IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ST. JUDE MEDICAL CARDIOLOGY DIVISION, INC., ST. JUDE MEDICAL SYSTEMS AB, and ST. JUDE MEDICAL S.C., INC.,	:	
Plaintiffs,	:	
v.	:	Civil Action No. 10-631-RGA
VOLCANO CORPORATION,	:	
Defendant.	:	

MEMORANDUM OPINION

Steven J. Fineman, Esq., RICHARDS LAYTON & FINGER, P.A., Wilmington, DE.; John Allcock, Esq., DLA PIPER LLP, San Diego, CA; Drew M. Wintringham, III, Esq., Stuart E. Pollack, Esq., Monica Thompson, Esq., Tamar Duvdevani, Esq., and Nicholas F. Aldrich, Jr., Esq., DLA PIPER LLP, New York, NY.

Attorneys for Plaintiffs-Counterclaim Defendants St. Jude Medical, Cardiology Division, Inc., St. Jude Medical Systems AB, and St. Jude Medical S.C., Inc.

Thomas L. Halkowski, Esq., FISH & RICHARDSON, Wilmington, DE; Frank E. Scherkenbach, Esq., FISH & RICHARDSON, Boston, MA; Todd G. Miller, Esq., Michael M. Rosen, Esq., FISH & RICHARDSON, San Diego, CA; Corrin N. Drakulich, Esq., Christina Brown-Marshall, Esq., FISH & RICHARDSON, Redwood City, CA.

Attorneys for Defendant-Counterclaim Plaintiff Volcano Corporation.

August 22, 2013

Richard G. Andrews

ANDREWS, U.S. DISTRICT JUDGE:

Pending before the Court are the parties' post-trial motions. St. Jude filed the following post-trial motions: (1) Renewed Motion for Judgment as a Matter of Law ("JMOL") for Infringement of U.S. Patent No. 6,112,598 ("the '598 Patent") or in the Alternative for a New Trial (D.I. 479); (2) Renewed Motion for JMOL of No Anticipation under 35 U.S.C. § 102 for U.S. Patent Nos. 5,938,624 ("the '624 Patent") and 6,196,980 ("the '980 Patent") (D.I. 480); (3) Renewed Motion for JMOL of No Obviousness under 35 U.S.C. § 103 for the '624 Patent (D.I. 481); (4) Renewed Motion for JMOL for Infringement of U.S. Patent No. 6,248,083 ("the '083 Patent") or in the Alternative for a New Trial (D.I. 482); and (5) Renewed Motion for JMOL of No Obviousness under 35 U.S.C. § 103 for the '980 Patent (D.I. 483). Volcano filed a Motion for JMOL that St. Jude's Aeris and Certus Generation 6 and 7 Products Infringe U.S. Patent No. 6,976,965 ("the '965 Patent") (D.I. 473).[1]

St. Jude filed this patent infringement action on July 27, 2010, alleging that Volcano infringes five patents: the '624 Patent, the '980 Patent, the '598 Patent, the '083 Patent and U.S. Patent No. 6,167,763 ("the '763 Patent"). (D.I. 1). Volcano filed a counterclaim, alleging that St. Jude infringes four patents, including among them the '965 Patent. (D.I. 8, 12, 39).

Separate trials were held for St. Jude's patent infringement claims against Volcano and Volcano's patent infringement counterclaims against St. Jude. After a five-day trial regarding St.

---

[1] Volcano also has filed a Motion for Summary Judgment of No Unenforceability for Inequitable Conduct or, in the Alternative, for a Ruling on the Merits of St. Jude's Unenforceability Defense Without a Hearing. (D.I. 476). This motion is not addressed in this Opinion and will be resolved by the Court separately.

Jude's claims against Volcano,[2] the jury returned the following verdict. (D.I. 452). For the '598 Patent, the jury found that Volcano's products do not infringe claims 3, 5, or 12. For the '083 Patent, the jury found that Volcano's products do not infringe claims 1, 2, 10, or 14. For the '624 Patent, the jury found in favor of Volcano that claims 1, 2, and 10 are invalid as anticipated and as obvious. For the '980 Patent, the jury found in favor of Volcano that claims 1, 2, and 10 are invalid as anticipated and as obvious.[3]

After a four-day trial regarding Volcano's counterclaims against St. Jude,[4] the jury returned a verdict. (D.I. 456). Relevant to Volcano's pending motion for JMOL, the jury found that St. Jude's accused products do not infringe claims 1, 4, or 5 of the '965 Patent under the doctrine of equivalents.

