UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA
MIAMI DIVISION

CASE NO. 13-23309-CIV-ALTONAGA

ATLAS IP, LLC,

Plaintiff,

v.

MEDTRONIC, INC., et al.,

Defendants.
_____/

ORDER

THIS CAUSE came before the Court on Defendants, Medtronic, Inc.; Medtronic USA, Inc.; and Medtronic Minimed, Inc.'s (collectively, "Medtronic['s]") Motion . . . for Summary Judgment on Liability and Damages ("Motion") [ECF No. 148], filed under seal August 5, 2014, with a Statement of Undisputed Material Facts. (See Mot. ¶¶ 1–37 ("Defendants' SMF")). Plaintiff, Atlas IP, LLC ("Atlas"), filed a sealed response in Opposition to Defendants' Motion for Summary Judgment ("Response") [ECF No. 169], accompanied by a Response to Defendants' Statement of Facts ("Plaintiff's SMF") [ECF No. 174]. Medtronic filed a sealed Reply . . . ("Reply") [ECF No. 190]. On September 11, 2014, the Court heard oral argument on the Motion. (See [ECF No. 213]). The Court has carefully considered the parties' written submissions, the record, oral arguments, and applicable law.

I. BACKGROUND

This case involves a patent infringement claim for wireless communication protocols used in medical devices related to United States Patent Number 5,371,734, titled "Medium access control protocol for wireless network" (the "'734 Patent") [ECF No. 63-1]. (See

generally Amended Complaint [ECF No. 63]). Atlas is the owner by assignment of the '734 Patent, and it alleges one count of patent infringement regarding claims 6, 11, and 21 of the Patent. (See id. ¶¶ 2, 29–31). The '734 Patent was issued on December 6, 1994. (See '734 Patent 1). Michael A. Fischer ("Fischer") is the sole named inventor of the '734 Patent. (See id.). The '734 Patent expired prior to the filing of this action. (See Defs.' SMF ¶ 28; Pl.'s SMF ¶ 28).

The claimed invention of the '734 Patent relates to a "medium access control (MAC) protocol for wireless, preferably radio frequency (RF), LAN-type network communications among a plurality of resources, such a[s] battery powered portable computers." ('734 Patent, col. 5, ll. 10–14 (alteration added)). Within such a network, "[o]ne of the communicators functions as a hub and the remaining communicators function as remotes." (Id. at Abstract (alteration added)). "The hub establishes repeating communication cycles, each of which has intervals during which the hub and the remotes transmit and receive frames," or information. (Id. at col. 5, ll. 44–47). "The hub transmits control information to the remotes to establish the communication cycle and to establish a plurality of predeterminable intervals during each communication cycle." (Id. at col. 5, ll. 47–50). "The intervals allow the hub and the remotes to anticipate transmitting and receiving frames, thereby allowing the remotes to power off their receivers and transmitters to achieve a considerable savings in power consumption without degrading communications." (Id. at Abstract). The invention "obtains significant reductions in battery power drain by permitting the receivers as well as the transmitters of the communicator stations to be powered off during a majority of the time, but selectively and predictably powered on to send or receive relevant communications." (Id. at col. 5, ll. 28–33).

Atlas asserts claims 6, 11, and 21 (the "Asserted Claims") of the '734 Patent. (See generally Mot.; Resp.). These claims are independent but share the following limitations:

> A communicator for wirelessly transmitting frames to and receiving frames from at least one additional communicator in accordance with a predetermined medium access control protocol, the communicators which transmit and receive the frames constituting a Group, each communicator including a transmitter and a receiver for transmitting and receiving the frames respectively, the medium access control protocol controlling each communicator of the Group to effect pre-determined functions comprising:
>
> > designating one of the communicators of the Group as a hub and the remaining the [sic] communicators of the Group as remotes;
> >
> > the hub establishing repeating communication cycles, each of which has intervals during which the hub and the remotes transmit and receive frames;
> >
> > the hub transmitting information to the remotes to establish the communication cycle and a plurality of predeterminable intervals during each communication cycle, the intervals being ones when the hub is allowed to transmit frames to the remotes, when the remotes are allowed to transmit frames to the hub, and when each remote is expected to receive a frame from the hub;
> >
> > the remotes powering off their transmitters during times other than those intervals when the remote is allowed to transmit frames to the hub, by using the information transmitted from the hub;
> >
> > the remotes powering off their receivers during times other than those intervals when the remote is expected to receive a frame from the hub, by using the information transmitted from the hub;
> >
> > the hub establishing the length of each communication cycle; and
> >
> > the hub transmitting a frame containing information describing the length of the communication cycle whose length is established.

(Am. Compl. ¶ 4 (quoting '734 Patent, col. 49, ll. 31–68 (representative "Claim 14"))).[1]

The Medtronic devices accused of infringement include implantable cardiac defibrillator or monitor, or implantable pulse generator ("cardiac implant" or "cardiac patient") devices, such

[1] The Court previously construed the '734 Patent in the related case Atlas IP, LLC v. St. Jude Medical, Inc., No. 14-cv-21006-CMA (S.D. Fla. July 30, 2014) [hereinafter "July 30 Claim Construction Order"].

as a defibrillator or pacemaker, operating with a CareLink 2090 programmer, or a 2490 or 2020 monitor ("cardiac base" or "cardiac monitor" devices); and a Paradigm REAL-Time Revel insulin pump ("insulin pump") operating with a mySentry monitor to provide continuous glucose monitoring. (See Expert Report of Mark Lanning Regarding Noninfringement . . . ("Lanning Report") 24, 33 [ECF No. 148-14]); Corrected Opening Expert Report of J. Nicholas Laneman, dated June 16, 2014 ("Laneman Report") 10 [ECF No. 148-3]; Mot. 10).

The cardiac implant devices operate pursuant to short-range, Telemetry B and Conexus Wireless Telemetry ("Telemetry C") communication protocols,[2] while the insulin pump device operates pursuant to a Paradigm protocol. (See Declaration of Gary P. Kivi . . . ("Kivi Declaration") ¶¶ 4–6; Defs.' SMF ¶¶ 1–3; Pl.'s SMF ¶¶ 1–3). A cardiac base device operates as a hub for a Group, as it can "broadcast to all cardiac patient devices within range, initiate communication cycles, transmit downlink telemetry, and receive uplink telemetry from all such devices." (Laneman Report 11). The accused telemetry protocols are implemented in firmware in the accused devices. (See Lanning Report 32). The Telemetry B and C protocols cannot designate at a later time an accused cardiac implant to operate as an external monitor or programmer and vice-versa. (Defs.' SMF ¶¶ 1–2; Pl.'s SMF ¶¶ 1–2).

A cardiac base device initiates a communication cycle by transmitting a downlink frame to a patient device. (See Laneman Report 13). The cardiac implant device is designed to turn its receiver on and poll for downlink telemetry periodically. (See Lanning Report 30). The patient device powers on its receiver every 250 milliseconds and during a three-bit period processes any

[2] The Telemetry B and C protocols operate similarly, apart from several key differences. (See Laneman Report 21–22). Telemetry B's range is approximately six inches. (See Lanning Report 29). As a result, "a programming head, or wand, must be placed and remain directly over the patient's implanted device" for the communications to be operational. (Id.). Telemetry C is the next generation protocol, operating wirelessly and having a longer range. (See id. 31).

signals transmitted by the base device. (See Laneman Report 13). If the patient device does not receive a signal consisting of three consecutive zeros, it powers down until the next polling time. (See id.). If the device is operating with Telemetry B, the instrument head or wand must be placed over the patient's implanted cardiac device to be within range. (See Lanning Report 30).

