thus there is no basis for the conclusion that the claim requires such a construction.

Additionally, Cochlear asserted in the Joint Brief on Claim Construction that the figures contained in the Patent always have direct coupling between capacitor and electrode. It argues that we must interpret "coupled" in the claim terms "in light of the written description, which is unambiguous." Therefore, we must construe this term to mean "directly connected." (Joint Br. 28). However, Cochlear again seems to misunderstand a basic principle of claim construction. This is not a means-plus-function claim, and thus our role is not to identify the structure from a disclosed embodiment that corresponds to the claim term. Cochlear essentially asks us to import a limitation from the preferred embodiment into the claim term. This we may not do. *Liebel-Flarsheim Co.*, 358 F.3d at 904.

Finally, there is ample case support for construing "coupled" to encompass both direct and indirect connection. In *Pass R. Seymour, Inc. v. Hubbell Inc.*, No. 5:07-CV-00945 (NAM/DEP), 2009 WL 7296903 (N.D.N.Y. Dec. 30, 2009), a disputed patent included the word "coupled" several times throughout its claims. The magistrate judge, whose R&R was adopted by the district court, undertook extensive analysis of expert testimony, other courts' constructions of this term, and technical dictionaries. He noted an expert witness's testimony that the term "coupled" "is commonly used in the field of electrical and electrico mechanical technology as implicating a relationship between components, which can be accomplished through direct connection or indirectly, through intervening components, or even by way of a magnetic field." The magistrate judge recommended a proposed definition of "the portion of a circuit electrically connected, either directly or indirectly . . ." and concluded that the customary definition of "coupled" can include an indirect connection. *Id.* at *21.

In *GSK Techs. Inc. v. Eaton Elec. Inc.*, Nos. 606CV358, 606CV360, 606CV361, 2008 WL 906713, at *5 (E.D. Tex. Apr. 1, 2008), the court similarly construed "electrically coupled" to mean "arranged so that electrical signals may be passed either directly, or indirectly via intervening circuitry, from one component to another." The court determined that this was what someone of ordinary skill in the art would understand it to mean. *Id.*; *see also Smartdisk Corp. v. Archos S.A.*, No. 2–05–CV–101 (TJW), 2006 WL 3448645, at *6 (E.D. Tex. Nov. 28, 2006) ("The court has consistently construed the term 'coupled' to mean 'directly or indirectly connected.'"); *Network Appliance, Inc. v. Bluearc Corp.*, 374 F. Supp. 2d 825, 839 (N.D. Cal. 2005) ("Implicit in this argument is the assumption that claim 1's 'coupled to' term must be construed to mean 'directly coupled to' or 'directly connected.' However, there is no basis for reading such a limitation into the claim."). The District of Delaware also examined the term "coupling" in a claim. It noted, after examining numerous technical dictionaries, that "the ordinary and accustomed meaning of the term 'couple,' even when used in an electronics context does not solely mean 'directly coupled.'" *Silicon Graphics, Inc. v. n Vidia Corp.*, 58 F. Supp. 2d 331, 346 (D. Del. 1999). Accordingly, the court rejected the defendant's argument that such a direct connection was required in the claim construction.

We note, as did the Special Master, that the *McGraw-Hill Dictionary of Scientific and Technical Terms* 445 (5th ed. 1994) defines "coupled circuits" as "[t]wo or more electric circuits so arranged that energy can transfer electrically or magnetically from one to the other." *See also New IEEE Standard Dictionary of Electrical and Electronics Terms* 277 (5th ed. 1993) (defining "coupling" as "[t]he association of two or more circuits or systems in such a way that power or signal information may be transferred from one to another"); *McGraw-Hill Dictionary of Scientific and Technical Terms* 474 (5th ed. 1994) (defining "coupling" as "[a] mutual relation between two circuits that permits energy transfer from one to another, through a wire, resistor, transformer, capacitor, or other device"). "Because dictionaries, and especially technical dictionaries, endeavor to collect the accepted meanings of terms used in various fields of science and technology, those resources have been properly recognized as among the many tools that can assist the court in determining the meaning of particular terminology to those of skill in the art of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005). Relevant technical dictionaries further demonstrate that one of ordinary skill in the art would not consider "coupling" to require a direct connection as suggested by Cochlear. We decline to include such a requirement in the construction of this claim merely because the disclosed embodiment employed a direct connection between electrode and capacitor.

