

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF WISCONSIN

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FUJITSU LIMITED, LG ELECTRONICS, INC.  
and U.S. PHILIPS CORPORATION,

Plaintiffs,

v.

NETGEAR, INC.,

Defendant.

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OPINION AND ORDER

07-cv-710-bbc

This patent infringement suit involving technology for the wireless transmission of information is before the court on the parties' cross motions for summary judgment. All parties seek summary judgment on the contention of plaintiffs Fujitsu Limited, LG Electronics, Inc. and U.S. Philips Corporation that defendant NETGEAR, Inc. sells products that infringe three United States Patents: No. 6,469,993 (the '993 patent), which claims a method for controlling the traffic load in a wireless communication system; No. 6,018,642 (the '642 patent), which claims a wireless communication system with intermittent power-on capabilities; and No. 4,975,952 (the '952 patent), which claims a method for wireless communication of data in segments. In addition, defendant seeks summary judgment on

its counterclaims that the asserted claims of the three patents are invalid. I conclude that plaintiffs have failed to adduce sufficient evidence to allow a reasonable jury to find that defendant's accused products infringe any of the asserted claims in plaintiffs' patents and that defendant is entitled to summary judgment on plaintiffs' infringement claims. For the same reason, plaintiffs' motion for summary judgment on willfulness will be denied. Because non-infringement is clear and defendant has shown no reason to believe it is at risk for further infringement suits, I will exercise my discretion not to decide defendant's invalidity counterclaims or defenses.

## I. PRELIMINARY MATTERS

Before discussing the merits of the parties' motions for summary judgment, I must address some of the supplemental issues raised by the parties.

### A. Motions to Strike

In an order entered on July 29, 2009, dkt. #575, I resolved the parties' motions to strike. I will apply the rulings in that order here without further discussion.

### B. Citations to the Record

With more than 600 docket entries, many more exhibits and the idiosyncratic

numbering inherent in the courts' electronic filing system, the identification of specific documents is inordinately confusing in this case. To assist anyone trying to find a cited document on the docket sheet, I have cited the docket number, #431, for example, and the exhibit *as it is labeled on the docket sheet*, exh. #5, as opposed to citing the number given the exhibit by the party submitting it, which in this instance was exh. #4 of dkt. #431. However, when I have cited a particular page in an exhibit, I have used the page number used by the parties in the actual document, not the page number assigned by CM/ECF.

### C. Manner of Proving Infringement

From the beginning of this litigation, plaintiffs have taken the position that they may prove infringement by defendant's products by showing that those products practice relevant standards that read on plaintiffs' patents. This was the strategy used by the plaintiff in Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263 (Fed. Cir. 2004). The plaintiff based its suit on the theory that networks conforming with an Institute for Electrical and Electronic Engineers (IEEE) standard also conformed to the patent in suit; thus, if the manufacturers of the devices incorporated technology explicitly designed to facilitate the construction of IEEE 1394 networks, they were liable for direct infringement.

At one point, early in the suit, plaintiffs resisted discovery requests from defendant, arguing that they were going to prove that the accused products practiced relevant standards

that read on plaintiffs' products. Defendant contends that plaintiffs gave up any other means of proving infringement and cannot claim now that defendant's products practice the specific methods claimed by plaintiffs' patents. Defendant is correct in noting that plaintiffs initiated this infringement action under the theory that they could show infringement by defendant's accused products if they showed that the products practice either certain sections of the IEEE 802.11 Standard-2007, which contains the requirements applicable to methods for the wireless connection and communication of devices in a local area network, or guidelines regarding the implementation of the 802.11 standard's Quality of Service requirements set out in the Wi-Fi Multimedia Specification.

Despite the emphasis that plaintiffs put on the standards and specifications, however, that was never plaintiffs' only theory. They never waived their right to prove infringement by comparing defendant's accused products to the patents' claims without relying on the standards. Defendant cites the magistrate judge's denial of defendant's motion to compel discovery on May 1, 2008, dkt. #96, as evidence that plaintiffs were disavowing any effort to prove infringement by comparison to the claims of the patents, but a close review of his order shows that he did not make it the law of this case that plaintiffs could prove infringement only under the method discussed in Dynacore. Instead, the magistrate judge relied on plaintiffs' representation that they did not have the information defendant sought at the time regarding infringement based on a comparison between the accused products and

the patents, as opposed to similar information based on a comparison of the standards and the patents. Trans., Tel. Mot. Hrg., dkt. #98, at 41.

Plaintiffs attempted to prove infringement using the Dynacore method when they moved for partial summary judgment, dkt. #227. They contended that devices practicing certain portions of the 802.11 standard and the Wi-Fi Multimedia Specification necessarily practice the patents at issue. Plaintiffs were successful with respect to claims 1 and 6 of the '952 patent, dkt. #301 at 22, but unsuccessful with respect to claim 4 of the '952 patent, claims 25 and 26 of the '993 patent and claims 2, 6 and 8 of the '642 patent. Id. at 22-23. (Despite plaintiffs' contention to the contrary, mere compliance with a section of the standard may not be enough to establish infringement because, as will be addressed later, the optional nature of a section, such as § 9.4, means that a device can comply with a relevant section without actually practicing the requirements in the section. For the non-optional sections compliance can be enough because a device cannot comply with the section without practicing its required methods.) Plaintiffs' lack of success as to some claims does not prevent them from attempting to prove infringement by comparing the accused products directly to the patents' claims, but it does prevent them from making any new arguments about how a device practicing the standard necessarily practices the patents. The time for making any such arguments has passed. Raising such arguments now would require reconsideration of the ruling on the earlier motion, something plaintiffs have not requested.

Accordingly, although plaintiffs are not barred from attempting to prove infringement by comparing accused products directly to patent claims, I will disregard any new arguments that products practicing the standard necessarily practice the patents' claimed inventions.

#### D. Grouping of Products

Throughout this litigation, defendant has contested plaintiffs' effort to group the accused products when providing evidence of infringement and the court has upheld defendant's efforts. Despite this, plaintiffs have proceeded on summary judgment as if it were proper to group accused products. This decision proves fatal to some of plaintiffs' arguments. In those instances in which plaintiffs' failure to prove that grouping of accused products is appropriate, the consequence is an absence of evidence regarding many of the accused products.

For example, plaintiffs relied on grouping of products by applying their expert's opinions on test results for one version of an accused product to other allegedly similar versions of the product. Their expert, Joel Williams, has testified that "different versions of the same product will typically support the same feature set . . . ." Williams Dep., dkt. #431, exh. #5, at 148, lns. 10-11; see also Plts.' Resp. Br., dkt. #464, at 15. According to Williams, if all versions of a particular product did not practice the same methods, defendant would be committing a "flagrant violation" of the Wi-Fi Alliance protocols. Dkt.

#431, exh. #5, at 146, lns. 10-16. Williams may be correct, but it is irrelevant in *this* case whether defendant has committed any violation of Wi-Fi Alliance protocol. This is a suit for patent infringement in which it is plaintiffs' burden to prove by a preponderance of the evidence that *each* accused product practices all the elements of at least one claim of an asserted patent.

As I noted in denying plaintiffs' motion to group accused products, plaintiffs can escape the requirement of adducing evidence regarding every accused product by grouping, but *only* if the grouping is supported by evidence. Dkt. #202 at 2. Conclusory statements that the products perform the same function or that different versions *typically* perform the same function are speculation, not evidence that the products actually perform the same function. In fact, plaintiffs' expert found through actual testing of different versions of an accused product that one version of the WG11VCNA device did not perform the same power saving functions as other tested versions. Plts.' Br., dkt. #370, at 49 n.9 ("Williams tested three samples of the WG11VCNA mobile station. (PFF 343). Two of the samples displayed the infringing functionality, but one sample did not. (*Id.*) The non-infringing sample utilized the software from CD version 1.4. (*Id.*)").

Plaintiffs' attempts to group products have made it difficult, if not impossible, to determine what evidence applies to which products. For example, plaintiffs listed accused product WPN824NA in Appendix A-1 of their brief in support of their motion for summary

judgment. (Copies of this appendix and other relevant appendices are attached to this opinion.) Products listed in Appendix A-1 are alleged to infringe claim 1 of the '952 patent by engaging in fragmentation both in accordance with specific sections of the 802.11 standard and in accordance with the actual claim language. Plaintiffs propose as fact that all products in Appendix A-1 comply with § 9.4 of the 802.11 standard, which addresses fragmentation, Plts.' PFOF #151, but the only cited evidence regarding product WPN824NA is Williams's declaration that 36 products, including WPN824NA, "perform fragmentation as described by the 802.11 specification." Williams Decl., dkt. #357, at 44 ¶99. Although Williams lists WPN824NA as a product he tested, Williams Decl., dkt. #357, at 7-8, ¶ 18, the product is not listed as one of the products he observed engaging in fragmentation. Id. at 25 ¶50. (Williams did not test product WPN824NA before he prepared his first expert report and he did not discuss it in that report. Instead, he tested it in preparation for his supplemental report. Williams Supp. Expert Rep., dkt. #338, exh. #3, at 3, ¶ 7.) In other words, Williams says nothing about what the testing of WPN824NA revealed. Instead, he merely adds the product to the list of products that he finds from an analysis of the software to be capable of fragmentation. Id. at 6 ¶21. Although plaintiffs never specifically discuss how they know that WPN824NA is capable of fragmenting messages, I assume that they are relying on the fact that the product has an Atheros chip, Plts.' PFOF, dkt. #662, exh. #2, at 63 #262, and that one of the Atheros

chips analyzed by Williams had software that he concluded was capable of performing fragmentation. Dkt. #357, at 33-37, ¶¶ 70-79. However, plaintiffs have produced no evidence that every product with an Atheros chip actually functions in the same manner. It is not persuasive for Williams to state that WPN824NA practices fragmentation because it contains software found in a similar chip when he was unable to determine whether the actual functionality of WPN824NA involved message fragmentation. Without more, Williams's opinion is speculation that no reasonable jury could rely upon in finding that the WPN824NA actually fragments messages.

One can see another example of the confusion caused by plaintiffs' reliance on grouping in plaintiffs' proposed finding of fact 52. Plts.' PFOF, dkt. #662, exh. #2, at 11 ¶52. Plaintiffs proposed as a fact that defendant's "Accused Products" are tested for compliance with the 802.11 standard. Id. Defendant disputed the finding of fact, noting that the exhibit plaintiffs cited in support of the fact, Plts.' Reply PFOF, dkt. #622, exh. #4, at 29, listed only some of the accused products. Plaintiffs replied that in fact, the exhibit covered only 95 of the accused products, id. at 29-30, without saying which 95. As a result, I have no way of knowing which accused products plaintiffs believe are covered without going through the exhibit itself to determine for myself, which I decline to do.