A cardiac base device broadcasts an identification request ("ID Request"), and an in-range patient device responds by uplinking its device identification ("Device ID") information, including model and serial numbers — six bytes of data. (See Laneman Report 13–14; Lanning Report 30 ("If the implant detects a valid downlink signal, it will transmit its information back to the instrument.")). After receiving the cardiac patient Device ID, the cardiac base device issues an Open Session Request; a communication session does not commence until the Open Session Request is issued.[3] (See Laneman Report 14; Lanning Report 30 ("The clinician can initiate a session by transmitting an Open Session request.")). Downlink messages, which can generally perform memory read or memory write operations or control the communication system, are transmitted from the cardiac base device to the implant. (See Lanning Report 30). The intervals for downlink transmission can be calculated because "the downlink frame lengths and transmission rate are predetermined and known." (Laneman Report 16). A cardiac patient device responds to an Open Session Request from a base device and begins uploading waveform data at an uplink interval of 32 milliseconds. (See id. 14). Uplink transmissions sent from the cardiac implant to the base device can be "'requested,' in response to a downlink message, or 'unrequested,' on the occurrence of a device event." (Lanning Report 30).

For the diabetes devices, the insulin pump and monitor form a Group, with the pump functioning as the hub and the monitor as the remote. (See Laneman Report 26). The mySentry

[3] Telemetry C does not require a wand to be activated; rather, Telemetry C can be activated when a Device ID downlink transmission is wirelessly received by the cardiac implant. (See Lanning Report 31).

monitor includes a color viewing screen, continuous (plugged-in) power supply, and an outpost that transmits information from the pump to the monitor. (See Lanning Report 34). The Paradigm protocol cannot designate an accused insulin pump to operate as a mySentry monitor and vice-versa. (Defs.' SMF ¶ 3; Pl.'s SMF ¶ 3). A mySentry monitor is designed to monitor one Paradigm insulin pump at a time. (See Lanning Report 35).

The pump sends a Pump ID message to establish communication between it and a monitor — a "marriage" message. (Id.; see Laneman Report 26). Transmissions between an insulin pump and monitor occur at a fixed transmission rate of 16,385 bites per second. (See Laneman Report 26). Approximately every five minutes, the pump sends the monitor a fixed 42-byte Periodic Data Update with monitoring information concerning glucose levels. (See id. 26–27; Lanning Report 35–36). The pump sends a Periodic Data Update indefinitely, even if the monitor does not communicate with it. (See Lanning Report 36). A monitor within range ignores a Periodic Data Update until a Pump ID message is sent and received. (See Laneman Report 26–27). This then "establish[es] a communication session between the pump and monitor." (Id. 26 (alteration added)).

Once communications are established between a pump and monitor, the monitor performs a "cyclical redundancy check" to verify the information it receives from the pump. (Id. 27). The monitor responds to a Periodic Data Update with an acknowledgement ("ACK") or non-acknowledgement ("NAK") message ("ACK/NAK" message). (See id.). An ACK/NAK message has a fixed length and data transmission rate. (See id. 27–28). The interval during which the Periodic Data Update is sent can be determined based on the known byte length and transmission rate. (See id. 27). These periodic broadcasts repeat until the battery life in the pump and/or monitor expires. (See id. 26).

Medtronic does not sell or lease its in-home cardiac monitors or cardiac programmers. (See Defs.' SMF ¶¶ 10–11; Pl.'s SMF ¶¶ 10–11). Nor does Medtronic sell cardiac implant devices together with monitors or programmers, or Paradigm insulin pumps together with mySentry monitors. (See Defs.' SMF ¶¶ 12–13; Pl.'s SMF ¶¶ 12–13).

Medtronic developed and sold products supporting Telemetry B and C more than six years before Atlas filed this lawsuit. (See Defs.' SMF ¶ 18; Pl.'s SMF ¶ 18). Medtronic received Food and Drug Administration ("FDA") approval to market its Marquis implantable cardiac defibrillator supporting Telemetry B in March 2002, and Concerto and Virtuoso line of implantable devices supporting Telemetry C in 2006. (See Defs.' SMF ¶¶ 18, 20; Pl.'s SMF ¶¶ 18, 20).

After the '734 Patent was issued on December 6, 1994, Digital Ocean, Inc. ("Digital Ocean") became an assignee of the '734 Patent. Digital Ocean produced a product line known as "Grouper." (See Deposition of Michael A. Fischer, June 13, 2014 ("Fischer Deposition") 138:7–140:18 [ECF No. 170-12]). The Patent inventor, Fischer, testified the Grouper product line was marked with the number of the '734 Patent. (See id. 138:17–19; 139:22–140:7). Fischer explained he became aware of the marking requirements in December 1992 when the industrial design of the enclosures, the promotion materials, and the labeling were being defined. (See id. 138:22–129:2). He met with Digital Ocean in Kansas to provide the marketing and industrial design teams information regarding the required labeling and to verify products were marked patent-pending or had the patent number. (See id. 139:6–8). According to Fischer, Digital Ocean was "very good at . . . execution on the fulfillment side[,]" making the probability products were not marked very low. (Id. 140:13–18 (alterations added)).

Digital Ocean marked a prototype, even though it was not legally required to do so. (See

id. 142:5–15).[4] Fischer possesses this marked Manta prototype product. (See id.). In 1999, Choice-Intersil Microsystems, Inc. acquired the '734 Patent and later merged into and became a subsidiary of Conexant, Inc. (Defs.' SMF ¶¶ 24–25; Pl.'s SMF ¶¶ 24–25).

Medtronic now seeks summary judgment of non-infringement on Claims 6, 11, and 21 of the '734 Patent. Medtronic first argues Atlas does not establish direct infringement pursuant the requirements of 35 U.S.C. section 271(a). (See Mot. 10–14). Medtronic challenges whether the accused cardiac and diabetes devices satisfy each of the Patent's claim limitations. (See id. 15–25). Medtronic also asserts Atlas's claims are invalid for indefiniteness. (See id. 25–26). Finally, Medtronic asserts Atlas's claim is barred by the affirmative defenses of laches and non-compliance with the Patent-Marking Statute, 35 U.S.C. section 287(a). (See id. 26–30). The Court addresses each of Medtronic's arguments in turn.

II. LEGAL STANDARDS

Patent infringement analysis consists of two steps: "claim construction to determine the scope and meaning of the asserted claims, and a comparison of the properly construed claims with the allegedly infringing device or method to determine whether the device or method embodies every limitation of the claims." Schoell v. Regal Marine Indus., Inc., 247 F.3d 1202, 1207 (Fed. Cir. 2001) (citing Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454, (Fed. Cir. 1998)). "Whether an accused device . . . infringes a claim either literally or under the doctrine of equivalents is a question of fact." Id. (quoting *Tanabe Seiyaku Co. v. U.S. Int'l Trade Comm'n*, 109 F.3d 726, 731 (Fed. Cir. 1997)).

