

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

CENTRAK, INC.,

Plaintiff,

v.

SONITOR TECHNOLOGIES, INC.

Defendant.

Civil Action No. 14-183-RGA

MEMORANDUM OPINION

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August 30, 2017

  
ANDREWS, U.S. DISTRICT JUDGE:

Presently before the Court are Defendant's Motion for Summary Judgment of No Infringement of U.S. Patent No. 8,604,909 (D.I. 148) and related briefing (D.I. 149, 175, 213) and Defendant's Motion for Summary Judgment of Invalidity of U.S. Patent No. 8,604,909 (D.I. 150) and related briefing (D.I. 151, 181, 214). The Court heard oral argument on June 9, 2017. (D.I. 235) ("Hr'g Tr."). After oral argument, at the court's direction, the parties submitted additional briefing directed to the evidence of record related to Plaintiff's infringement theories. (D.I. 230, 231, 233, 234).

## **I. Background**

Plaintiff brought this infringement action on February 12, 2014, alleging that Defendant infringes U.S. Patent No. 8,604,909 ("the '909 patent"). (D.I. 1). Plaintiff amended its complaint on November 10, 2015. (D.I. 87). Defendant answered, raising a number of defenses, including non-infringement and invalidity. (D.I. 106).

The '909 patent claims methods and systems for locating and identifying portable devices using ultrasonic base stations. Plaintiff asserts that Defendant infringes independent claims 1, 7, 8, 16, and 26 and dependent claims 18, 21, and 22 of the '909 patent. (D.I. 149 at 7). Claims 1, 7, 8, 18, 21, and 22 are system claims. Claim 1 reads as follows:

1. A system for determining a location and an identity of a portable device, the system comprising:
  - means for transmitting timing synchronization information including a plurality of RF transceivers coupled to a backbone network and a time server generating the timing synchronization information;
  - wherein each of the plurality of RF transceivers periodically transmits a request to the time server to receive the timing synchronization information;
  - a plurality of stationary ultrasonic base stations, each ultrasonic base station configured to receive the timing synchronization information and to transmit a corresponding ultrasonic location code in a time period based on the received timing synchronization information, each ultrasonic location code representative of a location of the respective ultrasonic base station; and

a plurality of portable devices, each portable device configured to 1) receive the timing synchronization information, 2) detect the ultrasonic location codes from the ultrasonic base stations and 3) transmit an output signal including a portable device ID representative of the portable device and the detected location code, wherein each portable device is synchronized to detect the ultrasonic location code in the time period based on the received timing synchronization information.

('909 patent, claim 1). Claims 16 and 26 are directed to an ultrasonic base station. Claim 16 reads as follows:

16. An ultrasonic base station, comprising:  
a radio frequency (RF) receiver, coupled to a time server via a backbone network and configured to receive timing synchronization information from the time server via the backbone network; and  
an ultrasonic transmitter configured to transmit an ultrasonic location code in a time period based on the received timing synchronization information, the ultrasonic location code representative of a location of the ultrasonic base station, wherein the ultrasonic base station periodically transmits a request to the time server, via the backbone network, to receive the timing synchronization information.

('909 patent, claim 16).

## **II. Legal Standard**

### **A. Summary Judgment**

“The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). The moving party has the initial burden of proving the absence of a genuinely disputed material fact relative to the claims in question. *Celotex Corp. v. Catrett*, 477 U.S. 317, 330 (1986). Material facts are those “that could affect the outcome” of the proceeding, and “a dispute about a material fact is ‘genuine’ if the evidence is sufficient to permit a reasonable jury to return a verdict for the nonmoving party.” *Lamont v. New Jersey*, 637 F.3d 177, 181 (3d Cir. 2011) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). The burden on the

moving party may be discharged by pointing out to the district court that there is an absence of evidence supporting the non-moving party's case. *Celotex*, 477 U.S. at 323.

The burden then shifts to the non-movant to demonstrate the existence of a genuine issue for trial. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586–87 (1986); *Williams v. Borough of West Chester, Pa.*, 891 F.2d 458, 460–61 (3d Cir. 1989). A non-moving party asserting that a fact is genuinely disputed must support such an assertion by: “(A) citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations . . . , admissions, interrogatory answers, or other materials; or (B) showing that the materials cited [by the opposing party] do not establish the absence . . . of a genuine dispute . . . .” FED. R. CIV. P. 56(c)(1).