As the WPN824NA example illustrates, determining whether evidence exists in the record to support plaintiffs' proposed findings of fact regarding the accused products would

require more searching in the record and comparing documents than any court should be asked to undertake. Plaintiffs' preparation of the record evokes two images, neither one of which is flattering to plaintiffs. The first is that they conceive of the court as a hunting dog with no higher duty than to run down every fox, sniffing out evidence in the record, wherever it may exist. The second is Poe's Purloined Letter, in which a valuable letter is hidden in plain sight among many other letters.

When moving for summary judgment, it is plaintiffs' responsibility to set out evidence in an accessible manner that allows the court to determine whether enough evidence exists to allow a reasonable jury to find in plaintiffs' favor on their infringement claims. The parties were advised in detail of the court's expectations for summary judgment motions. They received with the initial preliminary pretrial conference order a copy of the "Procedure to be Followed on Motions for Summary Judgment" in this court as well as "Helpful Tips for Filing a Summary Judgment Motion in Cases Assigned to Judge Barbara B. Crabb." Dkt. #16 One helpful tip is that

2. The court will not search the record for factual evidence. Even if there is evidence in the record to support your position on summary judgment, if you do not propose a finding of fact with the proper citation, the court will not consider that evidence when deciding the motion.

Id. at 11. The attachment to the Procedure directs the parties to limit each finding of fact to a single factual proposition if possible and it warns that facts found in a brief will not be

considered. Id. at 14.

When plaintiffs filed this patent infringement suit alleging that three separate patents had been infringed by more than 260 products they had to know it would not be simple or easy to prove that each of the accused products infringed every element of each claim of each asserted patent. Their efforts to take shortcuts by alleging “compliance with industry standards” and grouping accused products have failed. Merely asserting that products comply with an industry standard that runs more than 1000 pages is not proof that the products practice specific sections of the standard. Grouping does not work when the only evidence supporting such grouping is merely that “*in general*, different versions of a product are part of the same family and have the same basic functionality.” Plts.’ Reply PFOF, dkt. #622, exh. #4, at 88 (emphasis added). Slight variations in product functionality may be the difference between infringement and non-infringement by that product, as shown by the test results of different versions of product WG11VCNA. (See discussion at p. 7, supra) Saying that products have the same “basic” functionality is not enough to justify grouping without evidence that the relevant features are identical. Accordingly, I will disregard plaintiffs’ attempts to group products or to group versions of products unless plaintiffs can cite actual evidence supporting the similar functionality of the products.

#### E. Expert Witnesses

Federal Rule of Evidence 702 and Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), govern the admissibility of expert testimony. Rule 702 states:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

It is the duty of a district court to function as a “gatekeeper” regarding expert testimony, which entails determining whether the proposed expert testimony is both relevant and reliable. Daubert, 509 U.S. at 589. The Court of Appeals for the Seventh Circuit has set forth a three-step analysis for addressing relevance and reliability:

[1] the witness must be qualified “as an expert by knowledge, skill, experience, training, or education,” Fed. R. Evid. 702; [2] the expert’s reasoning or methodology underlying the testimony must be scientifically reliable, Daubert, 509 U.S. at 592-93; and [3] the testimony must assist the trier of fact to understand the evidence or to determine a fact in issue. Fed. R. Evid. 702.

Ervin v. Johnson & Johnson, Inc., 492 F.3d 901, 904 (7th Cir. 2007). District courts “enjoy wide latitude and discretion when determining whether to admit expert testimony.” Id. (quoting Wintz by & through Wintz v. Northrop Corp., 110 F.3d 508, 512 (7th Cir. 1997)).

The first challenge goes to testimony from plaintiffs’ expert Joel Williams. Defendant contends that his testimony should be excluded as unreliable because he did not use proper

testing methods. However, the alleged defects defendant identifies relate to the weight of Williams's testimony, not to its admissibility.

Defendant does not challenge Williams's qualifications as an expert in the functionality of wireless technology, for good reason. From June 2001 through August 2003, Williams was the principal engineer involved in testing the interoperability of wireless products for Agilent Technologies Interoperability Certification Laboratory. From September 2003 through January 2006, he was the principal engineer for the Wi-Fi Alliance, where his responsibilities included developing and conducting testing protocols to determine whether wireless networking products complied with the 802.11 standard and the Wi-Fi Alliance specification. Williams has been a contributor to the 802.11 standard and the Wi-Fi Alliance specification and he is a senior member of the Institute for Electrical and Electronics Engineers. His background and experience make Williams a qualified expert in the field of wireless technology functionality.

Defendant's challenge focuses on the methods Williams used in testing the accused products. Defendant lists several reasons why those methods are unreliable, but none are persuasive. Defendant accuses Williams of having created his own testing methods for the purpose of this litigation and asserts that his methods have never been used or examined by any other experts in the field, but this assertion is an exaggeration. Although Williams did devise the exact test protocols, he did not pull them out of thin air for this litigation. The

protocols utilized industry accepted tools and methods. Williams started with the tools and methods he used at the Wi-Fi Alliance, modifying them only to focus on the specific functions at issue in this case, that is, fragmentation, Quality of Service and power-saving.

Williams used an ixChariot, which is an industry-accepted tool for controlling the operations of the accused products in a network. As he controlled product operations, he observed and recorded the information produced by the tested products. He used a Wireshark Network Sniffer, which is an industry-accepted tool for capturing transmitted data in a wireless network. He used an oscilloscope, another industry-accepted tool used to measure a product's power consumption. He also used "mgen," which is a test developed by the United States Navy Research Laboratory to obtain more accurate timing than the timing produced by ixChariot.

Modifications of these industry-accepted tools and methods to focus on relevant functions do not make Williams's methods unreliable. As noted in Daubert, 509 U.S. at 593, some methods may be "too particular, too new, or of too limited interest to be published." Williams's testing protocols were particular to the relevant functions at issue. Defendant has adduced no evidence to contradict Williams's assertion that his modifications were minor and that he used industry-accepted tools in a proper manner.

Defendant challenges Williams's failure to test his methods on any control group of products and his decision to discard the results of setup tests. Neither of these issues affects

the reliability of the methods for admissibility purposes. Expert evidence is reliable and admissible when it is “well-grounded in methods and procedures of science.” Winters v. Fru-Con Inc., 498 F.3d 734, 742, (7th Cir. 2007). Williams has explained his methods and procedures and demonstrated that they are well-grounded in the science of wireless technology. At most defendant’s challenges go to the weight of the opinions. It has no expert of its own who tested the accused products to explain how they worked and why Williams’s explanations were incorrect. As Williams explained, the discarded results were those performed solely for the purpose of testing the configuration of the tools and discarding such results is the normal industry practice. Defendant has no evidence to contradict this explanation.

Defendant’s contention that Williams changed results is also incorrect. Williams explained that he did not change results but merely made them “more cosmetically obvious.” Williams Dep., dkt. #431, exh. #5, at 156, ln. 21. There is no evidence that Williams changed any results. Finally, Williams’s testimony regarding the functioning of the accused products will assist the trier of fact and there is no other evidence of the functioning of the accused products. Williams’s testimony is admissible under Rule 702 and Daubert.

Defendant also challenges the testimony of plaintiff’s expert V. Thomas Rhyne because his opinions rely on the testing of the accused products done by Williams. Because Williams’s testimony is admissible, Rhyne’s reliance on the testimony is proper and his

testimony is also admissible.

For their part, plaintiffs object to much of the testimony offered by defendant's expert, Chris Heegard. Plaintiffs contend that Heegard is not competent, that is, that he is not qualified to testify regarding wireless technology and that he does not rely on sufficient facts or data or use reliable principles and methods. Plaintiffs' general objection is not supported by the evidence in the record. Heegard has a PhD in electrical engineering from Stanford University and extensive experience in wireless communication technology. He was the chief technical engineer for Texas Instruments, Home and Wireless Networking, and is an IEEE participant. Heegard is qualified to testify as an expert regarding wireless communication technologies.

Plaintiffs also challenge the facts, data, principles and methods used by Heegard. Plaintiffs contend that Heegard's failure to conduct any tests makes any opinions regarding the products' functions unreliable. Plaintiffs are correct insofar as Heegard testifies regarding specific product functions. However, most of Heegard's report is directed to explaining the difference in functioning in compliance with the 802.11 standard and WiFi specification and functioning in a way that infringes the patents in suit. These opinions are admissible because they are based on a comparison of the standard and specification to the patents in suit. Heegard did not need to test the products to give an opinion whether products functioning in accordance with the standard and specification necessarily infringe the

patents in suit. The standard and specification documents and the patents themselves provided Heegard the information he needed to form his expert opinions.

The same is true regarding Heegard's opinions about the patents' validity. Heegard's comparison of the relevant prior art to the patents in suit is the proper means for explaining why one of ordinary skill in the art would or would not find the patents in suit anticipated or obvious. I will disregard any of Heegard's opinions on ultimate issues of invalidity or infringement. Dynacore Holdings Corp., 363 F.3d at 1277-78 (expert's unsupported conclusion on ultimate issue of infringement insufficient to raise genuine issue of material fact). What matters is the expert's testimony about how the device works or what makes the patented invention obvious. For these purposes, Heegard's expert testimony is admissible.

With these preliminary matters out of the way, I will take up the issue of infringement. For organizational purposes, I will address each patent separately. Although each plaintiff owns a different patent, I will refer to all plaintiffs collectively because that is the way they have prosecuted the case.

## II. NOTICE OF PATENTS AND INFRINGEMENT

### A. Undisputed Facts

On June 15, 2005, Ron Moore, then Director of Licensing and Business Development for Via Licensing, emailed Albert Liu, then defendant's Assistant General Counsel, explaining

that on behalf of Sony, Philips, France Telecom, Japan Radio Corporation and Fujitsu, Via Licensing was offering defendant a license to patents “that are essential to the practice of the IEEE 802.11 Standard.” Kincaid Decl., dkt. #346, exh. #7, at 1. Moore attached a sample patent license agreement, listing the ‘952 patent as one of five patents. Id. at VIA00021. He did not attach a copy of the ‘952 patent and he did not make any reference to specific claims of the ‘952 patent or to any specific products sold by defendant.

In a September 1, 2005 response to a request from defendant for more information about the alleged infringement, such as which of defendant’s products implement the patents held by the licensing agent and which claims of the patents are alleged to be implemented, Moore wrote that “Your letter . . . asked for information consistent with allegations of patent infringement. Those items are much more consistent with individual patent infringement claims pursuant to individual patent licensing programs.” Puckett Decl., dkt. #372, exh. #10, at 1. (In his letter, Moore noted that LG Electronics had become a sixth member of the licensing pool.) Neither plaintiffs nor Via Licensing ever provided the information defendant requested.