In light of the foregoing, and the Special Master's well-reasoned and thorough analysis, we hereby **ADOPT** the Special Master's recommendation and conclude that this claim term does not require a direct connection between capacitor and electrode. We **OVERRULE** Cochlear's objection.

6. '616 Patent, Claim 10: Applying the Stimulation Signals to the Electrodes

Claim 10 of the '616 Patent refers to "applying the stimulation signals to at least one pair of the multiplicity of tissue stimulating electrodes." Cochlear had argued in the Joint Brief on Claim Construction that this claim term requires that the stimulation signals be "capacitively coupled . . through switches" because "AMF distinguished its invention from [the prior art], in part by criticizing [the prior art's] lack of coupling capacitors." (Joint Br. 28-29). Cochlear also stated that the "Summary of the Invention" section "described the invention as follows: 'The ICS includes means . . . to . . . apply stimulation signals to a plurality of cochlea stimulating channels *each having capacitor coupled electrodes* . . . .' '616 patent 3:19-24 (emphasis added)." (Joint Br. 29). The Special Master disagreed and concluded that this claim term needs no construction. He acknowledged that "the patentees criticized the prior art for lacking capacitor coupled electrodes." (R&R 95). However, he noted that "the patentees explicitly stated that for some applications, *e.g.*, those using DC, 'no output capacitors are necessary.' *See* '616 patent, col. 34, lines 1-2 ('Conversely, for strictly DC applications, no output capacitors are necessary.')." (*Id.*).

Cochlear objects, stating that the Special Master's recommendation fails to preserve the distinction between the prior art and the present invention because it does not require "that the step of applying stimulation signals requires that those signals be capacitively coupled through switches." (Dkt. No. 203, at 17).

We disagree with Cochlear's arguments. As with the "transmitting" claim discussed above, Cochlear's argument appears to ignore that this is a method claim, not a system claim. Thus, its argument that AMF describes its inventions by referring to a "*means* . . . to apply . . . stimulation signals to a plurality of cochlea stimulating channels each having capacitor coupled electrodes" misses the mark. Our goal is not to identify the structure that performs the method, but to construe the method claimed. Indeed, another claim term – in claim 12 – addresses the structure by which this "applying" is to be performed. ('616 Patent, col. 36 ll. 22-24 (referring to "means for applying the stimulation signals to selected pairs of the multiplicity of tissue stimulating electrodes")). We decline to import any structural limitations that Cochlear argues are part of the system into this method claim. *See DSW, Inc.*, 537 F.3d at 1348; *Epcon Gas Sys.*, 279 F.3d at 1032. This claim term merely recites a method: "applying the stimulation signals to at least one pair of the multiplicity of tissue stimulating electrodes." Accordingly, we hereby **ADOPT** the Special Master's recommendation and conclude that this claim term requires no construction. We **OVERRULE** Cochlear's objection.

7. '616 Patent, Claims 1 and 12: Testing System

Claims 1 and 12 of the '616 Patent refer to a "physician's tester" and a "portable physician's tester," respectively. The Special Master construed these terms as "a physician's device used for testing" and a "physician's device used for testing which is capable of being easily transported or conveyed," respectively. (R&R 149). Cochlear argues, in its objection, that "[t]he testing system is separate from a system for programming the WP, which is also briefly discussed in the '616 patent." It suggested in the Joint Brief on Claim Construction that these claims should be construed as "a portable testing device, separate from a programming system"[6] to preserve the difference between the programming system and the physician's tester. (Joint Br. 43).