When determining whether a genuine issue of material fact exists, the court must view the evidence in the light most favorable to the non-moving party and draw all reasonable inferences in that party's favor. *Scott v. Harris*, 550 U.S. 372, 380 (2007); *Wishkin v. Potter*, 476 F.3d 180, 184 (3d Cir. 2007). A dispute is “genuine” only if the evidence is such that a reasonable jury could return a verdict for the non-moving party. *Anderson*, 477 U.S. at 247–49. If the non-moving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. *See Celotex Corp.*, 477 U.S. at 322.

## **B. Infringement**

A patent is infringed when a person “without authority makes, uses, offers to sell, or sells any patented invention, within the United States . . . during the term of the patent . . . .” 35 U.S.C. § 271(a). A two-step analysis is employed in making an infringement determination. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*, 517

U.S. 370 (1996). First, the court must construe the asserted claims to ascertain their meaning and scope. *See id.* The trier of fact must then compare the properly construed claims with the accused infringing product. *See id.* at 976. This second step is a question of fact. *See Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir. 1998).

“Literal infringement of a claim exists when every limitation recited in the claim is found in the accused device.” *Kahn v. Gen. Motors Corp.*, 135 F.3d 1472, 1477 (Fed. Cir. 1998). “If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law.” *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). If an accused product does not infringe an independent claim, it also does not infringe any claim depending thereon. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553 (Fed. Cir. 1989). However, “[o]ne may infringe an independent claim and not infringe a claim dependent on that claim.” *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1359 (Fed. Cir. 2007). A product that does not literally infringe a patent claim may still infringe under the doctrine of equivalents if the differences between an individual limitation of the claimed invention and an element of the accused product are insubstantial. *See Warner–Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 24 (1997). The patent owner has the burden of proving infringement and must meet its burden by a preponderance of the evidence. *See SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988).

When an accused infringer moves for summary judgment of non-infringement, such relief may be granted only if at least one limitation of the claim in question does not read on an element of the accused product, either literally or under the doctrine of equivalents. *See Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1376 (Fed. Cir. 2005); *see also TechSearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1369 (Fed. Cir. 2002) (“Summary judgment of noninfringement is . . .

appropriate where the patent owner's proof is deficient in meeting an essential part of the legal standard for infringement, because such failure will render all other facts immaterial.”). Thus, summary judgment of non-infringement can only be granted if, after viewing the facts in the light most favorable to the non-movant, there is no genuine issue as to whether the accused product is covered by the claims (as construed by the court). *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1304 (Fed. Cir. 1999).

### **C. Written Description**

The written description requirement contained in 35 U.S.C. § 112, ¶ 1 requires that the specification “clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad Pharm., Inc., v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (alteration in original). “In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* The written description inquiry is a question of fact. *See id.* Although it is a question of fact, “[c]ompliance with the written description requirement . . . is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1307 (Fed. Cir. 2008). “A party must prove invalidity for lack of written description by clear and convincing evidence.” *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 682 (Fed. Cir. 2015).

### **III. Defendant’s Motion for Summary Judgment of No Infringement**

There is no dispute that Defendant does not sell its customers all components necessary to make the infringing system claimed in claims 1, 7, 8, 18, 21, and 22 or the apparatus claimed in

claim 16.<sup>1</sup> (Hr'g Tr. 44:11-13). Plaintiff's infringement theories, therefore, are limited to making and using the patented invention. (*Id.* at 44:6). Plaintiff has alleged only direct infringement of these claims. (*Id.* at 46:22-47:6). First, Plaintiff contends that Defendant makes the allegedly infringing system when it installs the system at its customers' locations. (D.I. 175 at 6). Alternatively, Plaintiff argues that the customer's conduct in installing the system is attributable to Defendant. (*Id.*). Second, Plaintiff contends that Defendant uses the allegedly infringing system when it tests and troubleshoots the system after it is installed. (*Id.*).