On February 16, 2006, Moore contacted Liu to say that he would like to “engage with [Liu] in a meaningful discussion about 802.11 patent licensing.” Puckett Decl., dkt. #400, exh. #2, at PMSJ02703. He attached what he described as the “latest patent license agreement,” which listed the ‘642 patent as well as the ‘952 patent among a total of 42

patents. Id. at PMSJ02730-31. He did not attach a copy of the '642 patent or make any reference to specific claims of the '642 patent or to any products sold by defendant.

Defendant learned of the '993 patent no later than December 17, 2007, when this action was filed. In the complaint, plaintiffs informed defendant of the existence of the '993 patent and of plaintiff LG Electronics' request for correction of claim 25 of the patent from the United States Patent Office. Plaintiffs did not identify any allegedly infringing products. The '952 patent expired on December 4, 2007.

#### B. Notice Requirement

35 U.S.C. § 287(a) provides that patentees may not recover damages in any action for infringement except upon a showing that the patented goods were marked as patented or that "the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice." The general rule is that actual notice requires more than simply a written communication referring generally to a patent and an admonishment not to infringe. In Minks v. Polaris Industries, Inc., 546 F.3d 1364, 1376 (Fed. Cir. 2008), for example, the Court of Appeals for the Federal Circuit held that the requirement was met by a letter referring to the patent, identifying the allegedly infringing products specifically and offering a license. The test is an objective one; the adequacy of the notice does not require a showing that the alleged

infringer subjectively believed that the patentee's letter was a charge of infringement. Gart v. Logitech, Inc., 254 F.3d 1334, 1346 (Fed. Cir. 2001).

In a case with facts similar to those in this case, Amsted Industries, Inc. v. Buckeye Steel Castings Co., 24 F.3d 178, 187 (Fed. Cir. 1994), the Federal Circuit held that the patentee had not given sufficient notice when it wrote to the entire industry to say that it had purchased a number of patents (including one that defendant was using) that it intended to enforce its rights and that others should acquaint themselves with the patent in issue and refrain from supplying component parts that would contribute to infringement of the patent. In a second letter, sent a few years after the first, the patentee demanded that defendant cease and desist from any further unauthorized production and sales of the allegedly infringing product. The court held this letter to be sufficient notice, whereas the first one fell short because it did not notify the recipient of the infringement. Id. In a subsequent case, SRI International, Inc. v. Advanced Technology Laboratories, Inc., 127 F.3d 1462, 1470 (Fed. Cir. 1997), the court of appeals made it clear that the patentee need not charge infringement in so many words: "the purpose of the actual notice requirement is met when the recipient is informed of the identification of the patent and the activity that is believed to be infringing, accompanied by a proposal to abate the infringement, whether by license or otherwise." In other words, it is not necessary to demand that the alleged infringer cease and desist or threaten suit; the offering of a license makes the point. Id.

The letters defendant received offered a license and identified a group of patents, but they failed to identify any specific products that allegedly infringed specific patents. As plaintiffs have done throughout this litigation, their agent framed his letters on the assumption that any product sold as compliant with the IEEE 802.11 standard infringed one or more of the patents in the licensing pool. That assumption was not a valid one. The extensive 802.11 standard has many sections that permit wireless devices to function in several ways and still comply with the standard. Obviously, not every patent in the license pool covers every section of the standard, yet plaintiffs' licensing agent refused to tell defendant which sections or functions were at issue. For that reason alone, the letters Moore sent were insufficient to meet § 287(a)'s notice requirement. In fact, it is questionable whether even the commencement of this lawsuit provided proper notice, since plaintiffs did not provide a list of accused products in their initial complaint in this case. Dkt. #1. Instead, they continued to tell defendant only that its products infringed the three patents in suit by practicing the 802.11 standard. Proper notice required identification of the products allegedly infringing specific patents. Compare Minks, 546 F.3d at 1376 (finding sufficient letter to alleged infringer informing it that patentee believed that patentee's integrated reverse speed limiters infringed patentee's '080 patent); Gart, 254 F.3d at 1346 (finding that patentee gave actual notice when it sent letter that included specific reference to claims 7 and 8 of '165 patent, specific reference to TRACKMAN VISTA product and

advised alleged infringer to have counsel examine patent to determine whether license would be needed); SRI International, 127 F.3d at 1469 (“[We have noted from your advertising literature that [your] products Models Ultramark 4 and 8 may infringe one or more claims of [our] U.S. Patent No. 4,016,750); Amsted Industries, 24 F.3d at 186 (“In our view [your center plate, a photocopy of which is attached], or the intended application thereof to a freight car infringes [our] [‘269 patent].”)

It cannot be considered adequate notice for a group of patent holders pooling their patents to simply state without proof that products practicing an industry standard necessarily practice some of the pooled patents and inform parties that advertise products practicing the standard that they can obtain a license over all patents in the pool while never identifying which specific products may infringe any specific patent. Approving plaintiffs’ strategy would permit licensing pools to bully potential infringers into licensing agreements. It would place an unreasonable burden on the potentially infringing party, who would be required to examine all of its products to try to determine whether any infringed any claim of the pooled patents. In this case, that would mean defendant was responsible for examining hundreds of products and several dozen patents, each with several independent claims. Faced with such a large task and given a short time in which to respond to the license offer, the potentially infringing party is placed in an untenable position: (1) turn down the license and face a potential infringement action involving an unknown number of

patents and an unknown number of products or (2) pay for a license even though the license (a) may be completely unnecessary; (b) may not cover many of the alleged infringer's products; or (c) may cover many patents that its products do not practice. I conclude that defendant did not receive proper notice of infringement until the filing of plaintiffs' first amended complaint on March 17, 2008, dkt. #41, which provided defendant with a list of allegedly infringing products for the first time.

I note that, even if plaintiffs' initial complaint put defendant on notice of infringement although it did not list a single infringing product, this would not save plaintiffs' allegations of infringement regarding the '952 patent. That patent expired in December 2007, before the lawsuit was filed. Defendant never had notice of infringement of the '952 patent during the life of the patent and thus, it cannot have infringed the '952 patent.

### III. INFRINGEMENT OF THE PATENTS IN SUIT

#### A. Relevant Law

##### 1. Direct infringement and infringement under the doctrine of equivalents

“Summary judgment on the issue of infringement is proper when no reasonable jury could find that every limitation recited in a properly construed claim either is or is not found in the accused device either literally or under the doctrine of equivalents.” U.S. Philips

Corp. v. Iwasaki Elec. Co., 505 F.3d 1371, 1374-1375 (Fed. Cir. 2007) (quoting PC Connector Solutions LLC v. SmartDisk Corp., 406 F.3d 1359, 1364 (Fed. Cir. 2005)). Patent infringement analysis involves two steps. First, the patent claims must be interpreted or construed to determine their meaning and scope. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995). Second, the properly construed claims are compared to the process or device accused of infringing. Id.

To establish infringement, plaintiffs must prove that each claim element is present in the accused devices, either literally or by equivalence. Dawn Equipment Co. v. Kentucky Farms Inc., 140 F.3d 1009, 1015 (Fed. Cir. 1998). Regarding the process or method patent claims, plaintiffs must prove that defendant's products perform all of the steps of the patented process. BMC Resources, Inc. v Paymentech, L.P., 498 F.3d 1373, 1379 (Fed. Cir. 2007) (citation omitted). Conversely, defendant can prevail by demonstrating that at least one element or step from the asserted claim is absent from its devices.

Under the doctrine of equivalents, "a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." Warner-Jenkinson Co. v. Hilton Davis Chemicals Co., 520 U.S. 17, 21 (1997). A broad, overall equivalence between an accused product and a patented invention is not enough; rather, "[e]ach element contained in a

patent claim is deemed material to defining the scope of a patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.” Id. at 29; Freedman Seating Co. v. American Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005).

At times, the doctrine of equivalents is framed in terms of the substantiality of the differences between the elements of the invention and the product, e.g., Freedman Seating Co., 420 F.3d at 1358, and at times in terms of the “triple identity test”: “whether the accused device performs substantially the same function in substantially the same way to obtain the same result as the claim limitation.” E.g., Catalina Marketing Int'l v. Coolsavings.com, Inc., 289 F.3d 801, 813 (Fed. Cir. 2002) (citations omitted). The key to either test is “[a]n analysis of the role played by each element in the context of the specific patent claim.” Warner-Jenkinson Co., 520 U.S. at 40. Regardless of the test used, the essential inquiry is whether “the accused product or process contain[s] elements identical or equivalent to each claimed element of the patented invention.” Id.

## 2. Indirect infringement: active inducement or contributory infringement

Active inducement of infringement is covered in 35 U.S.C. § 271(b), which provides that “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” “In order to prevail on an inducement claim, the patentee must establish ‘first that there has

been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.” ACCO Brands, Inc. v. ABA Locks Manufacturer Co., 501 F.3d 1307, 1313 (Fed. Cir. 2007) (quoting Minnesota Mining & Manufacturing Co. v. Chemque, Inc., 303 F.3d 1294, 1304-05 (Fed. Cir. 2002)). “There can be no inducement or contributory infringement without an underlying act of direct infringement.” Linear Technology Corp. v. Impala Linear Corp., 379 F.3d 1311, 1326 (Fed. Cir. 2004). Such underlying direct infringement must be proved by “point[ing] to specific instances of direct infringement or show[ing] that the accused device necessarily infringes the patent in suit.” If an accused device can be used at any given time in a non-infringing manner, the device does not necessarily infringe the patent. Id.

The requisite specific intent may be shown by circumstantial evidence. Ricoh Co. v. Quanta Computer Inc., 550 F.3d 1325, 1342 (Fed. Cir. 2008) (citation omitted). Plaintiffs have “the burden of showing that [defendant's] actions induced infringement acts and that [it] knew or should have known [its] actions would induce actual infringement.” DSU Medical Corp. v. JMS Company, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (internal quotation omitted). In other words, “liability for active inducement may be found ‘where evidence goes beyond a product's characteristics or the knowledge that it may be put to infringing uses, and shows statements or actions directed to promoting infringement.’” Ricoh Co., 550 F.3d at 1341 (quoting Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 545 U.S. 913,

935 n.10 (2005)).

Contributory infringement is covered in 35 U.S.C. § 271(c), which provides that

Whoever offers to sell or sells within the United States . . . a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

Contributory infringement applies to “cases in which a party sells a particular component that is known to be intended for an infringing use and is useful only for infringement.”

PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1358 (Fed. Cir. 2007).

Unlike active inducement, contributory infringement requires “only proof of defendant’s *knowledge*, not *intent*, that his activity cause infringement . . . .” Hewlett-Packard Co. v.