Under Federal Rule of Civil Procedure 56(a), "'summary judgment of non-infringement can only be granted if, after viewing the alleged facts in the light most favorable to the non-

[4] This excerpt of Fischer's Deposition is available at docket entry number 148-3.

movant, there is no genuine issue whether the accused device is encompassed by the claims.'" Hilgraeve Corp. v. Symantec Corp., 265 F.3d 1336, 1341 (Fed. Cir. 2001) (quoting Pitney Bowes, Inc. v. Hewlett–Packard Co., 182 F.3d 1298, 1304 (Fed. Cir. 1999)). "An issue of fact is material if it is a legal element of the claim under the applicable substantive law which might affect the outcome of the case." Burgos v. Chertoff, 274 F. App'x 839, 841 (11th Cir. 2008) (quoting Allen v. Tyson Foods Inc., 121 F.3d 642, 646 (11th Cir. 1997) (internal quotation marks omitted)). "A factual dispute is genuine 'if the evidence is such that a reasonable jury could return a verdict for the nonmoving party.'" Channa Imps., Inc. v. Hybur, Ltd., No. 07-21516-CIV, 2008 WL 2914977, at *2 (S.D. Fla. Jul. 25, 2008) (quoting Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986)).

The movant's initial burden on a motion for summary judgment "consists of a responsibility to inform the court of the basis for its motion and to identify those portions of the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, which it believes demonstrate the absence of a genuine issue of material fact." Fitzpatrick v. City of Atlanta, 2 F.3d 1112, 1115 (11th Cir. 1993) (quoting Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986) (alterations and internal quotation marks omitted)). "[T]he plain language of Rule 56 mandates the entry of summary judgment against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." Jones v. UPS Ground Freight, 683 F.3d 1283, 1292 (11th Cir. 2012) (quoting Celotex, 477 U.S. at 322 (alterations and internal quotation marks omitted)).

III. ANALYSIS

Atlas asserts the following combinations of products directly infringe the '734 Patent: a

cardiac implant device operating with a CareLink programmer, a cardiac implant device operating with a CareLink monitor, and a Paradigm insulin pump device operating with a mySentry monitor. (See Mot. 10; Defs.' SMF ¶¶ 10–13; Pl.'s SMF ¶¶ 10–13; see generally Am. Compl.).

A. Direct Infringement

Atlas brings one count of direct patent infringement under 35 U.S.C. section 271(a)[5] regarding claims 6, 11, and 21.[6] "'[W]hoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.'" Ricoh Co., Ltd v. Quanta Computer Inc., 550 F.3d 1325, 1334 (Fed. Cir. 2008) (alteration added) (quoting 35 U.S.C. § 271(a)). "In order to prove direct infringement, a patentee must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit." ACCO Brands, Inc. v. ABA Locks Mfrs. Co., Ltd., 501 F.3d 1307, 1313 (Fed. Cir. 2007) (citing Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263, 1275–76 (Fed. Cir. 2004)).

The parties frame their direct infringement arguments in terms of infringing system

[5] Medtronic contends "Atlas did not allege indirect infringement, because it is undisputed that Medtronic had no knowledge of the patent prior to Atlas filing suit and the patent expired months before suit was filed." (Mot. 2). Atlas's Response is silent as to any indirect infringement claims, including contributory infringement claims or inducement. (See generally Resp.).

[6] Following the Court's indefiniteness ruling in the July 30 Claim Construction Order, Atlas withdrew its infringement allegation for claim 6 regarding the "allocating" limitation. (See Resp. 15 n.3). Nevertheless, Medtronic moves for summary judgment on this ground, as "Atlas has not yet dismissed its claim of infringement of claim 6." (Reply 10). Based on the Court's finding of indefiniteness, summary judgment of non-infringement is granted as to claim 6.

claims, rather than method claims.[7] (See Sept. 24, 2014 Hr'g Tr. 11:16–19 ("[W]e don't infringe because it is a system claim . . . ."), 32:18–23 ("These aren't method claims . . . . So to argue that a method step is required for infringement, it's just wrong as a matter of law.") (alterations added)).[8] Similarly, the parties limit their arguments to Medtronic's infringement by making, selling, and offering to sell the accused products, as opposed to Medtronic's use of the products.[9] (See Defs.' SMF ¶¶ 8–9; Pl.'s SMF ¶¶ 8–9; Mot. 11). See NTP, Inc., 418 F.3d at 1319 ("Congress has consistently expressed the view that it understands infringement of method claims under section 271(a) to be limited to use.").

Medtronic argues it does not infringe under section 271(a) because it does not make or sell the system, only its components, and even if it did make the system, there is no infringement until the system is turned on and operational. (See Mot. 11–12; Reply 2–3; Sept. 24, 2014 Hr'g Tr. 35:14–18; 36:3–37:17). Medtronic asserts any alleged direct infringement would be by the doctor or patient who makes and uses the system, not Medtronic. (See Mot. 12; Reply 4; Sept. 24, 2014 Hr'g Tr. 73:17–74:10). In response, Atlas contends Medtronic manufactures all of the elements to make the accused system, and "combination" is not required for infringement of the system claims to occur. (Resp. 2). Rather, the claims define "the environment in which" a

[7] "The law is unequivocal that the sale of equipment to perform a process is not a sale of the process within the meaning of section 271(a)." NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1317 (Fed. Cir. 2005) (quoting Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 773 (Fed. Cir. 1993)).

[8] The Court does not reach Medtronic's argument the patent is indefinite because the claims recite both a system and a method for using that system given all parties agree this case involves only a system claim. (Compare Mot. 8 (citing IPXL Holdings, L.L.C. v. Amazon.com, Inc., 430 F.3d 1377, 1384 (2005)) with Sept. 24, 2014 Hr'g Tr. 11:16–19; 32:18–23; 37:4–8). Moreover, in IPXL Holdings, L.L.C., the claim found to be indefinite involved input from a third party user, unlike the present case. (See Resp. 16 (citing IPXL Holdings, L.L.C., 430 F.3d at 1384)).

[9] "The use of a claimed system under section 271(a) is the place at which the system as a whole is put into service, i.e., the place where control of the system is exercised and beneficial use of the system obtained." NTP, Inc., 418 F.3d at 1317 (citation omitted).

single communicator device must function. (Id. 1). In arguing its manufacture of system components does not infringe, Medtronic cites Deepsouth Packing Co., Inc. v. Laitram Corp., 406 U.S. 518 (1972); Centillion *Data Sys., LLC v. Qwest Comms. Int'l*, Inc., 631 F.3d 1279 (Fed. Cir. 2011); and Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293 (Fed. Cir. 2005). (See Mot. 12). These cases, however, are distinguishable.