The parties completed briefing of post-trial motions on February 28, 2013. This is the Court's decision on those motions.

I. LEGAL STANDARDS

A. Motion for Judgment as a Matter of Law

Judgment as a matter of law is appropriate if "the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for [a] party" on an issue. Fed.R.Civ.P.

---

[2] The trial transcript for the trial regarding St. Jude's claims against Volcano is available at D.I. 418, 421, 424, 427, and 433. All citations to this trial transcript are in the format "Trial Tr. I" followed by the page number.

[3] The jury had nineteen decisions to make in the first trial. St. Jude's motions argue that the jury got each and every one wrong.

[4] The trial transcript for the trial regarding Volcano's counterclaims against St. Jude is available at D.I. 440, 451, 455, and 460. All citations to this trial transcript are in the format "Trial Tr. II" followed by the page number.

50(a)(1). "Entry of judgment as a matter of law is a sparingly invoked remedy . . . granted only if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and resaonable inference, there is insufficient evidence from which a jury reasonably could find liability." *Marra v. Phila. Housing Auth.*, 497 F.3d 286, 300 (3d Cir. 2007) (internal quotation marks omitted).

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

In assessing the sufficiency of the evidence, the court must give the non-moving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor, and in general, view the record in the light most favorable to him." *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991); *Perkin-Elmer Corp.*, 732 F.2d at 893. The court may not determine the credibility of the witnesses nor "substitute its choice for that of the jury between conflicting elements of the evidence." *Perkin-Elmer Corp.*, 732 F.2d at 893. Rather, the court must determine whether the evidence supports the jury's verdict. *See Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1014 (Fed. Cir. 1998).; *Gomez v. Allegheny Health Servs. Inc.*, 71 F.3d

1079, 1083 (3d Cir. 1995) (describing standard as "whether there is evidence upon which reasonable jury could properly have found its verdict"); 9B Wright & Miller, *Federal Practice & Procedure* § 2524 (3d ed. 2008) ("The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury properly could find a verdict for that party.").

Where the moving party bears the burden of proof, the Third Circuit applies a different standard. This standard "'requires the judge to test the body of evidence not for its sufficiency to support a finding, but rather for its overwhelming effect.'" *Fireman's Fund Ins. Co. v. Videfreeze Corp.*, 540 F.2d 1171, 1177 (3d Cir. 1976) (quoting *Mihalchak v. Am. Dredging Co.*, 266 F.2d 875, 877 (3d Cir. 1959)); *see also Agere Systems, Inc. v. Atmel Corp.*, 2005 WL 2994702, at *14 (E.D. Pa. Aug. 17, 2005) (citing *Fireman's Fund Ins. Co.*, 540 F.2d at 1177). The Court "'must be able to say not only that there is sufficient evidence to support a finding, even though other evidence could support as well a contrary finding, but additionally that there is insufficient evidence for permitting any different finding.'" *Fireman's Fund Ins. Co.*, 540 A.2d at 1177 (quoting *Michalchak*, 266 F.2d at 877).

B. Motion for a New Trial

Federal Rule of Civil Procedure 59(a) provides, in pertinent part:

> A new trial may be granted to all or any of the parties and on all or part of the issues in an action in which there has been a trial by jury, for any of the reasons for which new trials have heretofore been granted in actions at law in the courts of the United States.

Among the most common reasons for granting a new trial are: (1) the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage

of justice; (2) newly discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or (4) the jury's verdict was facially inconsistent. See *Zarow–Smith v. New Jersey Transit Rail Operations, Inc.*, 953 F.Supp. 581, 584 (D.N.J.1997).

The decision to grant or deny a new trial is committed to the sound discretion of the district court. *See Allied Chem. Corp. v. Daiflon, Inc.*, 449 U.S. 33, 36 (1980); *Olefins Trading, Inc. v. Han Yang Chem. Corp.*, 9 F.3d 282, 289 (3d Cir.1993) (reviewing district court's grant or denial of new trial motion under deferential "abuse of discretion" standard). Although the standard for grant of a new trial is less rigorous than the standard for grant of judgment as a matter of law—in that the court need not view the evidence in the light most favorable to the verdict winner—a new trial should only be granted where "a miscarriage of justice would result if the verdict were to stand," the verdict "cries out to be overturned," or where the verdict "shocks [the] conscience." *Williamson*, 926 F.2d at 1352–53.