Bausch & Lomb Inc., 909 F.2d 1464, 1469 (Fed. Cir. 1990) (emphasis in original).

However, the alleged contributory infringer must be shown to have “knowledge that the component was especially made or adapted for a particular use but also knowledge of the patent which proscribed that use.” Id. at 1469 n.4 (citation omitted); see also Preemption

Devices, Inc. v. Minnesota Mining & Manufacturing Co., 803 F.2d 1170, 1174 (Fed. Cir. 1986) (“[O]ne must show that an alleged contributory infringer knew that the combination

for which his components were especially made was *both* patented and infringing.”)

(Emphasis added.)).

Establishing contributory infringement requires plaintiffs to prove that defendant's components have no substantial noninfringing uses. Golden Blount, Inc. v. Robert H. Peterson Co., 365 F.3d 1054, 1061 (Fed. Cir. 2004) (Golden Blount I). Liability is established when a bare component, sold or offered for sale within the United States, has no use other than practicing the methods in an allegedly infringed patent. An alleged infringer does not fall under the no substantial noninfringing use exception by merely embedding the component "in a larger product with some additional, separable feature before importing and selling it." Ricoh Co., 550 F.3d at 1337.

## B. Infringement of the '993 Patent

### 1. Undisputed facts

#### a. defendant NETGEAR and plaintiff LG

Defendant NETGEAR, Inc. is a Delaware corporation with its principal place of business in California. It sells networking products for use in homes and businesses. Its product line includes wireless networking products and accessories that allow end users to connect their laptops, computers, printers or other devices to a network without being tethered by cables. Plaintiff LG Electronics, Inc. is a Korean company with its principal place of business in Seoul. It is the owner of the '993 patent. Plaintiff is part of a licensing pool run by Via Licensing; the pool contains 42 patents, including the '993 patent. Via

Licensing advertises the '993 patent as having claims essential to practicing the 802.11 standard.

b. the initial Dynacore motion

Early in this lawsuit, plaintiffs proceeded on the theory that defendant's products necessarily practice the inventions in the patents in suit because defendant advertises those products as being in compliance with the IEEE's 802.11 Standard or the Wi-Fi Multimedia Specification. Plaintiffs filed a motion for partial summary judgment, attempting to prove that compliance with certain sections of the 802.11 standard or the Wi-Fi Multimedia Specification brings defendant's products within the scope of the patent claims in suit.

The IEEE 802.11 Standard lists requirements for methods for the wireless connection and communication of devices in a local area network. The 802.11 standard runs hundreds of pages, with many sections and subsections explaining the different methods. The Wi-Fi Multimedia Specification sets out guidelines for the implementation of the 802.11 standard's Quality of Service requirements.

In pursuing their strategy, plaintiffs relied on the Federal Circuit's opinion in Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263 (Fed. Cir. 2004). In that case, the plaintiff had argued that computer networks conforming to certain industry standards necessarily conformed to its patent and therefore, any products that complied with

the standard directly infringed its patent. Although the court of appeals affirmed the district court's decision that networks compliant with the standard did not satisfy each limitation of the patent's claims, it acknowledged that a patent may "read on" a standard, that is, that a product could not comply with a standard without practicing all the elements in the allegedly infringed patent. Id. at 1272, 1276. In the January 5, 2009 order on plaintiffs' motion for partial summary judgment, I concluded with respect to the '993 patent that

a product complying with §§ 3.150, 3.152, 3.168, 5.1.1.4, 6.1.5, 7.1.3.5 and 9.1.3.1 of the 802.11 standard or §§ 2.1.6 and 3.3 of the Wi-Fi Multimedia Specification does not necessarily comply with all elements found in claims 25 and 26 of the '993 patent.

Dkt. #301 at 22-23.

c. asserted claims

The '993 patent is entitled "Method for Controlling Traffic Load in Mobile Communication System." Only claims 25 and dependent claim 26 are at issue. On April 2, 2008, a certificate of correction was issued regarding claim 25. It now reads:

25. A method of controlling traffic a [*sic*] communication system, comprising the steps of:

setting a priority level of each of a plurality of mobile terminals; and

dynamically controlling data transmissions of each of the plurality of mobile terminals in accordance with the priority level of each mobile terminal and a congestion level of the communication system, wherein each of the mobile terminals

is assigned to a priority group according to the priority level of the corresponding mobile terminal, and wherein a base station dynamically controls data transmission of each of the mobile terminals by transmitting a priority group number to each of the mobile terminals indicating which groups are authorized to transmit data, and wherein mobile terminals assigned to a priority group that is not authorized to transmit are temporarily blocked from transmitting while maintaining a physical channel.

'993 pat., Certif. of Corr., Claim 25. Claim 26 states:

26. The method of claim 25, wherein the priority level of each mobile terminal is set by the corresponding mobile terminal.

'993 pat., col. 8, lns. 57-59.

d. accused products

Plaintiffs assert that 57 of defendant's products infringe claims 25 and 26 of the '993 patent. Plts.' Br., dkt. #370, Appendix B (copy attached to this order). I will discuss the relevant functionality of the products in analyzing whether the products infringe claims 25 and 26.

## 2. Infringement analysis

For this analysis, the issue is whether defendant induces infringement of claims 25 and 26 of the '993 patent or infringes contributorily by selling and offering to sell the 57 products listed in Appendix B to plaintiffs' summary judgment brief, dkt. #370. I

determined previously that “a product practicing either the 802.11 standard or the Wi-Fi Multimedia Specification is not required to ‘set[] a priority level of each of a plurality of mobile *terminals*,’ which is an element required by claim 25 of the ‘993 patent.” Dkt. #301 at 19 (emphasis in original). Nonetheless, plaintiffs contend that the manner in which defendant’s products comply with the standard and specification involves setting the priority level of each terminal.

In the previous order, I explained that under the Quality of Service portions of the 802.11 standard and Wi-Fi specification, “a station uses a message’s user priority to determine under which access category the message should be placed” and then each message is queued according to the access category to which it has been assigned. Dkt. #301 at 17. In addition, “[a]ccess categories containing messages with higher user priorities receive a transmission opportunity before access categories containing messages with lower user priorities.” Id. The fundamental difference between the method claimed in the ‘993 patent and the method set out in the standard and Wi-Fi specification is that the patent teaches use of a *terminal* priority method for Quality of Service and the standard and specification teach use of a *message* priority method. Dkt. #301 at 18-19.

Plaintiffs’ current position is that defendant’s accused products infringe because they practice both message and terminal priority. However, plaintiffs’ argument boils down to a recasting of their previous argument regarding the standard and Wi-Fi specification, which

was that “access category,” as the term is used in the 802.11 standard and the Wi-Fi Multimedia Specification, is a “priority level,” as the term is used in the ‘993 patent. I have already found that an access category is the priority level assigned to a message and not to a terminal. The subtle alteration in plaintiffs’ current argument is that defendant’s terminals “adopt” the access category of the highest priority message queued in the terminal, making the message’s priority level the priority level of the terminal.

Although they do not say as much, plaintiffs are contending that a product using message priority is actually using terminal priority because the terminal “adopts” the priority level of the messages. Plaintiffs derive this characterization of the terminal’s “adoption” of the priority level of a message from the fact that a terminal is limited to sending messages using the contention window associated with the access category assigned to the terminal’s highest priority queued message. (The “contention window” is a set period of time during which messages can be sent. Thus, according to plaintiffs, each terminal’s priority group is the contention window it is limited to using and, because use of a contention window is based on the terminal’s highest priority queued message, the terminal’s priority level is the priority level of its highest priority message. For example, assuming that voice messages are assigned a higher priority access category than background messages, if terminal A has both a voice and background message and terminal B has only a background message, then terminal A will have access to a more advantageous or earlier contention window because it

has a message queued in a higher priority access category; any other terminals with voice messages will have access to the same contention window as well.

Even assuming that plaintiffs have described the priority process in defendant's products accurately, this "adoption" theory does not satisfy the terminal priority requirement, as claimed in claim 25 of plaintiffs' patent. To find otherwise would render the claim's use of the term "terminal" meaningless. If a terminal's priority level could be set by merely "adopting" the priority level of the message with the most advantageous contention window, the purpose of the patented invention would be defeated. The '993 patent provides a method for controlling traffic load in a mobile communication system. '993 pat., col. 1, lns. 8-10. As discussed in the '993 patent, traffic load is the amount of data passing between mobile terminals and a base station in the same receiving area established by one base station or cell. Claims Constr. Order, dkt. #201, at 4. According to plaintiffs, each terminal can transmit only one message at a time. Assuming this to be true, the more terminals there are, the higher the traffic load will be because more data is passing in the cell. If a terminal's priority level were adopted from the priority level of a message, there would be no controlling of traffic load. If every terminal had an equally high priority message, the terminals could all share the same contention window when sending messages, causing traffic overload.

Products like defendant's, which use the 802.11 standard and Wi-Fi specification

message priority method, are not directed to controlling traffic load but to determining which message types have the best opportunity to be transmitted. For such products, the terminals are not important. These products group messages to insure that high priority messages, such as voice messages, are sent before other messages by assigning them to the best access category to receive the earliest contention window.

In contrast, claim 25's method sets each terminal's priority level and groups the terminals to insure that traffic load is distributed among terminals in a cell, with an emphasis on traffic at the terminal, not on message type. Thus, when the specification describes a terminal's dynamic priority (for purposes of this explanation, I assume this dynamic priority is the same as a priority level) it focuses on a "waited" [*sic*] quantity variable and served quantity variable, '993 pat., col. 2, lns. 63-67 - col. 3, lns. 1-5, which relate to the traffic at a *terminal*, that is, messages waiting in queue and messages sent. Plaintiffs contend that the example supports the conclusion that the specification explains how to use information about messages to determine a terminal's priority level. They are wrong. Using the amount of traffic at a specific terminal to determine its priority level does not involve using information about the messages, but rather focuses on each terminal.

Moreover, using the amount of traffic to determine a terminal's priority level makes sense in light of the patent's purpose, which is to help control traffic load. If terminal A has 20 messages and terminal B has 10 messages, it would make sense to assign terminal A a

higher priority level than terminal B to control traffic load so that terminal A does not continue to amass a further backlog of messages. Although the patented method is broad enough to cover a method that makes message type one consideration in determining a terminal's priority level, the idea of message type as *one* consideration is different from the idea of message type as the *only* consideration.