In Deepsouth, the defendant only manufactured component parts of an unfinished product. See 406 U.S. at 528–29 (finding no direct infringement where defendant manufactured unassembled machines for export to be assembled outside the United States). The Supreme Court focused on "the whole operable assembly of a system claim for infringement in Deepsouth." NTP, Inc., 418 F.3d at 1317 (citing Deepsouth, 406 U.S. at 528–29). By comparison, Medtronic makes the accused devices to support an operable system.[10] (See Mot. 11–12 (citing J. Nicholas Laneman's Deposition, July 7, 2014 ("Laneman Dep.") 252:25–253:7 [ECF No. 148-2]); Laneman Report 9 ("accused [products] include devices manufactured and sold by the Medtronic family of companies . . . ."); Defs.' SMF ¶¶ 15–16; Pl.'s SMF ¶¶ 15–16).

In Centillion, the court found the defendant only manufactured part of the claimed system. See 631 F.3d at 1288 ("In order to 'make' the system under [section] 271(a), [the defendant] would need to combine all of the claim elements — this it does not do. The customer, not [defendant], completes the system by providing the 'personal computer data processing means' and installing the client software." (alterations added)). In this case, Medtronic makes all of the accused devices that form the system, and no third party component parts are required.

[10] Medtronic does not dispute it makes or manufactures the accused products — "'components of the system,' such as the individual implant devices, programmers, or monitors" — arguing only that it does not "make[] the entire accused system." (Mot. 11; see generally Reply).

In Cross Medical, the claim involved a limitation requiring "a lower bone interface [be] operatively joined to said bone segment." 424 F.3d at 1299 (alteration added). The court construed the "operatively joined" limitation to require the accused device to have contact with the bone to infringe. Id. at 1311. Because the defendant "does not itself make an apparatus with the 'interface' portion in contact with bone, [the defendant] does not directly infringe." Id. (alteration added). Rather, the device does not contact bone until the surgeon implants it. See id. at 1312. In Cross Medical, having only the capability to infringe was insufficient given the "operatively joined" limitation. (See Resp. 1). In contrast, the claim limitations of the '734 Patent do not expressly require the devices be combined into a system and/or turned on to infringe.

Atlas compares the claims at issue to those in Uniloc USA, Inc. v. Microsoft Corp., where the court construed the claim as defining "the environment in which that registration station [device] must function." 632 F.3d 1292, 1309 (Fed. Cir. 2011) (alteration added). As in Uniloc USA, Inc., Atlas argues there is no claim requiring an actual combination of components. In that case the claim involved "only one party" who "makes or uses the remote registration station." Id. at 1309 ("Microsoft does make and use the remote registration station in the environment required by the claims, when the MD5 and SHA1 generate a remote license unique ID." (emphasis in original)).

In response to Atlas's environment argument, Medtronic simply reiterates its earlier interpretation the '734 Patent claims require a system of devices operating together. (See Reply 3 (citing Nazomi Comms. Inc. v. Nokia Corp., 739 F.3d 1339, 1345 (Fed. Cir. 2014))). Medtronic insists to infringe, the devices "must be combined to provide the claimed capability" (id.), comparing this case to Nazomi Communications Inc., where the accused products did not

infringe because the claims required "a hardware-software combination that must perform the described functions." 739 F.3d at 1345. In that case, the requisite hardware was part of both accused devices and was not functional without the purchase and installation of JTEK software. See id. The court distinguished the case from a line of other cases in which the hardware or software described in the claim — "standing alone" — had the capability to perform the claim limitations. Id. at 1345 n.3. Furthermore, the court considered the installation of JTEK software a "'modification' of the accused products" that precluded a finding of infringement. Id. at 1345 (distinguishing Silicon Graphics, Inc. v. ATI Technologies, Inc., 607 F.3d 784, 794 (Fed. Cir. 2010) ("In addition to the actual use of the product described, infringement of an apparatus claim occurs when the invention is, among other things, made or sold in the United States. 35 U.S.C. § 271. Thus, even absent its use (or performance), . . . an apparatus claim directed to a computer that is claimed in functional terms is nonetheless infringed so long as the product is designed 'in such a way as to enable a user of that [product] to utilize the function . . . without having to modify [the product].'" (alterations added and in original))). Here, no modification to the accused devices is required to operate the system.

The Court finds Atlas's argument persuasive in defeating summary judgment. The preamble and claims "describe capabilities that an accused device must have"; in other words, they describe the communicator devices through which "the claimed process and system operate[]." Advanced Software Design Corp. v. Fiserv, Inc., 641 F.3d 1368, 1374 (Fed. Cir. 2011) (alterations added). The claim in Advanced Software Design Corporation described a "system for validating . . . a negotiable financial instrument . . . comprising: a scanner . . . and a data processing device programmed [to validate by decrypting or re-encrypting]." Id. (internal quotation marks omitted; alterations in original). Even though the preamble included the phrases

"'in which selected information . . . is encrypted [and then] printed'" and 'wherein the selected information is encrypted [and then] printed,'" the claim did not include an encrypting computer or printer. Id. at 1375 (alterations in original) ("There is no reason why a preamble cannot describe a financial instrument in terms of the steps required to create it, and that is exactly what the preambles of the asserted claims do. Although the terms 'in which' and 'wherein' set off the limitations on the claim environments less clearly than the language in Uniloc USA, Inc., it remains the case that the asserted claims of the '110 patent recite a process or system for validating checks, not for encrypting and printing them."). In Advanced Software Design Corporation, the district court did not address any difference between making and using a claimed system.

"A communicator for wirelessly transmitting frames to and receiving frames from at least one additional communicator" describes the purpose of the communicator device and the Group system in which it operates. ('734 Patent, Col. 49, ll. 31–33). As in Advanced Software Design Corporation and Uniloc USA, Inc., Medtronic manufactures all of the devices as finished products capable of infringement when paired together. See Advanced Software Design Corp., 641 F.3d at 1374; Uniloc USA, Inc., 632 F.3d at 1309 (explaining while a device may require two parties to function, it "could nevertheless be infringed by the single party who uses" it, and finding "only one party, [defendant], makes or uses" the device (alteration added)). Requiring more would erase any distinction between a claim for making a system and one for using a system — one in which "the system as a whole is put into service." NTP, Inc., 418 F.3d at 1317.

The court in Uniloc USA, Inc. also rejected the defendant's argument the claim required a third party's (end-user's) participation to infringe, distinguishing the case from a surgeon implanting a device in Cross Medical, where the claim required the device have bone contact to

infringe. The claim language in Uniloc USA, Inc. — describing "A remote registration station incorporating remote licensee unique ID generating means, said station forming part of a registration system . . . including local licensee unique ID generating means . . ." — focuses "exclusively on the 'remote registration station,'" that "forms part of a 'registration system.'" 632 F.3d at 1309 (alterations in original). Treating the infringement claim like the one in Cross Medical Products "'would be akin to importing a method step into this software system — something the language of Claim 19 does not support.'" Id. (citation omitted). Here, as in Uniloc USA, Inc., that "other parties are necessary to complete the environment in which the claimed element [accused system] functions does not necessarily divide the infringement between the necessary parties." Id. (alterations added).

Because Medtronic makes the allegedly infringing devices, the Court does not reach the issue of whether Medtronic sells the accused products.

B. Whether Accused Systems Meet the Claim Limitations

"A patentee claiming infringement must present proof that the accused product meets each and every claim limitation." Forest Labs., Inc. v. Abbott Labs., 239 F.3d 1305, 1310 (Fed. Cir. 2001) (citation omitted). "To infringe an apparatus claim, the device must meet all of the structural limitations." Cross Med. Prods., 424 F.3d at 1311–12 (citing Hewlett–Packard Co. v. Bausch & Lomb, Inc., 909 F.2d 1464, 1468 (Fed. Cir. 1990)).