II. VOLCANO'S POST-TRIAL MOTION

Volcano moves for judgment as a matter of law that St. Jude's accused Certus Generation 6 and 7 and Aeris Generation 6 and 7 guide wire products infringe claims 1, 4 and 5 of the '965 Patent under the doctrine of equivalents. (D.I. 473). Volcano argues that "no reasonable jury could conclude . . . that the proximal flexible tube in St. Jude's current wires was not equivalent to the claimed proximal coil in the context of the asserted claims." (D.I. 474 at 4). St Jude argues in response that the jury heard "substantial evidence" to support its contention at trial that a tube and a coil are not equivalent and, therefore, that the jury's verdict should stand. (D.I. 493 at 1).

The '965 Patent discloses and claims a pressure-sensing guidewire. '965 Patent at

Abstract. Claim 1 of the '965 Patent recites the following:

> 1. A pressure sensor apparatus comprising:
>
> a guidewire;
>
> a sensor housing having an external wall, a lumen, and a hole in the external wall extending from an external surface of the sensor housing to the lumen and being open to ambient fluid, the sensor housing disposed near a distal extremity of the guidewire;
>
> a first coil disposed proximally from the sensor housing;
>
> a second coil comprising a radiopaque material and disposed distally from the sensor housing; and
>
> a solid state pressure sensor having a pressure sensitive region located at or near one end thereof, the solid state pressure sensor mounted within the sensor housing such that the pressure sensitive region projects into the lumen of the sensor housing without contacting the external wall of the sensor housing and such that a portion of the pressure sensitive region is disposed opposite the hole and is in fluid communication with the ambient fluid via the hole.

Id. at claim 1. The disputed issue at trial was whether the flexible polymer tube in St. Jude's current guide wires was equivalent to the claimed first coil.

Volcano argues that it presented "ample evidence" that the flexible polymer tube in St. Jude's current guide wires "perform substantially the same function [as the claimed coil] in substantially the same way to achieve substantially the same result." (D.I. 474 at 8). At trial, Dr. Corl, a named inventor of the '965 Patent, testified that the sole function of the claimed first coil in the context of the patent was to provide flexibility. (Trial Tr. II at 224-25). Volcano's expert, Dr. Kenny testified that the function of the coils is to "'provide a flexible floppy tip for the [guidewire].'" (Trial Tr. II at 581 (quoting '965 Patent at col.4 ll.5-7)). Dr. Kenny further

testified that the function of the polymer tube in St. Jude's current guidewires is "to provide a flexible mechanical connection with the hypotube and the part of the product that has the sensor housing." (*Id.* at 582). Dr. Kenny also explained that the polymer tube performed this flexibility function in the same way as the claimed coil by using appropriate dimensions to achieve flexibility. (*Id.* at 186, 563, 569, 585, 596, 604-05). Finally, Dr. Kenny testified that the polymer tube achieved the same result as the claimed coil by providing a flexible, floppy tip while still maintaining axial and torsional force. (*Id.* at 588).

Volcano also argues that St. Jude's expert, Dr. Durfee, conceded equivalence by admitting at trial that the current St. Jude guidewires create flexibility through appropriate dimensions. (D.I. 474 at 8 (citing Trial Tr. II at 832-34)). Volcano also cites to Dr. Durfee's testimony that the polymer tube provided a flexible, floppy tip. Volcano essentially is rearguing the infringement theory it presented at trial, which the jury was free to reject.

St. Jude presented evidence that a tube and a coil are different and that it is sufficient that it show only one functional difference to sustain the jury's verdict. St. Jude's expert, Dr. Durfee, testified that a coil provides both "axial" and "lateral" flexibility where as a tube is "axially ... stiff." (Trial Tr. II at 754-55). Dr. Durfee further testified that this difference in flexibility has "a very big impact on the ability of the guidewire to be steered into the narrow arteries." (*Id.* at 755-56). Dr. Durfee also testified that a coil's results in regard to projecting axial forces and torsional forces in a guidewire differ from a tube. (Trial Tr. II at 455, 758-60).

The jury is presumed to have considered all of the evidence, assessed the credibility of the competing experts and fact testimony, and given the evidence whatever weight the jury felt appropriate. The Court finds that the evidence presented was sufficient to support the jury's non-

infringement verdict and that Volcano has not presented evidence that is so "overwhelming" that the only rational conclusion was infringement. *See Fireman's Fund*, 540 F.2d at 1177; *see also Wells v. Conn. Gen. Life Ins. Co.*, 469 F.2d 1231, 1234 (10th Cir. 1973). There is no basis to overturn the jury's verdict.