Next, even if plaintiffs are correct and a terminal could "adopt" the priority level of its highest priority message, defendant's products do not meet another limitation of claim 25: they do not use a Quality of Service method for "dynamically control[ling] data transmissions" in accordance with both the terminal's priority level *and* the "congestion level of the [general] communication system." Plaintiffs contend that defendant's products account for congestion: when there are higher congestion levels, terminals with high priority messages maintain high throughput, that is, the amount of data being transmitted by the terminal remains high, while terminals with low priority messages suffer a decreased throughput. In support of their contention, plaintiffs cite their expert's graph regarding terminal throughput. The graph shows that a terminal transmitting a low priority message had a decrease in throughput when another terminal transmitting a low priority message began transmitting, while a third terminal transmitting a high priority message maintained a high throughput. The graph does not show that defendant's products consider both priority level and congestion level in controlling data transmissions, only priority levels.

According to the graph, if more than one terminal is using the same contention window, those terminals' throughput decreases while the throughput of a third terminal using a different contention window is unaffected. Thus, if three terminals have high priority messages, they would use the same contention window and their throughput would decrease. A decrease in throughput because of congestion does not show a method of controlling data transmissions in accordance with congestion. Rather, it shows that there is no control of data transmissions when there is congestion. Throughput decreases because there are too many terminals competing to use the same contention window.

I conclude that plaintiffs have not adduced evidence from which a reasonable jury could find that defendant's accused products use a Quality of Service method for dynamically controlling data transmissions in accordance with both a terminal's priority level and the congestion level of the general communication system. Defendant's products practice Quality of Service using a message priority method; the '993 patent claims a terminal priority method. Moreover, defendant's products do not control data transmission in accordance with congestion levels, as required by claim 25 of the '993 patent. No reasonable jury could find that the products' Quality of Service method infringes claim 25 of the '993 patent. Because claim 26 is dependent from claim 25, defendant's accused products cannot infringe claim 26.

Plaintiffs say nothing about why the doctrine of equivalents should apply to claims

25 or 26. Plaintiffs' silence on the subject waives the argument. Central States, Southeast and Southwest Areas Pension Fund v. Midwest Motor Express, Inc., 181 F.3d 799, 808 (7th Cir. 1999) ("Arguments not developed in any meaningful way are waived.") Accordingly, defendant's request for summary judgment will be granted and plaintiffs' will be denied as to plaintiffs' claim that the accused products listed in Appendix B infringe claims 25 and 26 of the '993 patent.

C. Infringement of the '642 Patent

1. Undisputed facts

a. plaintiff Fujitsu

Plaintiff Fujitsu Limited is a Japanese company with its principal place of business in Tokyo. It is the owner of the '642 patent and is part of the 802.11 standard licensing pool run by Via Licensing.

b. the initial Dynacore motion

In the January 5, 2009 order regarding plaintiffs' motion for partial summary judgment, I concluded that with respect to the '642 patent:

a product complying with § 11.2 of the 802.11 standard does not necessarily comply with all elements found in claims 2, 6 and 8 of the '642 patent.

Dkt. #301 at 22-23.

c. asserted claims

The '642 patent is entitled "Radio Communications System, Base Station for Radio Communications System, and Intermittent Power-On Type Mobile Station." Independent claims 2, 6 and 8 are at issue. Claim 2 states:

2. A radio communications system comprising:

an intermittent power-on type mobile station for shifting to a power-on state synchronously with a received timing of a beacon signal, with a fixed period of time after the beacon signal has been received being defined as a data receive-ready period; and

a base station for emanating successive beacon signals to said intermittent power-on type mobile station and transmitting data to said intermittent power-on type mobile station by radio while said intermittent power-on type mobile station is ready to receive data from said base station as a result of control by the individual beacon signal from said base station;

said base station taking the initiative, if said data is to be transmitted continuously beyond said data receive-ready period of said intermittent power-on type mobile station, to originally report to said intermittent power-on mobile station, as time extension information, that data must be received beyond said data receive-ready period;

said intermittent power-on type mobile station being responsive to said time extension information from said base station to sustain its power-on state beyond said receive-ready period until all pieces of data transmitted continuously from said base station are received.

'642 pat., col. 26, lns. 1-26. Claim 6 states:

6. A base station for a radio communications system which accommodates an intermittent power-on type mobile station and in which said base station emanates successive beacon signals to the intermittent power-on type mobile station and transmits data to the intermittent power-on type mobile station by radio while said intermittent power-on mobile station is ready to receive data from said base station as a result of control by the individual beacon signal, the intermittent power-on type mobile station being operable to shift to its power-on state synchronously with the received timing of said beacon signal, which a fixed period of time after reception of said beacon signal being defined as a data receive-ready period,

wherein said base station comprises time extension reporting means for, if data is to be transmitted continuously beyond said data receive-ready period of said intermittent power-on type mobile station, originally reporting to the intermittent power-on type mobile station, as time extension information that data must be received beyond said data receive-ready period.

Id. at col. 27, lns. 14-33. Claim 8 states:

8. An intermittent power-on type mobile station for a radio communications system in which a base station emanates successive beacon signals to said intermittent power-on type mobile station and in which said intermittent power-on type mobile station shifts to its power-on state synchronously with a received timing of the individual beacon signal, with a fixed period after reception of said beacon signal being defined as a data receive-ready period,

wherein said intermittent power-on type mobile station includes power supply control means, responsive to time extension information originally emanated by the base station and regards that data must be received [sic] the base station beyond said data receive-ready period, for sustaining its power-on state beyond said data receive-ready period to extend said data receive-ready period until all pieces of data continuously transmitted from said base station have been received.

Id. at col. 28, lns. 8-24.

d. accused products

Plaintiffs assert that 4 of defendant's products infringe claims 2, 6 and 8 of the '642 patent. Plts.' Br., dkt. #370, Appendix C. In analyzing this assertion, I will discuss the relevant functionality of the products.

## 2. Infringement analysis

I note at the outset that it is questionable whether plaintiffs can use the evidence they adduced to show that defendant's accused products infringe any of the '642 patent's claims. Plaintiffs' experts, Williams and Rhyne, have explained why they believe that the accused products function in accordance with specific sections of the 802.11 standard and whether compliance with specific sections of the standard requires practicing the claimed invention. However, neither has compared the specific functions of defendant's accused products to the '642 patent's claims. In fact, Williams makes clear the limited purpose of his opinions and testing in his expert report;

I have been asked to analyze selected Netgear wireless networking products to determine if they operate in a manner consistent with those portions of the 802.11 Standard and WMM Specification that are relevant to the Asserted Patents. I have not been asked to opine, nor have I developed any opinions, with respect to whether any of the accused products infringe the Asserted Patents or whether the Asserted Patents are incorporated into the 802.11 Standard or WMM Specification.

Kincaid Decl., dkt. #338, exh. #27, at 7 ¶16. Rhyne did no testing of his own, but relied on Williams's analysis. This means that to the extent the accused products have been tested,

the testing has been limited to determining their compatibility with the 802.11 standard and Wi-Fi specification.

In his expert report, Rhyne states that he was retained “to study the Asserted Patents and technical characteristics of the accused products and, based on that study, to determine whether or not in my opinion those products infringe any of the Asserted Claims.” Kincaid Decl., dkt. #337, exh. #6, at 2 ¶6. Despite this general statement, Rhyne’s opinions in the body of his report all involve comparisons of the 802.11 standard and Wi-Fi specification to the asserted patents’ claims. Further, Rhyne’s understanding of how the accused products function is based entirely on Williams’s testing, which was done to determine whether the products functioned in a manner consistent with the standard and specification, not the claims of the asserted patents.

Rhyne’s opinions about whether the accused products infringe the claims in issue are conclusory statements of no help to plaintiffs. For example, Rhyne states:

As I noted above, the Williams Report identified seven of Netgear STAs which passed the tests Mr. Williams had created to determine whether or not those products met the power-save concepts set forth in the 802.11 Standard. Those tests and other analyses included in the Williams Report also demonstrated that those Netgear products met the limitations of the Asserted Claims of the ‘642 Patent.

Id., at 91 ¶354. An expert's unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue of material fact. Dynacore Holdings Corp, 363 F.3d at 1277-78. What matters is the expert’s testimony about how the device works and why

such functions meet the elements of one or more asserted claims. Rhyne's opinions are merely assertions that the accused products' compliance with certain sections of the standard are evidence of infringement of the '642 patent's claims. I rejected those contentions with respect to the '642 patent in the order entered on January 5, 2009. Dkt. #301 at 22-23.

a. "synchronously" element in claims 2 and 8

Even assuming that plaintiffs' experts did not base their testing opinions solely on compatibility with the standard, but intended to address the accused products' functions generally, plaintiffs have adduced no evidence from which a reasonable jury could infer that the accused mobile devices infringe claim 2 or 8 of the '642 patent. I previously construed the term "shifting to a power-on state synchronously with a received timing of a beacon signal" as used in claims 2 and 8 of the '642 patent to mean "shifting to a power-on state at the same time a beacon signal is to be received." Dkt. #201 at 24. Plaintiffs have adduced no evidence that defendant's products shift to a power-on state *at the same time* a beacon signal is to be received.

Initially the parties dispute whether shifting to a power-on state at the same time a beacon signal is to be received means that the device must start waking up when the beacon signal is to be received or that the device must be awake and capable of receiving the beacon signal when the beacon signal is to be received. The latter explanation is the correct one.

It would make little sense for the device to start waking up when it is supposed to be receiving a beacon signal. Otherwise it would most likely miss the beacon signal because it would still be starting up or, as plaintiffs' expert Rhyne explains, ramping up when it should be ready to receive the signal. Rhyne explains that in a real world application nothing happens at exactly the same time and that in fact mobile devices require a brief ramp-up time to awaken their radio receivers from sleeping so that they can achieve operational stability in time to receive the beacon signal. Thus, the mobile devices will begin consuming power before they are completely powered on and capable of receiving a beacon signal.

However, allowing for a ramp-up time does not mean that a mobile device can comply with the "shifting to a power-on state synchronously" element by starting the ramp-up process and reaching complete power-on mode at any time before the beacon signal is to be received. The ramp-up period should bring the mobile device to its complete power-on mode at the same time the beacon signal is to be received.

As evidence that defendant's accused mobile devices power-on at the same time a beacon signal is to be received, plaintiffs cite the oscilloscope graphs produced in Williams's testing. Some graphs show spikes in the mobile devices power consumption at times *near* the time the devices should have been receiving beacon signals. As "beacon signal" has been used in claims 2, 6 and 8 of the '642 patent, it has been construed as a "radio transmission from a base station to an intermittent power-on type mobile station, received when the

intermittent power-on type mobile station is in the powered-on state and indicating whether there is data to be delivered to the intermittent power-on mobile station.” Dkt. #201 at 16. However, the graphs do not show the precise time at which the devices shift to a power-on state. This lack of specificity is not surprising because the graphs were created to demonstrate compliance with the 802.11 standard, which requires merely that a station wake up *early enough* to be able to receive a beacon signal.