Defendant moves for summary judgment of no infringement of claims 1, 7, 8, 16, 18, 21, and 22 on the basis that it neither makes nor uses the patented invention.<sup>2</sup> According to Defendant, there is no evidence in the record that would support a finding of infringement. (Hr'g Tr. 41:15-21). Specifically, Defendant contends that it does not install the system, nor does it contract with another company to do so. (D.I. 213 at 11). Defendant further contends that it does not use the entire system and argues there is no evidence in the record that would support a finding that it does. (Hr'g Tr. 41:25).

In support of its contention that Defendant makes and uses the system, Plaintiff first points to excerpts from a deposition of Stephen Cormier, who is Defendant's Vice President of Technical and Customer Support. (D.I. 175 at 11; D.I. 191 at 54, depo 25:4-9). Plaintiff alleges that Defendant "first goes to the customer site and determines from the layout of the hospital what type equipment should be installed." (D.I. 175 at 11). The relevant portion of the Cormier deposition that Plaintiff cites for support for this statement reads, "Ordinarily that's done by looking at the set

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<sup>1</sup> Claim 16 is an apparatus claim for "[a]n ultrasonic base station comprising: a radio frequency (RF) receiver, coupled to a time server via a backbone network." Like the system claims, this claim calls for components not provided by Defendant (the time server and backbone network).

<sup>2</sup> Defendant has also moved for summary judgment of no infringement for certain claims under several other theories. Since I find claims 1, 7, 8, 16, 18, 21, and 22 are not infringed because Defendant neither makes nor uses the system or apparatus claimed, and because I find all of the asserted claims are invalid for lack of written description, I need not reach these other non-infringement arguments.

of prints for the site, not going on site.” (D.I. 191 at 38, Depo. Tr. 74:5-7). Whether Defendant’s employees visit the site or simply view prints for the site, however, such activity is insufficient to support a jury finding that Defendant installs or tests the allegedly infringing system. All this evidence reveals is that Defendant evaluates the customer’s site to determine the customer’s needs.

Plaintiff next alleges that Defendant “determines if the customer’s backbone network and existing infrastructure is compliant with the Cisco CCX protocol and sufficient to support the quantity of portable tags in the proposed system to be delivered.” (D.I. 175 at 11). For support, Plaintiff points to excerpts from Mr. Cormier’s deposition. (*Id.*) Mr. Cormier’s testimony confirms that Defendant’s system requires that the customer’s wireless network be CCX compatible and that Defendant’s system will not work if the network is not compatible. (D.I. 191 at 33-34, Depo. Tr. 51:22-52:5; D.I. 191 at 47-50, Depo. Tr.112:3-115:17). Mr. Cormier also testified that Defendant “wouldn’t put the system in if the system supporting it didn’t exist.” (D.I. 191 at 44, Depo. Tr. 108:14-19). This testimony indicates only that Defendant evaluates the capabilities of the customer’s existing network and determines whether or not it will support Defendant’s system. This testimony does not support a jury finding that Defendant installs or tests the allegedly infringing system.

Plaintiff next alleges that if the customer’s network is not compliant, Defendant “will issue directions to the hospital” to obtain whatever equipment and licenses are necessary to meet the requirements of Defendant’s system. (D.I. 175 at 11). Plaintiff again cites to Mr. Cormier’s deposition testimony as support. (*Id.*) This portion of his testimony indicates that Defendant provides their customers with the network requirements necessary for supporting Defendant’s system. (D.I. 191 at 48, Depo. Tr. 113:2-6). When asked whether Defendant “makes sure” that the required infrastructure is in place before installation, Mr. Cormier testified that, “We don’t

physically verify it but we do have communication with the hospital about that.” (*Id.* at 50, Depo. Tr. 115:18-24). Again, this testimony does not support a jury finding that Defendant installs or uses the allegedly infringing system. All it indicates is that Defendant notifies the customer of the network infrastructure requirements and how to acquire the necessary technology if the customer does not already have it in place.

Plaintiff next alleges that once Defendant confirms that the customer has the necessary infrastructure in place, Defendant “returns to install the system.” (D.I. 175 at 11). Specifically, Plaintiff alleges that Defendant’s “personnel are on site to supervise and oversee the installation.” (*Id.*). Plaintiff further alleges that, “The actual mounting of equipment is done either by Sonitor personnel or by those with whom Sonitor has contracted to do the work for Sonitor, and which Sonitor supervises.” (*Id.*). As support for these allegations, Plaintiff cites to excerpts from the deposition of Anne Marie Bugge. (*Id.*). Ms. Bugge testified that Mr. Cormier “works with the customers and also our sales team in terms of layouts of projects, how the devices should be installed [and] oversees the installation.” (D.I. 191 at 43-44, Depo. Tr. 25:21-26:3). Ms. Bugge did not elaborate on what was involved in “oversee[ing] the installation.”