Accordingly, the Court will deny Volcano's motion for judgment as a matter of law that St. Jude's Certus Generation 6 and 7 and Aeris Generation 6 and 7 guide wire products infringe claims 1, 4 and 5 of the '965 Patent under the doctrine of equivalents.

III. ST. JUDE'S POST-TRIAL MOTIONS

A. St. Jude's Motion for Judgment as a Matter of Law for Infringement of the '598 Patent or in the Alternative for a New Trial

St. Jude moves for judgment as a matter of law that Volcano has infringed claims 3, 5, and 12 of the '598 Patent. (D.I. 479). In the alternative, St. Jude seeks a new trial. (*Id.*). The Court will deny the motion.

1. Judgment as a Matter of Law

Claim 1 of the '598 Patent, from which all the asserted claims depends, recites a "sensor element being mounted at the distal end of said [guidewire], on said mounting structure such that it does not contact any surrounding rigid structures of said [guidewire]." '598 Patent at claim 1. The Court construed the term "it does not contact any surrounding rigid structures" to mean "the sensor element does not come into contact with any rigid structures that are peripheral to the mounting structure." (D.I. 410 at 1). St. Jude argues that the sensor housing and the core wire are the claimed "mounting structures" and that "[i]t is undisputed that Volcano's sensor elements do not contact any rigid structures peripheral to these structures." (D.I. 484 at 2-7). St. Jude

argues that it proved that, in Volcano's guidewires, the proximal ends of the sensor elements were affixed directly to the sensor housing and the core wire by using adhesive. (*Id.*).

Volcano responds that it presented substantial evidence that in its guidewires, the sensor element is mounted in direct contact with the rigid stainless steel housing that surrounds it. The jury was shown pictures taken through a microscope showing direct contact between the edge of the sensor and the housing, as well as manufacturing instructions confirming the same. (DTX-1849; DTX 1871; DTX 1677; DTX 1850; DTX 1202). Dr. Corl testified that Volcano "intend[s] to securely mount the proximal end of the sensor to the housing." (Trial Tr. I at 923). He also testified that Volcano's solution was not "to avoid the housing." (*Id.*). Volcano's expert, Dr. Kenny opined that the sensor element in the accused Volcano guidewires directly contacts the surrounding rigid structure. (Trial. Tr. I at 1038-50).

It was within the jury's province to weigh the fact and expert testimony as well as photographs and other documentary evidence. The Court concludes that Volcano presented substantial evidence from which a jury could find against infringement. Accordingly, the Court will deny St. Jude's motion for judgment as a matter of law that Volcano infringed the '598 Patent.

2. New Trial

St. Jude asks for the Court to grant a new trial because of an "erroneous construction" of the term "it." (D.I. 484 at 7). The Court will deny this request. St. Jude asserts that the erroneous construction caused St. Jude prejudice because "Volcano does not dispute that under St. Jude's construction, Volcano's guide wires infringe every limitation of claim 3." (*Id.* (citing D.I. 289 Ex. 1 ¶¶ 52-89)). St. Jude also asserts that it "submitted uncontroverted evidence that

the pressure sensitive end of Volcano's pressure sensors did not contact any rigid structures" and "[t]herefore, under St. Jude's proposed construction, Volcano infringes the '598 Patent." (*Id.* at 8). The Court, however, believes that it correctly construed the claims. (*See* D.I. 410). No new trial is warranted on these grounds.

B. St. Jude's Renewed Motion for Judgment as a Matter of Law of No Anticipation for the '624 and '980 Patents

St. Jude moves for judgment as a matter of law that Volcano has failed to prove anticipation by clear and convincing evidence for claims 1, 2, and 10 of the '624 and '980 Patents. (D.I. 480). The Court will deny the motion.

"An issued patent is presumed valid and the burden is on the party challenging the validity of a patent to show that it is invalid by clear and convincing evidence." *Minnesota Min. & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301 (Fed. Cir. 2002). "Clear and convincing evidence is such evidence that produces an abiding conviction that the truth of the factual contentions are highly probably." *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012). Anticipation is a factual determination that is reviewed for substantial evidence when decided by a jury." *Koito Mfg. Co., Ltd. v. Turn-Key-Tech, LLC,* 381 F.3d 1142, 1149 (Fed.Cir.2004) (citations omitted).