The graphs have vertical dotted lines spaced 100 milliseconds apart. Williams had beacon signals (which he labels “DTIM beacons”) sent to the mobile devices every 306 milliseconds. With respect to the WN511B-100NAS mobile device, one graph shows power consumption spikes close to 306 milliseconds apart. However, it is impossible to tell whether the spikes are actually 306, 308 or 316 milliseconds apart. Even Williams, who conducted the tests and created the graphs, notes that the tested device consumes more power “approximately every 306ms.” Williams Decl., dkt. #357, at 91 ¶243. The precise power-on time matters. As the maxim goes, “An inch isn’t so long, unless it’s at the end of your nose.” As I have previously explained, the inventor’s use of the word “synchronously” in the ‘642 patent requires a level of preciseness beyond merely powering on *some time* before the beacon signal is received. Dkt. #301 at 21 (“[T]he ‘642 patent limits the power-on time to the time it is to receive the beacon signal so that the station can operate in [a] more efficient manner and conserve more power.”).

One of the core purposes of the invention claimed in the '642 patent is to reduce the power consumption of mobile devices. '642 pat., col. 3, lns. 41, 46 & 51. Although a variance of a couple of milliseconds may not seem like much, it can add up when one considers the fact that the power-on process is occurring every couple of hundred milliseconds. The '642 patent specification explains that the prior art practice of sending beacon signals at short intervals improved throughput, but the use of short intervals increased the number of times the mobile station had to power on, which increased power consumption. Id. col. 3, lns. 13-19. If defendant's accused mobile devices are powered on for even five extra milliseconds every time they receive a beacon signal, this will increase power consumption, just as short beacon intervals would. Thus, because it is impossible to know from plaintiffs' oscilloscope graphs the precise time between when defendant's accused mobile devices reach their power-on mode and a beacon signal is to be received, the jury is left with no evidence from which to find that the devices literally infringe the "synchronously" element of claims 2 and 8 of the '642 patent.

To find infringement of this element, the jury would have to decide how soon before a beacon signal is to be received, a mobile station could reach its power-on mode and still perform substantially the same function as the claimed invention. Plaintiffs have produced no evidence that would allow a fact-finder to make this decision. Plaintiffs contend that the accused mobile devices power-on "so close" to or "very near" to the time when a beacon

signal is to be received that there is no discernible impact on the power-saving capabilities of the devices. Although the wireless technology at issue involves processes happening in milliseconds, plaintiffs do not explain what constitutes “so close” or “very near.” They do not even provide an approximate range, such as between five and ten milliseconds. It is true that reaching a powered on mode one millisecond before the point at which a beacon signal is to be received is “very near.” Is four milliseconds still “very” near? Is nine milliseconds?

Moreover, plaintiffs have adduced no evidence regarding the actual power saving effects of a device powering on “so close” or “very near” to receiving a beacon signal. They merely cite to their expert’s conclusory opinion to explain the effects. Plts.’ Resp. Br., dkt. #464, at 52 (citing Opp. PFF #600). (I note that in their opposition proposed finding of fact number 600, plaintiffs cited paragraph 20 of Rhyne’s declaration, but they did not say which of his declarations they were relying on. Dkt. #362; dkt. #460. A review of the two declarations to which Rhyne swore discloses no respective paragraphs 20 to support even the conclusory opinion proposed in the finding of fact.) Plaintiffs cite no test or information regarding the difference in power consumption between different devices, such as a device that reaches its power-on mode 10 milliseconds before it is to receive a beacon signal and one that reaches its power-on mode 20 milliseconds before that time.

It may be the case that such variations in power-on time do not create any discernible change in power saving and that such differences perform substantially the same power-

saving function as reaching power-on mode at the same time a beacon signal is to be received, but that is not something a lay jury would know. Plaintiffs have the burden of providing specific evidence from which a jury could find in their favor, but their conclusory statements are nothing more than speculation about when the accused mobile devices power-on and how that time affects their power consumption. Speculation is not enough to create a material issue of fact on summary judgment. No reasonable jury could find from the evidence plaintiffs have produced that defendant's accused mobile devices infringe claim 2 or claim 8 of the '642 patent.

b. "data receive ready period" element in claims 2 and 6

For the accused base station or access point devices, plaintiffs provided transmission traces to demonstrate how the devices function. Plaintiffs contend that these traces establish that the accused access point devices are capable of communicating with mobile devices in accordance with claims 2 and 6 of the '642 patent. However, these traces do not show that the devices transmit data only during a "data receive-ready period" as the term has been construed, unless time extension information is transmitted.

In the claims construction opinion I explained that "[a]ccording to the claim language and specification, a data receive-ready period has two necessary components: (1) the period must be "fixed" and (2) it begins after the intermittent power-on type mobile station receives

a beacon signal telling it there is data waiting to be transmitted.” Dkt. #201 at 21. The fact that the period must be fixed makes sense in light of the patent’s requirement that an access point provide time extension information to a mobile station. There would be no need for transmitting time extension information to a mobile station if the data receive-ready period was not a fixed period. The mobile station would merely remain powered on until it finished receiving all the data buffered at the access point.

Plaintiffs contend that the beacon interval corresponds to the data receive-ready period because “(1) it is a fixed period of time, (2) the mobile station remains powered-on for the entire period if there is data to be received, and (3) in the tested products, the period begins immediately after the DTIM beacon is received.” Plts.’ Br. in Supp., dkt. #370, at 59. Plaintiffs’ expert Williams set the beacon interval on defendant’s WPN802NA access point at 102 milliseconds and the transmission trace captured the transmission of beacon signals, both DTIMs and TIMs, every 102 milliseconds. Further, when the multicast bits in both a DTIM and the following TIM were set, the mobile device receiving the beacon signals remained awake to receive data transmitted between the DTIM and TIM signals as well as after the TIM signal.

The transmission trace provided by Williams establishes that the tested access point transmitted a DTIM signal with its multicast bit set. Williams Decl., dkt. #357, at 92-93 ¶246. The access point proceeded to transmit data to the mobile device and included a

“more data” flag in the form of an “m” to inform the mobile device that more data was to follow the received data. After the eleventh data transmission with an “m,” the access point transmitted a TIM signal, as it was programmed to do according to the 102 millisecond beacon interval that Williams set. The TIM signal also had its multicast bit set, informing the mobile device that more data remained buffered at the access point waiting to be transmitted. The access point sent two more data frames, the second of which had no “m” flag. The access point then stopped transmitting until the next scheduled DTIM signal. The accompanying oscilloscope graph of the mobile device’s power consumption revealed that the mobile device receiving transmissions from the access point had powered on some time before the transmission of the first DTIM signal with its multicast bit set and did not power down until after the data frame with no “m” flag was transmitted.

The evidence plaintiffs provide demonstrates that the accused access points transmit data to mobile stations so long as there is data to transmit, but it does not establish whether the access points limit transmission of data during a fixed period unless they transmit time extension information. In other words, plaintiffs’ expert’s tests show an access point that transmits all the data buffered for a mobile device without regard for any fixed period of time in which the mobile device normally is powered on to receive data. The access point merely sends information in each data frame telling the mobile device whether there is more data waiting for it.

To establish that the accused access devices' beacon interval is akin to a data receive-ready period, plaintiffs had to adduce evidence of such a feature. One example might be a trace showing that the access device transmits data frames with an "m" flag during an entire beacon interval and then, despite having more data buffered for the mobile device, stops the transmission of such data until the next DTIM signal. Such evidence would establish that the access point limited its transmission of data to a "fixed" period despite the fact that more data for the mobile device remained buffered at the access point when it stopped transmitting data. Plaintiffs have adduced no evidence from which a reasonable jury could find that defendant's devices perform this function. Accordingly, defendant's motion for summary judgment will be granted and plaintiffs' will be denied as to plaintiff's claim that the accused products in Appendix C infringe claims 2, 6 and 8 of the '642 patent.

#### D. Infringement of the '952 Patent

##### 1. Undisputed facts

###### a. plaintiff Philips

Plaintiff U.S. Philips Corporation is a Delaware corporation with its principal place of business in New York. It is the owner of the '952 patent and it is a part of the 802.11 standard licensing pool run by Via Licensing.

b. the initial Dynacore motion

In the January 5, 2009 order on plaintiffs' motion for partial summary judgment, I concluded that with respect to the '952 patent:

a product complying with §§ 7.1.3.1.4, 7.1.3.1.5, 7.1.3.4, 7.1.3.4.1, 7.1.3.4.2 and 9.4 of the 802.11 standard necessarily complies with all elements found in claim 1 of the '952 patent and a product complying with §§ 7.1.3.1.8 and 8 of the 802.11 standard necessarily complies with all elements found in claim 6 of the '952 patent.

Dkt. #301 at 22-23. This conclusion as to claims 1 and 6 does not end the infringement analysis. It remains to be determined whether any of defendant's products practice the requirements set forth in the relevant sections of the standard.

c. asserted claims

The '952 patent is entitled "Method of Data Communication." Only independent claim 1 and dependent claim 6 are at issue. Claim 1 states:

1. In a data communication system wherein messages comprising data code words are to be transmitted from a data transmitter to one or more of a plurality of data receivers, a method of transmission of such messages comprising the steps of:

segmenting the data code words of each message into a sequence of successive segments each of a predetermined length;

assigning an identification number to each message and assigning sequential identification numbers to the successive segments thereof;

including in the first segment of each message a code word which contains the message identification number and including in the last segment of each message a

code word identifying it as the last segment, whereby segments having segment identification numbers between those of the first and last segments of a message are identified as being segments of such message; and

including in each segment of a message a code word which includes the segment identification number and also indicates whether such segment includes retransmission of code words which were included in a previously transmitted segment of the same message.

'952 pat., col. 7, lns. 47-61 and col. 8, lns. 1-10.

Claim 6 states:

6. The method as claimed in claim 1, further comprising:  
encrypting the data words of a message; and  
indicating in the message that the data words thereof have been encrypted.

Id. at col. 8, lns. 30-34.

The '952 patent expired on December 4, 2007.

d. accused products

Plaintiffs assert that 147 of defendant's products infringe claims 1 and 6 of the '952 patent. Plts.' Br., dkt. #370, Appendix A. Discussion of the relevant functionality of the products is included below in the analysis of infringement.