Ms. Bugge further testified that Defendant has contractual agreements with partners with whom Defendant works. (*Id.* at 45-46, Depo. Tr. 62:24-63:2). The contractual agreements Ms. Bugge referred to are “integration agreement[s]” and “reseller agreement[s].” (*Id.* at 46, Depo. Tr. 63:5-6, 8). Nothing in Ms. Bugge’s testimony references contracts entered into with third parties to perform the installation of Defendant’s system. Ms. Bugge further testified that during installation of Defendant’s system, “There is a team of people involved.” (*Id.* at 47, Depo. Tr. 76:21-25). According to Ms. Bugge, the actual installation is performed by a “partner or a third party or the hospital sometimes.” (*Id.* at 48, Depo. Tr. 77:16-22). Nothing in the cited portions of

Ms. Bugge's testimony supports a jury finding that Defendant's employees or agents make the system by performing the installation.

Plaintiff alleges that "the installation process involves installing the location transmitters, distributing the tags, installing the software to make the Sonitor server . . . and integrating the entire system into the customer's network." (D.I. 175 at 11-12). Plaintiff again cites to Mr. Cormier's deposition testimony as support for this recitation of facts. (*Id.* at 12). The portions of testimony cited by Plaintiff, however, support only the uncontested fact that Defendant provides the software that is installed on the server. (D.I. 191 at 27, Depo. Tr. 25:8-11). As Mr. Cormier also testified, the server hardware is not supplied by Defendant. (*Id.*, Depo. Tr. 25:5-7, 25:15-19). Again, nothing in the cited testimony supports a jury finding that Defendant performs the installation or uses the system.

Plaintiff next alleges that Defendant's "personnel also enter the location data on the virtual server . . . where the Sonitor software was installed during installation." (D.I. 175 at 12). Plaintiff cites to a portion of Mr. Cormier's testimony as support for this assertion. (*Id.*; D.I. 191 at 26-27, Depo. Tr. 24:21-25:3, 25:8-11). This is the same portion of Mr. Cormier's testimony cited as support for the last allegation and, as noted above, this testimony simply indicates that Defendant provides software which is installed on server hardware supplied by the customer. In another portion of Mr. Cormier's deposition, not cited by Plaintiff here, Mr. Cormier does testify that Defendant's employees "do the data entry," meaning entering the location data into the server. (*Id.* at 29, Depo. Tr. 29:11-21).<sup>3</sup> Nothing in this testimony, however, supports a jury finding that Defendant performs the installation.

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<sup>3</sup> During oral argument I asked Plaintiff to submit a letter pointing out where in the evidence of record there was support for its infringement contentions. (Hr'g Tr. 56:13-16, 63:14-19). Plaintiff submitted a letter with an entirely new theory of infringement that Defendant makes the system by "assigning location codes" and "entering that data into the server." (D.I. 233 at 1). Even if I were to consider this untimely infringement theory, I do not find it

Finally, Plaintiff alleges that Defendant makes a post-installation visit to the customer site to test and tune the system. (D.I. 175 at 12). Plaintiff alleges that once Defendant is satisfied that the system is functioning, it certifies and commissions the system. (*Id.*). Plaintiff also alleges that Defendant continues to work with the customer post-installation to troubleshoot problems as they arise. (*Id.*). Plaintiff again cites to Mr. Cormier's deposition as support. (*Id.*). The cited portions of the deposition testimony indicate that, post-installation, "The installation company, whoever that may be, will provide [Sonitor] a set of as-built drawings illustrating what devices were put into which locations." (D.I. 191 at 29, Depo. Tr. 29:11-15). Mr. Cormier further testified that Defendant's employees "go out and tune the system to ensure it functions normally." (*Id.*, Depo. Tr. 29:21-23). Plaintiff also cites to Ms. Bugge's testimony that Mr. Cormier works with customers and the sales team on system layouts, "commissions and certifies . . . that everything is working to specification," and "helps troubleshoot" post-installation. (*Id.* at 54-55, Depo. Tr. 25:18-26:8). Nothing in this testimony supports a jury finding that Defendant makes the system by performing the installation.