Cochlear provided more context for this argument at the *Markman* hearing. Cochlear explained that a device called a "programming system" programs the wearable processor, (*Markman* Hr'g Tr. 162:2-14), whereas the physician's tester does not program the wearable processor. Cochlear expressly stated that through its proposed construction, it was not trying to "say that [a programming system and physician's tester] can't be combined in the same box, but to say that a programming system is different [from] a physician's tester. So one is for testing, and one is for programming. They're two different things. That was the intention of the claim construction." (*Id.* at 157:20-25). Accordingly, Cochlear's construction is clearly not meant to assert that the physician's tester cannot engage in any programming, but rather to make clear that the device claimed is different than the programming system, which is not described in any claim but is referenced elsewhere in the specification. (*See* '616 Patent, col. 27:24-27 (referring to a "clinician's programmer" that embeds "a series of patient-specific parameters . . . in the WP" that will be sent by the WP to the ICS)).

[6] In addition to its argument regarding the programming device, Cochlear argued in the Joint Brief on Claim Construction that *both* the "physician's tester" and the "portable physician's tester" should be construed as a "portable testing device." Cochlear provided absolutely no justification for construing both of these claims to be portable systems, which is contrary to the claim language. Cochlear appears to have abandoned this argument in its objection.

Cochlear's argument is puzzling. Essentially, Cochlear asks us to define these claims by what they are *not*, rather than what they *are*. Cochlear provides no authority for such an approach. The physician's tester is also not the ICS, or the WP, or a tennis shoe, but that does not mean that we should construe this term as "a physician's device used for testing, which is separate from the ICS, WP, and a tennis shoe." *See Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, No. 1:05–cv–2482–ODE, 2006 WL 6142860, at *9 (N.D. Ga. Sept. 18, 2006) ("Union Rich's proposed construction of, 'non-rigid, non-semi-rigid, non-stiff canvas or plastic cloth member,' is fairly unhelpful, as it primarily defines flexible by what it is not, rather than by what it is."); *Ekstam v. Ekstam*, No. 4:04CV00187AGF, 2006 WL 568352, at *18 (E.D. Mo. Mar. 7, 2006) ("[T]he Court can perceive no reason either to define the air filter in terms of what it is not or to expressly distinguish it from other types of filters that it does not purport to be."); *Oki Am., Inc. v. Advanced Micro Devices, Inc.*, No. C 04–03171 CRB, 2006 WL 335369, at *6 (N.D. Cal. Feb. 14, 2006) ("[T]he Court declines to define a protection MOSFET in terms of what it is not."). We decline to adopt Cochlear's proposed construction and hereby **ADOPT** the Special Master's proposed construction. Accordingly, we conclude that "physician's tester" and "portable physician's tester" shall be construed as "a physician's device used for testing" and a "physician's device used for testing which is capable of being easily transported or conveyed," respectively. We **OVERRULE** Cochlear's objection.

IV. Conclusion

We hereby adopt all portions of the R&R to which the Parties have filed no objections. We **SUSTAIN** AMF's only objection and conclude that "the results of the measurements made within the implanted stimulator," which is part of Group 14 claims terms from claim 10 of the '616 Patent, requires no construction as it is not a separate limitation on the claim term of which it is a part. We **OVERRULE** all of Cochlear's objections and **ADOPT** the Special Master's recommendations as to the claim terms to which Cochlear objects.

AMF has also moved to set the case schedule through trial. AMF's Motion to Set Case Schedule Through Trial is hereby **DENIED**. Now that claim construction is complete, the Parties **SHALL** attempt to resolve this action via private mediation. Accordingly, we hereby **ORDER** the Parties to attend further mediation **within sixty (60) days hereof**. If the Parties are unable to resolve the entire action in mediation, they **SHALL** in good faith attempt to resolve as many remaining issues as possible, including their disputes regarding any remaining discovery. The Parties **SHALL** file a joint status report **within ten (10) days hereof** setting forth the dates cleared for further mediation. If the case settles, the Parties shall inform the Clerk forthwith. If the case does not settle, the Parties shall file a joint status report within forty-eight hours of the conclusion of mediation so informing the Court. In that event, if we are satisfied that the Parties have in good faith made every effort to resolve this issue, we will
entertain the Parties' recommendations as to an order setting the case schedule through trial.

IT IS SO ORDERED.

E-Filed

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	CV 07-8108-GHK (SHx)	Date	June 18, 2012
Title	*Alfred E. Mann Foundation for Scientific Research v. Cochlear Corp., et al.*		

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