Medtronic contends the accused systems do not satisfy each of Atlas's claim limitations to establish infringement. (See Mot. 14). The parties have stipulated the preamble of claims 11 and 21 is a limitation of the '734 Patent. (See Joint Claim Construction Stipulation ("Claim Constr. Stip.") 1 [ECF No. 129]). The preamble requires:

> A communicator for wirelessly transmitting frames to and receiving frames from at least one additional communicator in accordance with a predetermined medium

> access control protocol, the communicators which transmit and receive the frames constituting a Group, each communicator including a transmitter and a receiver for transmitting and receiving the frames respectively, the medium access control protocol controlling each communicator of the Group to effect pre-determined functions comprising:

('734 Patent, Col. 49, ll.31–40).

1) "Designating" Limitation

Following the preamble, the first "pre-determined function[]" concerns "designating one of the communicators of the Group as a hub and the remaining the [sic] communicators of the Group as remotes" (the "designating" limitation). (Mot. 15; Resp. 2 (alterations added) (quoting '734 Patent, col. 49, ll. 41–43)). The "hub" refers to a "communicator that has been designated by the medium access control protocol to control communication to and from the remotes." (July 30 Claim Constr. Order 10 n.3). The designating limitation applies to both claims 11 and 21.

Medtronic argues the MAC protocol must effect or "carry out" the predetermined functions in each limitation following the preamble, including the designating limitation. (Mot. 15). According to Medtronic, the MAC protocol designates a communicator as a hub after evaluating criteria, including location, transmission range, power source status (battery versus continuous power), interference level, and a communicator's prior status as a hub. (See id. 15–16). Medtronic challenges Laneman's testimony for failing to explain how the accused devices allegedly perform the designating step (see id. 16 (citing Laneman Report 29, 35)), and that he did not opine regarding a designation at "design time" until his deposition[11] (see id. (citing Laneman Dep. 98:18–99:12)). Medtronic further asserts the designation cannot be carried out by the MAC protocol because it is not active at design time. (See id. (citing Laneman Dep. 90:2–

[11] Medtronic takes issue with Laneman's testimony, arguing it was not previously disclosed and is conclusory. (See Reply 10).

15)).

Atlas argues the designation criteria are pre-programmed into the read only memory ("ROM") of each communicator and "constitute part of the MAC protocol of the present invention." (Resp. 3 (quoting '734 Patent, col. 42, ll. 13–15)). Criteria at the time of design may include whether communicators are "powered by continuous AC power or whether each is battery powered." (Id. (quoting '734 Patent, col. 42, ll. 17–19)). Atlas argues these design criteria occur while the MAC protocol is inactive. According to Atlas, Medtronic's construction excludes these embodiments and must be rejected. (See Resp. 3–4).

The MAC protocol controls each communicator of the Group, doing so to effect certain pre-determined functions. Although the parties do not dispute the devices have predetermined functions at the time of manufacture and cannot later assume different roles, such as switching from a cardiac implant to a monitor, they disagree whether the MAC protocol must be turned on or be operational to make a designation, and whether the accused protocols actively designate a hub and remote. Even though certain criteria are preprogrammed at design time into the devices, the Telemetry protocols, like the MAC protocol, interpret real-time data and effect certain pre-determined functions to control the communications between the devices. When active, the protocols identify the hub and remote, even if their functions were pre-determined. Further, Atlas contends nothing in the claims expressly requires the MAC protocol be active at the time of designation. (See Resp. 3). Atlas has sufficiently demonstrated a basis for the trier of fact to find the accused products satisfy the designating limitation.

2) "Establishing" or "Transmitting" Limitation

The establishing limitation refers to "the hub establishing repeating communication cycles, each of which has intervals during which the hub and the remotes transmit and receive

frames." ('734 Patent, col. 49, ll. 44–46). The Patent's transmitting limitation is described as:

> the hub transmitting information to the remotes to establish the communication cycle and a plurality of predeterminable intervals during each communication cycle, the intervals being ones when the hub is allowed to transmit frames to the remotes, when the remotes are allowed to transmit frames to the hub, and when each remote is expected to receive a frame from the hub . . . .

(Id. ll. 47–54). The establishing and transmitting limitations apply to both claims 11 and 21, and so these two limitations are considered together.

The Court has construed "the hub establishing repeating communication cycles" to mean "the hub defining in advance the starting time and duration for each repeating communication cycle" (July 30 Claim Constr. Order 12), with each communication cycle being "a series of intervals for outbound and inbound communications" (id. 10 n.3). The Court further noted the '734 Patent "indicates the hub itself uses a MAC protocol as a component of its overarching function, not that the MAC protocol is, independently, defining anything about a communication cycle." (Id. (citing '734 Patent, col. 11, ll. 28–32)). Similarly, the Court construed "the hub transmitting information to the remotes to establish the communication cycle" to mean "the hub transmitting to the remotes information necessary to know in advance the starting time and duration of the communication cycle." (Id. 13). The Court previously construed the transmitting and establishing limitations in conjunction with the language, "the hub transmitting information to the remotes to establish . . . a plurality of predeterminable intervals," and interpreted it to mean "the hub transmitting to the remotes information necessary to know in advance the starting time and duration of each of . . . two or more predeterminable intervals during each communication cycle." (Id. 14 (alterations in original)).

The parties dispute the construction of certain terms addressed in the Claim Construction Order, and whether the accused devices are capable of knowing the duration of a communication

cycle in advance. (See Sept. 24, 2014 Hr'g Tr. 83:10–85:7 (asserting divergent definitions for "in advance," "to know," and "two or more").[12] To clarify, it is necessary to know in advance the starting time and duration of the communication cycle and two or more intervals. Both of the following must be true to meet the claims' establishing and transmitting limitations: (1) "the hub defining in advance the starting time and duration for each repeating communication cycle" (July 30 Claim Constr. Order 12), and (2) "the hub transmitting to the remotes information necessary to know in advance the starting time and duration of each of . . . two or more predeterminable intervals during each communication cycle" (id. 14 (alterations in original)).

Medtronic contends the "hub does not define in advance the duration of a communication cycle (the establishing limitation) or transmit information to the alleged remote device so that the remote can know in advance the starting time and duration of the communication cycle and predeterminable intervals (the transmitting limitation)." (Mot. 17).[13] With respect to the cardiac devices, Medtronic further argues the Pump ID message and Periodic Data Update do not include information about the duration of a cycle, when the remote can transmit, or when the remote is expected to receive. (See Mot. 18 (citing Kivi Decl. ¶ 5)). Medtronic asserts a cycle's duration cannot be known in advance because clinicians initiate and terminate communication sessions, or alternatively a session is terminated when a device goes out of range. (See id.). Atlas acknowledges a communication cycle for the accused devices may in some circumstances be the length of one interrogation session by a clinician (see Sept. 24, 2014 Hr'g Tr. 86:20–87:14), but it argues the cycle is not required to repeat — only that it has the capability to repeat.