I see no support in any of the evidence of record cited by Plaintiff that Defendant makes the system. The testimony cited indicates that Defendant does not itself install the system. Furthermore, Plaintiff has not provided any evidence of contracts entered into between Defendant and third party installers that would indicate that the installation is done at Defendant's direction or behest.

Plaintiff argues that even if Defendant does not physically perform the installation, the customer's actions in making the claimed invention are attributable to Defendant. (D.I. 175 at 13). Defendant relies on *Centillion* for the proposition that the accused infringer must assemble the

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persuasive. Simply entering the data into a server does not constitute making the physical system claimed in the '909 patent.

entire system itself in order to be liable for infringement. (D.I. 149 at 15; *Centillion Data Sys., LLC v. Qwest Comm'ns Int'l, Inc.*, 631 F.3d 1279, 1288 (Fed. Cir. 2000)). Plaintiff counters that the Federal Circuit's decision in *Akamai* "establish[ed] a broader test for attributing conduct of an accused infringer's customer to the accused infringer" than the holding in *Centillion*. (D.I. 175 at 14-15). I disagree.

There is no indication that *Centillion* has been overruled or that its holding is no longer good law. In fact, the Federal Circuit has cited to *Centillion* at least three times since *Akamai* was decided, and in each case indicated that system claims are different from method claims and are still treated under the *Centillion* standard for infringement. See *Georgetown Rail Equip. Co. v. Holland L.P.*, 2017 WL 3499240, at \*5 (Fed. Cir. Aug. 1, 2017) (citing *Centillion* for proposition that system claim requires single party to use all elements of claimed invention); *Lyda v. CBS Corp.*, 838 F.3d 1331, 1339 (Fed. Cir. 2016) (joint infringement applies to method claims, not system claims); *LifeNet Health v. LifeCell Corp.*, 837 F.3d 1316, 1326 (Fed. Cir. 2016) (citing *Centillion* for proposition that there is no direct infringement if action by third party required to meet all claim limitations). *Centillion* is still good law and applies to the system claims in this case. Plaintiff must prove that Defendant makes or uses the entire system, including all claimed elements, in order to prove infringement. I find that Plaintiff has not pointed to sufficient evidence in the record to allow a reasonable jury to conclude that Defendant infringes the system claims by making the claimed invention.

I also find no evidence in the record to support a finding of infringement on the basis of use. Plaintiff's "use" theory of infringement is based on troubleshooting and testing the system. Plaintiff has not pointed to any evidence of record, however, that supports a finding that Defendant has ever used the system in its entirety in performing these tasks. As an initial matter, Plaintiff has

not provided any evidence of what is involved in the alleged troubleshooting and testing. As to troubleshooting, Plaintiff points only to vague statements made during depositions. There is simply no evidence that Plaintiff uses any part of the system, never mind the entire system, during the troubleshooting referred to in the depositions.

As to testing or verifying operability, Plaintiff relies on statements from depositions that Defendant certifies and commissions the system. But again, there is no evidence to be found in the record as to what takes place during certifying and commissioning. There is no evidence that Defendant operates any part of the system, or the entire system, during certification and commissioning. Plaintiff cites to a declaration from a person it characterized at oral argument as being “a guy who competes directly who says that all the hospitals that they sell to in competition require that the thing be fully tested live before they buy a system. He’s a guy with decades of experience in this.” (Hr’g Tr. 45: 4-7). The declaration Plaintiff cites is from Dr. Ari Naim, who describes himself as “the co-founder, President and CEO of the CenTrak, Inc., the Plaintiff.” (D.I. 179 at ¶ 1). The declaration does not purport to allege actual knowledge of any testing or troubleshooting performed by Defendant. Instead, the declaration states that “there is no possible way that Sonitor could deliver its system without running full tests on the installed, operable system.” (*Id.* at ¶ 10). This self-serving declaration from Plaintiff’s CEO, who is not one of Plaintiff’s experts, cannot serve as evidence that Defendant actually did perform testing of an actual complete system.