Anticipation requires that a single prior art reference disclose all of the limitations of the claim in dispute. *See Zenith Elec. Corp. v. PDI Comm. Sys. Inc.*, 522 F.3d 1348, 1363 (Fed. Cir. 2008). "Typically, testimony concerning anticipation must be testimony from one skilled in the art and must identify each claim element, state the witnesses' interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference." *Koito Mfg*,

381 F.3d at 1152 (finding insufficient evidence of invalidity where prior art reference had been submitted into evidence but party failed to articulate how it rendered the patent invalid). Thus, expert testimony that maps each element of the asserted claim to the prior art reference and provides detailed analysis of how it meets the limitations of the claims typically constitutes substantial evidence to support a jury verdict of invalidity. *See Cordance Corp. v. Amazon.com, Inc.*, 658 F.3d 1330, 1335-36 (Fed. Cir. 2011) (reversing district court of judgment as a matter of law of no anticipation).

St. Jude argues that Volcano provided no evidence that the FloWire contained two limitations: (1) "fills the male connector to prevent capillary action from bodily fluid" ('624 Patent); and (2) "insulating material disposed between the core wire and conductive members . . . having an outer surface coextensive with outer surfaces of said conductive members" ('624 and '980 Patents). (D.I. 484 at 9). With respect to the first limitation, St. Jude argues that the FloWire did not satisfy this limitation because "the proximal extremity of the male connector in the FloWire was not filled with the insulating material, but was instead an exposed solid core wire without insulation." (D.I. 484 at 9). In other words, St. Jude argues that the FloWire's male connector tail was not "completely filled without any gaps, joints or spaces with insulating material to stop capillary action from occurring." (D.I. 511 at 4).

Volcano argues that the tail is irrelevant to the inquiry and that it presented substantial evidence that the FloWire is filled with insulating material. (D.I. 494 at 9). Specifically, Dr. Corl, who developed the FloWire, showed the jury a lab notebook diagram depicting how the device was filled with "insulating material" that "resulted in the smooth connector." (Trial Tr. I at 859-64; *id.* at 925-929; DTX 450). Mr. Vanderlaan, the production manager who oversaw the

FloWire's manufacture, testified about the process for making the male connector. (Trial Tr. I at 955-961; DTX 634). Volcano's expert, Dr. Segal, testified that the product was smooth and, therefore, "filled" within the meaning of the claim. (Trial Tr. I at 1179-84, 1196, 1237-39; DTX 600; DTX 1777). Finally, the jury was able to inspect the prior art FloWire. (Trial Tr. I at 856-57).

The evidence presented by Volcano was sufficient to sustain the jury's verdict of anticipation. To the extent the experts disagreed about whether or not the FloWire's tail bore any relevance to the anticipation inquiry, the jury was entitled to credit Dr. Segal's testimony. *Solvay, S.A. v. Honeywell Int'l, Inc.*, 2012 WL 3561617, at *5 (D. Del. 2012).

With respect to the second "coextensive" limitation, St. Jude argues that the tail of the FloWire's male connector was not coextensive with the outer surface of the conductive band because the fillet, the insulating material region between the connector and the tail, has a "conical shape." (D.I. 484 at 10-11). Volcano argues that there was a factual dispute at trial whether the tail was coextensive with the assembly or whether the claims required it to be. Volcano presented evidence that the FloWire was coextensive, including testimony from Dr. Corl and Mr. Vanderlaan as well as from its expert, Dr. Segal. (Trial Tr. I at 849-56, 859-68, 955-961, 1184-87, 1196, 1237-39). Dr. Segal also demonstrated for the jury that the FloWire was easy to clean, and as stated earlier, the jury was able to examine a FloWire for itself.

The Court, thus, concludes that there was substantial evidence from which a reasonable jury could conclude that the '624 and '980 Patents were anticipated by the FloWire. Accordingly, the Court will deny St. Jude's motion for judgment as a matter of law of no anticipation.

C. St. Jude's Renewed Motions for Judgment as a Matter of Law of No Obviousness for the '624 and '980 Patents

St. Jude moves for judgment as a matter of law that Volcano has failed to prove obviousness by clear and convincing evidence for claims 1, 2, and 10 of the '624 Patent, (D.I. 481) and for claims 1, 2, and 10 of the '980 Patent, (D.I. 483). Because the jury determined that claims 1, 2, and 10 of the '624 and '980 Patents are invalid as anticipated and the Court has concluded that the jury's verdict must stand, the Court need not reach the issue of obviousness. Accordingly, the Court will dismiss as moot St. Jude's motions for judgment as a matter of law concerning obviousness as to claims 1, 2, and 10 of the '624 and '980 Patents.