[12] Atlas argues "in advance" means before the remotes transmit to the hub (Sept. 24, 2014 Hr'g Tr. 84:8–9), while Medtronic contends the cycle's duration must be known in advance, that is, before the communication cycle commences (see id. 73:6–14; 89:22–24; 90:1–5).

[13] For support, Medtronic cites its Statement of Material Facts, paragraphs four through six. Those paragraphs are disputed. (See Defs.' SMF ¶¶ 4–6; Pl.'s SMF ¶¶ 4–6).

The parties primarily dispute the timeline of what it means to be known in advance. As previously explained, not only does the hub initiate intervals, but it also "conveys information about the starting time and duration of each repeating communication cycle — [it] must, that is, 'define[] intervals of the communication cycle.'" (July 30 Claim Constr. Order 11 (quoting '734 Patent, col. 5, ll. 54–55 (alterations added))). Specifically, the hub defines the intervals. (See id.). The parties do not dispute that the length or duration of the intervals is predetermined.

And "[i]n order for remotes to power down at appropriate times — a key innovation of the '734 Patent — they must have received defined intervals in advance from the hub . . . . [T]he '734 Patent specifies the hub designates the start and end times of the communication intervals."[14] (Id. (alterations added) (citing '734 Patent, col. 13, ll. 12–14)). Thus, to the extent a communication cycle is "known in advance," it is because the length or duration of the intervals is predetermined. Because a communication cycle continues until a clinician or other person using the device manually terminates it, a device's battery life expires, or a device becomes out of range, the cycle's duration obviously cannot be known until such time one of these events occurs; this is Medtronic's main argument. (See Mot. 17–18; Reply 7–9).

Yet, the hub also has the capability to terminate a communication cycle by sending an end-session message. (See Sept. 11 Hr'g Tr. 89:1–18 (discussing Deposition of Christopher House, May 13, 2014 [ECF No. 148-2])). The evidence, viewed in the light most favorable to the non-moving party, suggests the accused hubs (the cardiac base device and the insulin pump) have the capability to establish the communication cycle.[15]

[14] "Due to the defined intervals of the communication cycle and the information conveyed by the hub, the remotes are able to power off their transmitters during times other than those intervals when the remote is allowed to transmit frames to the hub." ('734 Patent, col. 5, ll. 54–58).

[15] Additionally, it is unclear whether the accused hub transmits an end-session message to terminate the communication cycle in response to environmental or predetermined factors, such as a device's power

3) "Revoking" Limitation

The limitation in Claim 11 provides "the hub revoking a previous transmission opportunity allocation of a remote which has not transmitted more than a predetermined number of frames during a previous number of communication cycles" (the "revoking" limitation).[16] ('734 Patent, col. 48, ll. 33–36).

Medtronic's interpretation of the revoking limitation focuses on the phrase "during a previous number of communication cycles." (Id.). According to Medtronic, the '734 Patent considers prior communication cycles to adjust for changes in remote activity (amount of data transmitted) in order to maximize efficiency. (See id. (quoting '734 Patent, col. 6, ll.3–12)). Atlas argues the limitation includes consideration of "the previous portion of the current communication cycle" because "it would be illogical to read this claim to allow for the revocation of a previously allocated transmission opportunity based on underutilized transmission opportunities or lost communications in an entirely different communication cycle, while not covering such revocation as a result of underutilized transmission opportunities or lost communications in the current communication cycle." (Resp. 11 (emphasis omitted)). But Atlas fails to address how the accused devices consider recent communication cycles.

Medtronic emphasizes the '734 Patent specification's references to "Txop allocations may be varied or adjusted by the hub from one communication cycle to the next to account for changes in activity of the remotes. The adjustment occurs in relation to the number of frames or quantity of data transmitted by each remote during recent communication cycles." (Reply 11 (emphasis omitted) (quoting '734 Patent, col. 6, ll. 3–12)). Although the first sentence could be

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source and range, to the effect the hub could be said to know in real-time the duration of the communication cycle; in other words, immediately in advance of sending an end-session message.

[16]Atlas asserts Medtronic's cardiac devices infringe claim 11. (See Mot. 22 n.5).

construed to mean making adjustments from the current communication cycle to the next or from a prior communication cycle to a present or future one — as Atlas proposes — the second sentence refers to "recent communication cycles," in other words, previous, near-in-time communication cycles, not the present cycle.

The revoking limitation requires the hub to consider a remote's transmissions during previous communication cycles. While the limitation does not preclude the hub from also considering information from the present communication cycle, it must account for recent, previous ones. Atlas provides no evidence the accused devices take into consideration transmissions from previous cycles. (See Mot. 21–22; Resp. 10–12; Reply 11–12). As Medtronic points out, Laneman's testimony related to the revoking limitation seems to refer to the current communication cycle. (See Mot. 22 (citing Laneman Report 32)).

Atlas argues the accused devices' revoking transmissions based on the current communication cycle are equivalent to revoking transmissions based on prior communication cycles as described in the claim limitation. (See Resp. 12 ("One of ordinary skill in the art would know that more efficient use of the communications medium (one purpose of the invention claimed in the '734 patent) would be accomplished by revoking transmission opportunities either as a result of underutilized transmission opportunities or lost communications during a previous part of the current communication cycle, or underutilized or lost during a different, earlier communication cycle."). This equivalency argument is rejected, as it is raised for the first time in Atlas's Response. Even if the doctrine of equivalents was properly raised in the case, Atlas fails to satisfy its evidentiary burden, as it provides no expert testimony regarding the "insubstantiality of the differences between the claimed invention and the accused device . . . ." AquaTex Indus., Inc. v. Techniche Solutions, 479 F.3d 1320, 1328 (Fed. Cir. 2007) (alteration

added; internal quotation marks and citation omitted) (affirming a grant of summary judgment of non-infringement where the patentee "provided no particularized testimony from an expert or person skilled in the art that specifically addressed equivalents 'on a limitation-by-limitation basis'" (citation omitted)).[17]

Atlas fails to demonstrate the accused cardiac devices satisfy the revoking limitation, and thus it has not shown infringement as to claim 11. The Court need not consider the remaining limitations — the transmitting transmission opportunity allocation limitation and the monitoring limitation — specific to claim 11. Summary judgment of non-infringement is granted as to claim 11.

4) "Two Frames" Limitation

The claim 21 limitation requires that the MAC protocol effect the function of "the hub transmitting two frames containing information to establish the plurality of predeterminable intervals during each communication cycle, the second frame containing the information to established [sic] the plurality of predeterminable intervals occurring before the intervals in which the remotes are allowed to transmit frames to the hub" (the "two frames" limitation).[18] ('734 Patent, Col. 51, ll. 3–9).

Medtronic argues this limitation requires "the hub to transmit two frames containing the information for establishing the plurality of predeterminable intervals during each communication cycle" (Mot. 23), and that both "frames must be sent before the remotes transmit so that the remotes know when to transmit and when to receive frames" (id. 24 (emphasis

[17] According to Medtronic, Atlas no longer intends to pursue a doctrine of equivalency theory at trial. (See Medtronic Defendants' Notice of Changed Position 1–2 [ECF No. 234] (citing Atlas's Response to Medtronic's Motion in Limine 5 [ECF No. 218])).