It is certainly true that testing a system may constitute an infringing use. *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1366 (Fed. Cir. 2001). This does not alleviate Plaintiff’s burden to demonstrate that testing actually occurred, however. The cases to which Plaintiff points do not suggest otherwise. For example, in *Waymark*, no use was found because the alleged

infringer tested only components of the system, not the entire system constituting the claimed invention. *Id.* Sufficient use to survive summary judgment was found in *McKesson* where there was evidence that the alleged infringer had used the entire system in product development and had demonstrated the system at a client facility at least once. *McKesson Information Solutions, Inc. v. Bridge Medical, Inc.*, 2005 WL 2346919 at \*8 (E.D. Cal. Sept. 23, 2005). Finally, in *Radio Corporation*, the alleged infringer had admitted to fully assembling the entire system for testing prior to disassembly and shipment to customers. *Radio Corporation of America v. Andrea*, 90 F.2d 612, 613 (2d Cir. 1937). In all of the cases where use was found, there was specific evidence in the record that testing had been performed on the entire system. Here, there is no such evidence in the record. Plaintiff cannot survive summary judgment by relying on vague allegations of troubleshooting and the wholly unsupported assertion that if the system was sold, Defendant must necessarily have tested it. I find that Plaintiff has not pointed to any evidence of testing or troubleshooting that would allow a reasonable jury to conclude that Defendant uses the system.

For the reasons given above, I will grant Defendant's motion for summary judgment of no infringement of claims 1, 7, 8, 16, 18, 21, and 22 of the '909 patent on the basis of either making or using the claimed invention.

#### **IV. Defendant's Motion for Summary Judgment of Invalidity**

Defendant moves for summary judgment of invalidity of all asserted claims on the basis that the claims do not find written description support in the specification.<sup>4</sup> Specifically, Defendant argues that the specification of the '909 patent "fails to provide sufficient information in the original disclosure to show that the inventor possessed the invention at the time of the

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<sup>4</sup> Defendant also asserts that the claims are not enabled and are indefinite. (D.I. 151 at 7). Since I find that all of the asserted claims are invalid for lack of written description, I need not reach the issues of enablement or indefiniteness.

original filing.” (D.I. 151 at 14). Defendant contends that the ’909 patent discloses radio frequency (“RF”) and infrared (“IR”) base stations, transmitters, and receivers, but not ultrasound (“US”) base stations, transmitters, and receivers as required by the asserted claims. (*Id.* at 15-16).

Plaintiff responds that Defendant’s written description argument is actually an enablement argument. (D.I. 181 at 9). According to Plaintiff, the specification of the ’909 patent discloses US base stations in a manner sufficient to meet the written description requirement. (*Id.* at 12). Plaintiff contends that in order to prevail on a written description defense, Defendant must prove “that the specification contains no disclosure recognizable as corresponding to the claimed” US components. (D.I. 181 at 12) According to Plaintiff, Defendant cannot show this because US base stations are expressly disclosed in the specification. (*Id.*).

The ’909 patent’s only disclosure of US base stations is as follows:

Although IR base stations 106 are described, it is contemplated that the base stations 106 may also be configured to transmit a corresponding BS-ID by an ultrasonic signal, such that base stations 106 may represent ultrasonic base stations. Accordingly, portable devices 108 may be configured to include an ultrasonic receiver to receive the BS-ID from an ultrasonic base station.

(’909 patent at 5:5-11). Plaintiff’s argument appears to be that because the specification uses the word “ultrasonic,” the disclosure of US base stations, transmitters, and receivers is sufficient to meet the written description requirement. I disagree. The Federal Circuit has held that “the specification must describe an invention understandable to [a] skilled artisan and show that the inventor actually invented the invention claimed.” *Ariad Pharma., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Here, there is no question that the inventor actually invented a system employing IR base stations, transmitters, and receivers. The question is whether the single paragraph quoted above is sufficient to show that the inventor actually invented US base stations, transmitters, and receivers. I do not think that it is.

What matters in a written description analysis is what is found in “the four corners of the specification.” *Ariad*, 598 F.3d at 1351. “The knowledge of ordinary artisans may be used to inform what is actually in the specification, but not to teach limitations that are not in the specification, even if those limitations would be rendered obvious by the disclosure in the specification.” *Rivera v. Int’l Trade Comm’n*, 857 F.3d 1315, 1322 (Fed. Cir. 2017) (internal citation omitted).