## 2. Infringement analysis

Plaintiffs contend that the accused products in Appendix A infringe claims 1 and 6 of the '952 patent by performing fragmentation, encryption and defragmentation. The '952 patent claims a method that defendant does not practice itself but, according to plaintiffs, infringes indirectly by actively inducing others to practice by selling products to customers who then use the products to engage in the patented method. E.g., RF Delaware, Inc. v. Pacific Keystone Technologies, Inc., 326 F.3d 1255, 1267 (Fed. Cir. 2003) (“A method claim is directly infringed only by one practicing the patented method.”) (quoting Joy Technologies, Inc. v. Flakt, Inc., 6 F.3d 770, 775 (Fed. Cir. 1993)).

a. defragmentation

Plaintiffs contend that any device that performs “defragmentation” in accordance with § 9.5 of the 802.11 standard necessarily infringes claim 1 of the '952 patent. Although plaintiffs were instructed to include such arguments in their Dynacore motion they filed in October 2008, they raised this argument for the first time in their current summary judgment motion. Ordinarily, plaintiffs' failure to raise this issue at the appropriate time would amount to waiver of the argument, but it fails on its merits in any event. For the sake of completeness, I will discuss it here.

The '952 patent provides a method of data communication that involves sending long data messages in segments or fragments, as opposed to trying to send the entire message at

once. The preamble to claim 1 sets the stage for the “method of transmission” set forth in claim 1 of the ‘952 patent by explaining that the method is used “[i]n a data communication system,” which includes both data transmitters and data receivers. ‘952 pat., col. 7, lns. 47-50. “Data transmitters fragment data messages according to the patented method and send the fragmented messages to data receivers. Plaintiffs contend that the mention of “data receivers” in claim 1 makes defragmentation material to that claim’s method of transmission. I agree that without data receivers capable of defragmenting messages transmitted in accordance with the patent’s claimed segmentation or fragmentation method, the usefulness of the claimed method would be lost. Nonetheless, the claimed method relates only to the fragmentation portion of the transmission; the patent does not disclose defragmentation.

Although claim 1 of the ‘952 patent claims a method of transmission, plaintiffs contend that a device receiving a fragmented message and performing defragmentation in accordance with § 9.5 of the 802.11 standard infringes indirectly, by contributing to the infringement of claim 1. A major problem with plaintiffs’ argument is that it rests on the false assumption that compliance with § 9.5 of the standard necessarily results in infringement of claim 1. Section 9.5 sets out clear methods for defragmentation of a received fragmented transmission, but claim 1 of the ‘952 patent does not. In fact, it makes no mention of any method of defragmentation. It appears that plaintiffs’ contention is that

the mere fact that defendant's accused products perform defragmentation makes them infringing products, regardless of the way the messages they receive and defragment were initially fragmented. This cannot be correct.

Plaintiffs do not—and cannot—contend that the method claimed by the '952 patent covers any and all processes of fragmentation. The background section of the patent makes it clear that the mere fragmenting or segmenting of a data transmission was not a new discovery: “It is known that efficiency can be improved by transmitting data as a series of segments . . . .” ‘952 pat., col. 2, lns. 27-28. The invention is a specific method of fragmentation or segmenting that is an improvement over the prior art. If fragmentation was known in the prior art, it follows that devices capable of defragmentation existed to reassemble the fragmented messages. Plaintiffs’ defragmentation argument rests on the assertion that any device capable of defragmentation infringes the ‘952 patent. If this is correct, the existence of those prior art devices infringe the ‘952 patent because they would have had the capability of defragmenting messages. Of necessity, therefore, the existence of those devices would invalidate the ‘952 patent. SmithKline Beecham Corp. v. Apotex Corp., 439 F.3d 1312, 1321 (Fed. Cir. 2006) (“That which infringes, if later, anticipates if earlier.”)

If plaintiffs meant to claim defragmentation in the ‘952 patent, they would have had to specify a novel form of that process. That they did not suggests that they did not view

defragmentation as part of the invention that became the '952 patent.

The flaw in plaintiffs' argument is clear in light of an example. Assume someone patented the method of throwing a hanging curve ball as an improvement on the regular curve ball. In describing the method, the inventor explains that the method is "used in a baseball game, wherein a pitcher throws a ball to a catcher." From there the inventor proceeds to explain the steps necessary to throw a hanging curve ball. None of the steps mention any special method for catching a hanging curve ball. No one reading the patent would conclude that the inventor was concerned about the manner in which the catcher might catch the hanging curve ball, let alone that he was claiming the general method of catching balls thrown by a pitcher to a catcher. He was claiming an improved method of throwing a curve ball.

Reading the '952 patent as covering the way a terminal "receives" a message (by defragmenting it) would be like reading the mythical hanging curve ball invention as covering the general method of catching balls thrown by a pitcher. Clearly, without a catcher to receive the hanging curve ball, the method would not be useful, but the catcher's ability to catch the hanging curve ball does not disclose anything about whether the pitcher was actually throwing the ball in the way claimed in the patent. It would make no sense to say a catcher's ability to *catch* a hanging curve ball infringes a patent that discloses a method of *throwing* a hanging curve ball.

Returning to the case at hand, just because a product can defragment (or put back together) a fragmented message does not mean that the reassembled message was fragmented using the method of claim 1 of the '952 patent. If it did, the improved fragmentation method would be read out of the claim. Conversely, if a device fragmented a message in accordance with claim 1 and transmitted the message to a device that was unable to defragment the message, the fragmenting device would still infringe claim 1. Thus, in deciding whether a device contributorily infringes claim 1, it is irrelevant whether it is capable of defragmentation.

b. fragmentation and encryption

Next, plaintiffs contend that defendant's accused products in Appendix A-1 indirectly infringe claims 1 and 6 of the '952 patent under either an active inducement or contributory infringement theory. "[L]iability for either active inducement of infringement or for contributory infringement is dependent upon the existence of direct infringement by customers." RF Delaware, Inc., 326 F.3d at 1268. In other words, the indirect infringer creates a product or process that when put into use by a third party causes that party to infringe a patent directly. The indirect infringer is one step removed from the direct infringement. Nonetheless, for the indirect infringer to be liable there must be evidence that a third party used the alleged indirect infringer's product in a manner that directly infringes

a patent. Id.

Plaintiffs have tried to satisfy this element of their underlying infringement claim by contending that defendant's accused products listed in Appendix A comply with relevant sections of the 802.11 standard that read on claims 1 and 6 of the '952 patent. Although compliance with some sections of the standard demonstrates that devices function in a manner that necessarily infringes claims 1 and 6, compliance cannot be enough to prove underlying direct infringement of § 9.4 because a device may comply with § 9.4 without actually practicing its required methods. Fragmenting messages is a limitation of the '952 patent, yet, as plaintiffs concede, a device can comply with § 9.4 of the 802.11 standard without actually fragmenting messages because fragmentation is optional under § 9.4. Almeling Decl., dkt. #228, exh. #6, at 279 ("The MAC *may* fragment and reassemble individually addressed MSDUs or MMPDUs." (Emphasis added)). In other words, devices may operate in a non-infringing manner and still comply with § 9.4 by not fragmenting at all.

One might think this settles the matter, but plaintiffs contend that whether fragmentation is optional under § 9.4 does not matter because the court determined earlier that a device's compliance with § 9.4 necessarily infringes claim 1 of the '952 patent. This is a misreading of the order, which said nothing about whether fragmentation under § 9.4 was optional. Although I concluded in the partial summary judgment opinion that a device's

“compliance” with relevant sections of the standard would necessarily infringe claims 1 and 6, the conclusion was based on the assumption that the only way in which a device could be in compliance with § 9.4 was for it to actually practice each required method listed. In fact, it is clear from the reasoning in that opinion that what was referred to as “compliance” with § 9.4 meant the actual practice of the methods listed in § 9.4. I broke down many sections of the 802.11 standard, including § 9.4, and explained how a device that actually functioned in the manner required by the specific requirements listed in each section would necessarily practice claims 1 and 6 of the ‘952 patent. At this stage of the litigation, plaintiff must produce evidence that the accused devices actually practice the requirements in the relevant sections of the standard that read onto a patent. A device that actually practices fragmentation in accordance with the requirements listed in § 9.4 and several other sections necessarily infringes claim 1; it does not follow that a device that complies with § 9.4 by choosing not to fragment messages infringes claim 1.

Regardless whether compliance with § 9.4 requires a device to engage in fragmentation, plaintiffs agree that defendant’s accused products reach consumers in a default mode with fragmentation disabled. Without enabling fragmentation, customers use defendant’s products in a non-infringing manner. In other words, even assuming that enabling fragmentation causes defendant’s products to infringe claim 1 of the ‘952 patent, defendant’s products are capable of functioning in both infringing and non-infringing

matters. Because defendant's A-1 accused devices can be used at any given time in a non-infringing manner, they cannot *necessarily* infringe claim 1. ACCO Brands, Inc. v. Locks Manufacturer Co., 501 F.3d 1307, 1313 (Fed. Cir. 2007) ("Because the accused device can be used at any given time in a noninfringing manner, the accused device does not necessarily infringe the '989 patent."). Thus, to prove the required underlying direct infringement plaintiffs must show specific instances of direct infringement. Id.

Before reaching that point, I note that it is plaintiffs' burden to show specific instances of direct infringement for *each* accused product. Plaintiffs have not provided evidence that the functionality of one product is representative of the functionality of other products. As explained earlier, plaintiffs' expert's conclusory statements that products in the same family typically function in the same manner is nothing more than speculation, which is not enough to support grouping products on the basis of functionality.

Despite the previous order denying plaintiffs' request to group products unless and until plaintiffs provided evidence that any proposed groups were proper, dkt. #202, plaintiffs have built their case on this failed grouping strategy. Many of their proposed findings of fact are broad, general statements regarding the functionality of "accused products" that do not identify which of the specific products actually exhibit the allegedly infringing functionality. E.g., Plts.' PFOF, dkt. #662, exh. #2, #90 ("Netgear instructs its ODMs to design *products* so that a user may set the fragmentation threshold.") (Emphasis

added). Plaintiffs attempt to group the products listed in the appendixes to their briefs, but they do not provide supporting evidence for each product in the list. Instead, they provide a long list of record cites regarding some of the products in the cited appendix. E.g., id. at #91 (“Fragmentation is enabled by setting the “fragmentation threshold” through the user interface for Appendix A-1 Products” (citing 39 exhibits in support of the statement).)

A patent holder may prove specific instances of direct infringement through circumstantial evidence. Metabolite Laboratories, Inc. v. Laboratory Corp. of America Holdings, 370 F.3d 1354, 1364-65 (Fed. Cir. 2004). Plaintiffs contend that circumstantial evidence exists from which a reasonable jury could find that defendant’s customers engage in specific instances of direct infringement. First, plaintiffs point to defendant’s advertising of its products as 802.11 compliant. At the risk of redundancy, I note again that stating that a product is compliant with a standard that includes more than a thousand pages of information on wireless functionality is not the same as advertising a specific functionality. Such general advertisements do not establish that customers directly infringe the ‘952 patent by enabling fragmentation on purchased products, particularly where fragmentation is optional under the standard. E.g., PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1351 (Fed. Cir. 2007) (general advertisements regarding benefits of cord blood not sufficient to show direct infringement because advertisements did not state specifically that cord blood contained enough stem cells to reconstitute an adult, which was element of

patented method).