[18] In its Motion Medtronic further defines "the information" in claim 21. (See Mot. 23). The Court's prior construction of the phrase "the information transmitted from the hub" concerned claim 6.

omitted)). Medtronic explains even under Laneman's analysis a remote transmits frames to the hub before the hub transmits the second frame. (See id. (citing Laneman Report 34 ("The cardiac base device sends the ID request in a frame to . . . [a] patient device . . . . Once the cardiac patient device responds with valid ID information, the cardiac base device sends an Open Session Request in a frame to the cardiac patient device. . . . Upon [] receipt by the cardiac base of the Open Session Ready Response from the cardiac patient device, a bi-directional communication link is established . . . ." (alterations added))). Laneman identifies the Open Session Request as the second frame sent by the cardiac base device. (See Laneman Report 34). From this, Medtronic argues the remote still transmits valid ID information in response to the first frame before the second frame is transmitted from the hub. (See Mot. 25).

Atlas emphasizes the accused hubs transmit at least two frames to the accused remotes. (See Resp. 13). The timeline, however, is disputed. Atlas contends whether both frames are transmitted "before the intervals in which the remotes are allowed to transmit frames to the hub" ('734 Patent, Col. 51, ll. 8–9) depends on how the intervals are defined (see Resp. 13). Atlas refers back to the establishing limitation in an effort to define intervals as "intervals of the 'repeating communication cycles.'" (Id.). Atlas's definition is not viable, however, because the establishing limitation indicates each communication cycle "has intervals during which the hub and the remotes transmit and receive frames." ('734 Patent, col. 51, ll. 27–28).

Atlas explains "a communication session between a cardiac base and patient device does not occur until the cardiac base device transmits the Open Session request," in an effort to demonstrate the remote's transmission would occur outside the communication cycle and not be limited by claim 21. (Resp. 13). At issue are how the accused devices' communication cycles are defined, and when the communication cycles commence. The parties do not dispute when a

communication cycle starts and finishes, yet the parameters of a communication cycle for the accused devices are unclear. Regarding the cardiac devices, Laneman states a cardiac base device initiates a communication cycle by transmitting a downlink frame to a patient device (see Laneman Report 13), but he also opines a communication cycle does not commence until the Open Session Request is issued (see id. 14).

The first instance of a downlink transmission is the cardiac base device sending a Device ID message, which, based on Laneman's former testimony, would initiate the communication cycle. Lanning attests the clinician can initiate a session by transmitting an Open Session Request. (See Lanning Report 30). Factual issues remain as to the parameters of the communication cycles for the accused devices (particularly in terms of when the communication cycle commences), as compared to the intervals during which the remotes are allowed to transmit frames. The parameters of the accused devices' communication cycles are a dispositive issue, and how the accused technology works is a question reserved for the trier of fact. Schoell, 247 F.3d at 1207.

Medtronic insists nothing in claim 21 requires the intervals to occur during the communication cycle and thus urges the two frames limitation would still not be satisfied. (See Reply 12). Medtronic's interpretation is not so convincing so as to compel a grant of summary judgment. The claim limitations' references to intervals refer to "communication cycles, each of which has intervals." ('734 Patent, col. 49, ll. 44–46). In the context of the '734 Patent, the intervals occur within a communication cycle.

With regard to the diabetes devices, Medtronic argues the communication timeline likewise fails because the remote transmits ACK/NAK messages in response to the first frame before the hub transmits the second frame. (See Mot. 25; Laneman Report 38 ("The pump sends

the marriage message . . . to the monitor, and the Periodic Data Update message . . . to initiate the intervals of the communication session. The Periodic Data Update message is transmitted before the ACK or NAK message is sent by the monitor to the pump."). As is the case for the cardiac devices, the parameters of the communication cycle for the diabetes device remain a factual issue.

C. Laches

To proceed under an affirmative defense of laches, a defendant must establish "the patentee unreasonably and inexcusably delayed filing suit and that the delay resulted in material prejudice to the defendant."[19] Ecolab, Inc. v. Envirochem, Inc., 264 F.3d 1358, 1371 (Fed. Cir. 2011) (citing Wanlass v. Gen. Elec. Co., 148 F.3d 1334, 1337 (Fed. Cir. 1998)). The delay is measured from the time the patentee possessed actual or constructive knowledge of a defendant's potentially infringing activities. Wanlass, 148 F.3d at 1337 (citation omitted). "[C]ourts impose a duty on patentees to police their patent rights, and will impose constructive knowledge based on the required reasonable, diligent inquiry." Magnetar Technologies Corp. v. Six Flags Theme Parks Inc., Civ. No. 07-127-LPS-MPT, 2014 WL 533425, at *6 (D. Del. Feb. 7, 2014) (alteration added) (citing Wanlass, 148 F.3d at 1338).

"A presumption of laches arises if the patentee delays bringing suit for more than six years after actual or constructive knowledge of the defendant's infringing activity." Ecolab, Inc., 264 F.3d at 1371 (citing A.C. Aukerman Co. v. R.L. Chaides Const. Co., 960 F.2d 1020, 1028, 1035–36 (Fed. Cir. 1992)). The "length of time that may be deemed unreasonable has no fixed boundaries," but instead depends on the circumstances of a case. Id. (citing A.C. Aukerman Co.,

[19] "The effect of laches is merely to withhold damages for infringement which occurred prior to the filing of the suit." *Peter Letterese And Assocs., Inc. v. World Inst. of Scientology Enters., Int'l*, 533 F.3d 1287, 1321 (11th Cir. 2008) (internal quotation marks and citation omitted).

960 F.2d at 1030). In response to a "defendant's evidence of at least a six-year delay, a patentee may offer proof that the delay has not in fact been six years — that is, that the time it first learned or should have known of the infringement after the patent issued was within six years. If a patentee is successful on this factual issue, no presumption arises." A.C. Aukerman Co., 960 F.2d at 1038 (internal footnote call number and citation omitted).

But "a presumption is not evidence." Id. at 1037. "[A]t all times, the defendant bears the ultimate burden of persuasion of the affirmative defense of laches. . . . The burden of persuasion does not shift by reason of the patentee's six-year delay." Id. at 1038–39 (alterations added; internal citations omitted). "If the patentee presents a sufficiency of evidence which, if believed, would preclude a directed finding in favor of the infringer, the presumption evaporates and the accused infringer is left to its proof. That is, the accused infringer would then have to satisfy its burden of persuasion with actual evidence." Id. at 1037–38 (citation omitted). "When raising the laches defense in the summary judgment context, the defendant . . . must establish that there was no genuine issue of material fact about the delay . . . ." Wanlass, 148 F.3d at 1337 (alterations added; citation omitted). Raising "a genuine issue respecting either factual element of a laches defense" overcomes the presumption of laches. A.C. Aukerman Co., 960 F.2d at 1038.

Medtronic argues Atlas and its predecessors-in-interest delayed bringing suit for over six years after they should have known of Medtronic's alleged infringement. (See Mot. 26–27). Medtronic not only insists the laches defense applies, but asserts the "burden shifts to Atlas 'to show that either the patentee's delay was reasonable or excusable under the circumstances or the defendant suffered neither economic nor evidentiary prejudice.'" (Id. 27 (quoting Wanlass, 148 F.3d at 1337)). The Court focuses only on evidence of constructive knowledge, as Atlas's

Response does not address Medtronic's alleged economic and evidentiary prejudice.