Plaintiff appears to be arguing that even though only IR embodiments are disclosed, an embodiment using US is supported by the specification because the inventors stated that a US system was “contemplated.” (D.I. 181 at 12). Mere contemplation, however, is not sufficient to meet the written description requirement. The problem with Plaintiff’s argument is that US and IR are fundamentally different. IR is a form of electromagnetic radiation, or a light wave, that travels at approximately 300 million meters per second. (D.I. 161 at 331, ¶ 30). US, on the other hand, is a sound wave, which travels at approximately 340 meters per second in air. (*Id.*). As an initial matter, it seems clear to me that electromagnetic radiation and sound waves are not simply two species of the same genus; rather these are two completely different types of phenomena. The manners in which they are generated, transmitted, and received are necessarily different.

Plaintiff argues that both IR and US technology were well-developed and the differences between US and IR were well known at the time of invention. (D.I. 181 at 16). This may well be true, but it is insufficient to show that the inventor had possession of a system employing a US base station, transmitter, and receiver. It seems clear to me that one could not simply drop a US transmitter into the system as disclosed in the specification and have a functioning US system. There is no dispute that the two technologies, light waves and sound waves, are fundamentally different and there is also no dispute that there is no disclosure in the patent whatsoever that

acknowledges this. The dispute between the parties is whether these differences are relevant to the invention as described. Defendant contends that the differences are critical and for that reason, the described IR system does not adequately disclose a US system. (D.I. 151 at 18). In contrast, Plaintiff contends that using US instead of IR is a minor difference, such as the difference between using #2 screws and #3 screws. (D.I. 181 at 8). I agree with Defendant that the differences are significant to the question of whether the written description requirement is met.

For example, because US travels at a speed a million times slower than IR, any application in which precise timing is involved would necessarily require a significantly different solution if implemented using IR than if US were used. Timing is critical to the technology disclosed in the '909 patent. The specification discloses that RF base stations transmit timing synchronization information ("TSI") to the IR base stations, as well as to the portable devices. ('909 patent at 4:19-22). The TSI "provide[s] a unified time of origin to all nodes in the system." (*Id.* at 3:55-56). The IR base stations then use the TSI to determine when to periodically transmit a base station identification. (*Id.* at 4:46-59). Since IR and RF travel at the speed of light, transmission and reception are essentially simultaneous. (D.I. 159 at 60, Depo. Tr. 104:2-8; at 63, 221:4-19; at 46, Depo. Tr. 171:6-13). The fact that US travels about a million times slower introduces propagation delays into the system that result in non-simultaneous transmission and reception. (D.I. 159 at 46, Depo. Tr. 171:6-16). Dealing with these propagation delays is nowhere disclosed in the patent.

In addition, the use of US introduces a host of other problems not present with IR technology. For example, since an US system uses sound waves, it encounters problems with interference from reflection and echoes that are not present in IR systems. (D.I. 159 at 40, Depo. Tr. 146:13-149:8). In contrast, IR devices are susceptible to other types of interference and a

discussion of the effects of that interference, such as the creation of dead zones, and how to avoid such interference, is discussed in detail in the specification. ('909 patent at 13:24-14:4).

There is simply nothing in the '909 patent's specification that even acknowledges the differences between IR and US. An inventor cannot demonstrate possession of the invention merely by stating that it is "contemplated" that the invention could be configured to use a completely different technology than what is described in the patent without providing at least some description of the configurational changes required to do so. The written description requirement guards against an inventor "leaving it to the . . . industry to complete an unfinished invention." *Ariad*, 598 F.3d at 1353. This is exactly what the patentee did here. For the reasons given above, I find that the asserted claims of the '909 patent are invalid under § 112, ¶ 1 for lack of written description.

## **V. Conclusion**

For the reasons set forth above, Defendant's Motion for Summary Judgment of No Infringement of U.S. Patent No. 8,604,909 (D.I. 148) is granted as to claims 1, 7, 8, 16, 18, 21, and 22. Defendant's Motion for Summary Judgment of Invalidity of U.S. Patent No. 8,604,909 (D.I. 150) is granted as to all asserted claims.

An appropriate order will be entered.