Second, plaintiffs point to defendant's customer service records. However, plaintiffs cite records regarding only four accused products: WPN111, WG511, WPN824 and WG311T. (Those products will be addressed further in the next section of this opinion.) The 900 pages of customer service records may contain examples of customers being instructed to enable fragmentation in other accused products, but plaintiffs have not proposed findings of fact regarding any products other than the four cited. I have disregarded whatever information is contained in the additional records because of plaintiffs' failure to propose specific findings of fact and submit the supporting evidence in an accessible format. This means there are effectively no customer service records for the remainder of the accused products listed in Appendix A-1.

Third, plaintiffs cite accused products' user manuals, arguing that because the manuals include a discussion of enabling fragmentation, they are circumstantial evidence that customers would actually enable fragmentation. However, plaintiffs have not identified which accused products' manuals actually explain how to engage in fragmentation. Plts.' PFOF, dkt. #662, exh. #2, at 28 ¶106. Further, at most a manual discussing how to enable fragmentation raises hypothetical possibilities of direct infringement. Plaintiffs must show more than possibilities to establish indirect infringement. ACCO Brands, Inc., 501 F.3d at 1313.

This is not a case in which the customer necessarily engages in the patented method by using the product in its basic configuration in accordance with instructions provided by the alleged infringer. E.g., Golden Blount, Inc. v. Robert H. Peterson Co., 438 F.3d 1354, 1362 (Fed. Cir. 2006) (plaintiff provided evidence of direct infringement by showing that defendant assembled eleven infringing devices itself and included instructions with each sold product that taught only infringing configuration). In this case, fragmentation, that is, the patented method, is disabled by default on every accused product. Nothing in the manuals tells users that they have to enable fragmentation to use the products or even that they should. The products can be used without enabling fragmentation. One can speculate from the manuals that some customers actually enable fragmentation on the accused products; one cannot know this from the manuals. Speculation is not enough to prove direct infringement. E.g., Lucent Technologies, Inc. v. Gateway, Inc., 543 F.3d 710, 723 (Fed. Cir. 2008) (no evidence of direct infringement because too speculative to conclude that High Quality encoder actually ran on Window Media Player). Plaintiffs' general evidence about defendant's user manuals is not enough to allow a reasonable jury to find that customers enable fragmentation on accused products.

Finally, the fact that plaintiffs' expert could enable some of the accused products to perform fragmentation is not evidence from which a reasonable jury can find specific instances of direct infringement by actual customers who were sold the accused products.

E.g., ACCO Brands, Inc., 501 F.3d at 1313 (“The sole witness at trial who testified to having used the lock in an infringing manner was ACCO’s expert, Dr. Dornfeld. However, the record contains no evidence of *actual users* having operated the lock in an infringing manner.” (Emphasis added.)) Accordingly, I find that the evidence provided by plaintiffs fails to establish specific instances of direct infringement of claim 1 of the ‘952 patent for the majority of the accused products listed in Appendix A-1.

Without even circumstantial evidence of specific instances of direct infringement of claim 1 by customers using defendant’s accused products, plaintiffs cannot prevail on their allegations of indirect infringement. No evidence of direct infringement means there can be no finding of indirect infringement. Linear Technology Corp., 379 F.3d at 1326. Because claim 6 is a dependent claim and no reasonable jury could conclude that most of the accused products listed in Appendix A-1 infringe claim 1 indirectly, those same products cannot infringe dependent claim 6 indirectly. Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1328 n.5 (Fed. Cir. 2008) (“A conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.”). Defendant’s motion for summary judgment of non-infringement with respect to claims 1 and 6 of the ‘952 patent will be granted because of plaintiffs’ failure to provide evidence from which a reasonable jury could find specific instances of direct infringement of any accused products in Appendix A-1 other than the four I have identified previously.

c. Indirect infringement by the WPN111, WG511, WPN824 and WG311T products

At the outset, I note that plaintiffs' continued grouping of products makes it difficult to know whether WPN111, WG511, WPN824 and WG311T actually practice fragmentation according to the specific fragmentation sections in the 802.11 standard or claim 1 of the '952 patent. (Although plaintiffs do not say so, I assume that product WPN824NA, discussed supra at 8, is the same product as WPN824, the NA denoting nothing more than sale in North America.) Although plaintiffs' expert Williams states that he tested these products and that they fragment messages in accordance with the 802.11 standard, it is unclear where the underlying evidence of such testing is in the record. Williams identifies one representative example of a product practicing fragmentation in his expert disclosure and states that WPN111, WG511 and WG311T were observed functioning in the same manner, but he does not explain how the results of any testing were the "same." Williams Decl., dkt. #357, ¶¶ 50, 64 & 65. Moreover, as discussed earlier in this opinion, supra at 8, plaintiffs have produced nothing but speculation to support their assertion that product WPN824 performs fragmentation and uses frame headers in a manner that corresponds to those functionality requirements in the 802.11 standard and claim 1 of the '952 patent.

Nevertheless, there is no evidence from which a reasonable jury could find that plaintiffs have satisfied the knowledge or intent elements under either a contributory

infringement theory or an inducement of infringement theory. As explained earlier in this opinion, defendant was not on notice that any of its products were potentially infringing the '952 patent until after the patent expired. If defendant was not notified of infringement, it could not have intended to induce infringement or known that its product would contribute to customer infringement.

With respect to their active inducement claim, plaintiffs must show that defendant induced its customers to infringe knowingly and intentionally. Ricoh Co., Ltd. v. Quanta Computer Inc., 550 F.3d 1325, 1342 (Fed. Cir. 2008). Without proof that defendant had adequate notice that the WPN111, WG511, WPN824 and WG311T products allegedly infringed plaintiffs' '952 patent, plaintiffs have no way to show that defendant had the requisite knowledge for a finding of inducement of infringement. If defendant did not know its products might infringe, it would not have been able to form the intent necessary for a finding of liability.

With respect to contributory infringement, there is no need for proof of intent to cause infringement, Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469 (Fed. Cir. 1990), but there must be evidence that defendant "knew that the combination for which [its] components were especially made was *both* patented and infringing," Preemption Devices, Inc. v. Minnesota Mining & Manufacturing Co., 803 F.2d 1170, 1174 (Fed. Cir. 1986)(emphasis added). Again, without proof that defendant knew that its WPN111,

WG511, WPN824 and WG311T products infringed the '952 patent until after the patent expired, plaintiffs' allegations of contributory infringement founder. Therefore, defendant's motion for summary judgment of non-infringement of the '952 patent will be granted and plaintiffs' motion for summary judgment of infringement of the '952 patent will be denied.

#### IV. VALIDITY OF THE PATENTS IN SUIT

In addition to requesting a determination of non-infringement, defendant has requested that the '993, '642 and '952 patents be declared invalid and it has asserted counterclaims to that effect, seeking a declaratory judgment. The Court of Appeals for the Federal Circuit has held that a district court has the discretion to dismiss invalidity counterclaims upon a grant of summary judgment of non-infringement. Phonometrics, Inc. v. Northern Telecom Inc., 133 F.3d 1459, 1468 (Fed. Cir. 1998); Cardinal Chemical Co. v. Morton Int'l, Inc., 508 U.S. 83, 95 (1993) (in addressing motion for declaratory judgment district court has discretion to decide whether to exercise jurisdiction even when established). It is appropriate for a district court to address only the infringement issue when non-infringement is clear and invalidity is not plainly evident. Phonometrics, Inc., 133 F.3d at 1468 (citing Leesona Corp. v. United States, 530 F.2d 896, 906 n.9 (Ct. Cl. 1976)).

Discretionary dismissal of defendant's invalidity counterclaims is appropriate in this case because it is clear that plaintiffs have failed to prove either direct or indirect

infringement and it is far less clear whether these patents are invalid. A finding of invalidity would require an analysis of several pieces of prior art in combination and reviewing hundreds of disputed facts bearing on five additional patents. It would be a poor use of judicial resources to explore these issues at this time, when defendant has given the court no reason to believe that it is at risk of a future infringement suit based on the patents in suit.

Because defendant's motion for summary judgment will be granted on the core issue of non-infringement on clear grounds and because the outcome of defendant's counterclaims for invalidity is less certain, I will exercise my discretionary authority and dismiss defendant's invalidity counterclaim without prejudice.

#### ORDER

IT IS ORDERED that:

1. Defendant NETGEAR, Inc.'s motion for summary judgment of non-infringement and invalidity, dkt. #326, is DENIED with respect to its invalidity counterclaims and GRANTED with respect to plaintiffs' claims that
  - a. Defendant's accused products listed in Appendix A to plaintiffs' motion for summary judgment infringe claims 1 and 6 of the '952 patent;
  - b. Defendant's accused products listed in Appendix B to plaintiffs' motion

for summary judgment infringe claims 25 and 26 of the '993 patent;

- c. Defendant's accused products listed in Appendix C to plaintiffs' motion for summary judgment infringe claims 2, 6 and 8 of the '642 patent.

2. The motion for summary judgment of infringement, dkt. #355, filed by plaintiffs Fujitsu Limited, LG Electronics, Inc. and U.S. Philips Corporation is DENIED.

3. Defendant's counterclaims asserting invalidity are DISMISSED without prejudice.

4. The clerk of court is directed to enter judgment

- a. In favor of defendant NETGEAR, Inc. with respect to the claims for infringement asserted by plaintiffs Fujitsu Limited, LG Electronics, Inc. and U.S. Philips Corporation regarding claims 1 and 6 of plaintiff U.S. Philips Corporation's U.S. Patent No. 4,975,952; claims 25 and 26 of plaintiff LG Electronics, Inc.'s U.S. Patent No. 6,469,993; and claims 2, 6 and 8 of plaintiff Fujitsu Limited's U.S. Patent No. 6,018,642;
- b. Dismissing the infringement claims by plaintiffs Fujitsu Limited, LG Electronics, Inc. and U.S. Philips Corporation regarding claim 4 of the '952 patent and claims 1, 2, 3, 6 and 21 of the '993 patent with prejudice in accordance with the order entered on March 27, 2009,

dk. #439;

- c. Dismissing defendant NETGEAR Inc.'s counterclaims for invalidity without prejudice.

5. The parties' motions in limine, dkts. ##585, 589, 590, 591 and 592, are DENIED as moot.

6. The clerk of court is directed to close this case.

Entered this 18th day of September, 2009.

BY THE COURT:  
/s/  
BARBARA B. CRABB  
District Judge