The '734 Patent was issued in December 1994, and Medtronic began manufacturing the accused devices using Telemetry B in 2002 and those using Telemetry C in 2006, more than six years before Atlas filed suit in September 2013. (See Defs.' SMF ¶¶ 15–16; Pl.'s SMF ¶¶ 15–16). The presumption of laches applies.

To rebut the presumption, Atlas explains it was not on notice of Medtronic's alleged infringement until 2011, when a press release regarding the supply of Zarlink chips to Medtronic was issued. (See Resp. 19). Atlas claims this was the earliest it could have learned of Medtronic's alleged infringement. (See id.). Atlas underscores the highly confidential nature of the telemetry protocols and devices in this case as good cause for any delay in filing suit. (See id.). It states it could not have reasonably known about Medtronic's confidential telemetry protocols except by way of discovery in this case, and it notes Medtronic did not purchase chips from Zarlink. (See id.). The Court gives little weight to Atlas's discovery argument, as Atlas filed suit and "formulated infringement contentions against Medtronic's products in this case[] before receiving discovery from Medtronic." (Reply 14).

According to Medtronic, Atlas possessed constructive knowledge of potential infringement because Medtronic's activities were "pervasive, open, and notorious." Wanlass, 148 F.3d at 1338. Constructive knowledge of suspected infringement "give[s] rise to a duty to investigate whether there is infringement[,]" and such knowledge may be imputed if the alleged infringer's "activities are sufficiently prevalent in the inventor's field of endeavor." Id. (alterations added). Medtronic states Atlas should have known of its telemetry products from information the company submitted to the FDA since 2002 and maintained on its website, including advertising its release of Telemetry C products and product manuals. (See Reply 14).

Yet apart from submitting company information to the FDA and hosting a website, there is little evidence Medtronic's activities were in fact "'pervasive, open, and notorious'" in the industry to put Atlas on constructive notice. Wanlass, 148 F.3d at 1338 (citing Hall v. Aqua Queen Mfg., Inc., 93 F.3d 1548, 1553 (Fed. Cir. 1996) (vacating summary judgment of laches as to one of eight defendants because patentee raised a triable issue of fact as to whether it knew or should have known of infringing conduct, where defendant did not market its products until seven years before the suit but the patentee testified it did not know of the accused products until a tradeshow four year before filing suit)).

Without more information regarding the amount of publicly available information at the time and Medtronic's prevalence in the inventor's field, disputed issues of material fact remain as to when Atlas, or its predecessors-in-interest,[20] possessed constructive knowledge of Medtronic's alleged infringement. See A.C. Aukerman Co., 960 F.2d at 1039 ("If the decision on laches is made on summary judgment, there must . . . be no genuine issues of material fact, the burden of proof of an issue must be correctly allocated, and all pertinent factors must be considered." (alteration added)); cf. Gasser Chair Co., 60 F.3d at 773 (reversing summary judgment of laches for multiple reasons, including trial court's improper inference against non-moving party regarding when patentee should have known of alleged infringement).

D. Notice and Marking

Medtronic argues Atlas's claims are barred by the Patent-Marking Statute, 35 U.S.C. section 287(a), precluding a damages award. (See Mot. 28). Pursuant to section 287(a), a patentee may not recover damages without establishing "proof that the infringer was notified of

[20] "A patentee cannot avoid the consequences of his laches by transferring the patent." Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1559 (Fed. Cir. 1997), abrogated in part on other grounds by Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed. Cir. 1998).

the infringement and continued to infringe thereafter."[21] Id. Such notice is required to recover a damages award. See id. Absent actual notice, a patentee may provide constructive notice to other inventors by marking the number of the patent on "substantially all of its patented products," Am. Med. Sys., Inc. *v. Med. Eng'g Corp.*, 6 F.3d 1523, 1538 (Fed. Cir. 1993), in a "substantially consistent and continuous" manner, id. at 1537. Because "compliance with the marking statute, 35 U.S.C. [section] 287(a), is a question of fact," resolution of the issue is improper at summary judgment, unless "no reasonable jury could find that the patentee either has or has not provided actual notice to the particular defendants by informing them of his patent and of their infringement of it." Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed. Cir. 2001) (alteration added; citations and internal quotation marks omitted).

Atlas contends Medtronic possessed constructive knowledge of its infringement of Atlas's Patent because Atlas and its predecessors sufficiently marked substantially all of their products protected by the '734 Patent. (See Resp. 20–22). According to Atlas, assignee, Digital Ocean, marked its Grouper product line, which apart from Medtronic's accused products, is "the only product[] known by anyone to have embodied or practiced the '734 [P]atent." (Id. 20; see Defs.' SMF ¶ 31; Pl.'s SMF ¶ 31 (alteration added)).

Fischer testified the Grouper product line was marked with the number of the '734 Patent. (See Fischer Deposition 138:17–19). Fischer became aware of the marking requirements in December 1992 when the industrial design of the enclosures, the promotion materials, and the labeling were being defined. (See id. 138:22–129:2). He met with Digital Ocean to provide the marketing and industrial design teams information regarding the required labeling, and "verified after we began showing the products that it either said patent pending or, once the patent was

[21] Atlas does not assert Medtronic had actual knowledge of infringement. (See Defs.' SMF ¶ 30; Pl.'s SMF ¶ 30).

granted, had the patent number." (Id. 139:6–8). Although Fischer admitted he lacked physical evidence of a marked Grouper line product, he has "every reason to believe" the Grouper product line was marked with the '734 Patent. (Id. 139:22–140:7).

Fischer also emphasized Digital Ocean was "very good at . . . execution on the fulfillment side. So the probability that any one wouldn't be marked is very small. The people who did that were some of the most competent and consistent people in the whole company." (Id. 140:13–18 (alteration added)). As a basis for his belief Digital Ocean consistently marked substantially all of its products, Fischer explains the company went so far as to mark a prototype (a Manta product he has in his possession) when it was not legally required to do so. (See id. 142:5–15).

Medtronic asserts Fischer lacks personal knowledge all Digital Ocean products were marked. (See Reply 14). The weight to be given to Fischer's testimony and whether Atlas has met its burden to show it complied with the statutory requirements of section 287(a) are issues for the trier of fact. While Atlas has the burden of proof to demonstrate compliance at trial, to succeed on its summary judgment motion, Medtronic must establish no reasonable jury could find Atlas complied with the Patent-Marking Statute. This is simply not the case given the evidence in the record.

IV. CONCLUSION

For the foregoing reasons, it is

ORDERED AND ADJUDGED that Medtronic's Motion for Summary Judgment **[ECF No. 148]** is **GRANTED in part** and **DENIED in part**. Summary judgment of non-infringement is granted in Medtronic's favor as to claims 6 and 11 and denied as to claim 21.

DONE AND ORDERED in Chambers at Miami, Florida, this 8th day of October, 2014.

CECILIA M. ALTONAGA
UNITED STATES DISTRICT JUDGE

cc: counsel of record