D. St. Jude's Renewed Motion for Judgment as a Matter of Law for Infringement of the '083 Patent or in the Alternative for a New Trial

St. Jude moves for judgment as a matter of law that Volcano has infringed claims 1, 2, 10, and 14 of the '083 Patent. (D.I. 482). In the alternative, St. Jude moves for a new trial. (*Id.*). The Court will deny the motion.

1. Judgment as a Matter of Law

Claim 1 of the '083 Patent recites:

> A [guidewire] assembly, comprising . . . an interface cable (4) having a first end connectable to a control unit (8), and having a second end connectable (6) to the proximal end of said [guidewire] (2); and information storing means (20; 22; Rx) provided on said interface cable (4) . . . .

St. Jude argues that no reasonable jury could find that the information storing means is not supplied on the interface cable. Volcano, however, presented evidence to demonstrate that

the EEPROM in its accused wires is located on the connector, not the interface cable. Volcano's expert, Dr. Wise, testified that the asserted claims require that the information storing means or the electronic device be provided on the cable, not in a connector. (Trial Tr. I at 1127). He further testified that the '083 specification distinguishes between providing a memory on the cable and in the connector. (*Id.*; '083 Patent at col.3 ll.38-46; *id.* at col.5 ll.22-25). Dr. Wise and St. Jude's expert, Dr. Durfee, both testified that, in the accused Volcano wires, the memory device is mounted in the connector, not on the cable. (Trial Tr. I at 1124; *id.* at 697-98).

St. Jude argues that the connector can be "provided on" a separate interface cable as shown in figure 2 of the patent and that the placement of the EEPROM on Volcano's wires is exactly what the '083 Patent discloses. (D.I. 484 at 17-19). Volcano responds that even in Figure 2, the "EPROM 20 is not described as a connector, as being in a connector, or as being provided on the interface cable." (D.I. 494 at 16). Moreover, even assuming that the embodiment of figure 2 did disclose a memory device located in a connector, such an embodiment was not claimed. The asserted claim requires that the information storing means or an electronic device be provided on an interface cable, not in a connector. *See TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1373 (Fed. Cir. 2008) ("Federal Circuit precedent is replete with examples of subject matter that is included in the specification, but is not claimed.")

St. Jude had the burden to prove infringement at trial. Given the evidence and argument presented by both sides, a reasonable jury could conclude that Volcano's guidewires do not infringe the '083 Patent.

Accordingly, the Court will deny St. Jude's motion for judgment as a matter of law that Volcano infringed the '083 Patent.

2. New Trial

St. Jude asks for the Court to grant a new trial because "the Court's construction of 'interface cable' in claim 1 of the '083 Patent was incorrect." (D.I. 484 at 19). The Court will deny this request. St. Jude asserts that "under the correct construction, Volcano infringes the '083 Patent." (*Id.* at 20). Claim construction was the subject of lengthy briefing and oral argument. The Court believes that it correctly construed this term. (*See* D.I. 410). No new trial is warranted on these grounds.

III. CONCLUSION

For the reasons set forth in this Opinion, the Court will deny the parties' post-trial motions. An Order consistent with this Opinion will be entered.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ST. JUDE MEDICAL CARDIOLOGY DIVISION, INC., ST. JUDE MEDICAL SYSTEMS AB, and ST. JUDE MEDICAL S.C., INC.,	:	
Plaintiffs,	:	
v.	:	Civil Action No. 10-631-RGA
VOLCANO CORPORATION,	:	
Defendant.	:	

ORDER

For the reasons stated in the accompanying memorandum opinion, this 22nd day of August 2013, IT IS HEREBY ORDERED that;

1. St. Jude's Renewed Motion for Judgment as a Matter of Law etc. (D.I. 479) is **DENIED**;

2. St. Jude's Renewed Motion for JMOL of No Anticipation etc. (D.I. 480) is **DENIED**;

3. St. Jude's Renewed Motion for JMOL of No Obviousness etc. (D.I. 481) is **DISMISSED AS MOOT**;

4. St. Jude's Renewed Motion for JMOL for Infringement etc. (D.I. 482) is **DENIED**;

5. St. Jude's Renewed Motion for JMOL of No Obviousness etc. (D.I. 483) is **DISMISSED AS MOOT**; and

6. Volcano's Motion for JMOL etc. (D.I. 473) is **DENIED**.

Richard G. Andrews
United States District Judge