



(“Responsive”) and Turning Technologies, LLC (“Turning”) (collectively, “Plaintiffs”) against Holtzbrinck Publishers, LLC (“Holtzbrinck”) and MacMillan Publishers, Inc. (“MacMillan”) (collectively, “Defendants”). Both Plaintiffs and Defendants market and sell radio frequency based audience response systems that employ handheld-initiated communications. Plaintiffs brought suit on May 13, 2008, alleging infringement of U.S. Patent No. 7,330,716 (“the ‘716 Patent”), entitled “Wireless Communication System.” (Doc. No. 1; Doc. No. 23.) Plaintiffs’ specifically allege that Defendants, through Defendants’ i>Clicker wireless audience response system, infringe claims 1-5, and 8-9 (“the asserted claims”) of the ‘716 Patent. (Doc. No. 23.)

Defendants deny infringement and further deny that the patent is valid. (Doc. No. 15; Doc. No. 25.) Defendants brought declaratory judgment counterclaims of non-infringement and invalidity under 35 U.S.C. §§ 102, 103, and 112 and counterclaims of unfair competition under the Lanham Act § 43(a), common law unfair competition, deceptive trade practice under Ohio Rev. Code § 4165.02, defamation, and tortious interference. (Doc. No. 25.) On April 3, 2009, the Court issued its *Markman* Order. (Doc. No. 38.) On June 29, 2009, Defendants moved to amend its affirmative defenses and counterclaims to add new allegations of inequitable conduct and patent misuse. (Doc. No. 39.)

On June 24, 2010, Defendants filed a Motion for Summary Judgment on their invalidity defenses of anticipation, obviousness, and failure to disclose the best mode. (Doc. No. 72.) Plaintiffs filed a Motion for Summary Judgment on: (1) their claim of patent infringement, (2) Defendants’ invalidity defenses of anticipation, obviousness, written description, enablement, and best mode, (3) Defendants’ unenforceability defenses of inequitable conduct, and patent misuse, and (4) Defendants’ counterclaims. (Doc. No. 73 corrected at 76). The Court heard Oral

Argument on the parties' motions for summary judgment on July 7, 2010. (*See* Doc. No. 125.)

Pursuant to motion by Plaintiffs, the Court withheld ruling until after the United States Supreme Court addressed the issue of burden of proof in a case pending before it in 2011. The Supreme Court decision did not fundamentally alter the burden of proof implicated in the motions of the parties and the Court now issues its ruling.

## **II. The '716 Patent**

### **The '716 Patent's History**

The '716 Patent issued on February 12, 2008, from U.S. Patent Application No. 11/336,361 ("the '361 Application"), filed on January 20, 2006. The patent claims priority to a provisional application, filed on January 21, 2005. Kevin Adkins, Responsive's President, is the sole inventor of the '716 Patent. Adkins assigned his rights in the '716 Patent to Responsive, the current owner of the '716 Patent. Responsive granted an exclusive license to Turning, the exclusive licensee of the '716 Patent.

### **Overview**

The '716 Patent is generally directed to audience response systems, i.e., systems "employed to retrieve (or receive) responses from a group of individuals at a central location." U.S. Patent No. 7,330,716, Col. 1, Lines 18-20. The audio response system of the '716 Patent has a plurality of transmitters (handheld devices) and at least one receiver (base unit). U.S. Patent No. 7,330,716, Col. 1, Lines 11-13. Each handheld device includes a wireless data transmitter illustrated as a radio frequency ("RF") transceiver configured to transmit and receive RF signals. U.S. Patent No. 7,330,716, Col. 4, Lines 4-7.

The '716 Patent contains 13 claims, including 1 independent claim (claim 1) and 12

dependant claims (claims 2-13). Independent Claim 1 is representative of the claimed invention and reads as follows:

1. A wireless communication system comprising:  
a plurality of handheld devices, each handheld device including:  
a transmitter, an input selection control, and a processor configured to receive a user selection from the input selection control; and upon receipt of the user selection, communicate instructions to the transmitter to transmit an RF signal encoding an address and the user selection according to a defined RF profile, wherein the defined RF profile comprises a distinct period of no RF transmission, and a first period of RF transmission corresponding to transmission of the RF signal, where the first period of RF transmission occurs after the distinct period of no RF transmission and is responsive to receipt of the user selection from the input selection control;  
and a receiver including a transceiver configured for data communication with a processor.

Dependant claims 2-5 and 8-9, when simplified, add additional limitations to claim 1:

Dependent claim 2 adds a computer readable medium that stores an address.

Dependent claim 3 adds that the base unit receiver decodes the RF signal into the address and the user selection following receipt by the transceiver.

Dependent claim 4 adds that the base unit receiver stores the user selection in the computer readable medium.

Dependent claim 5 adds that there is a second period of RF transmission including an acknowledgment after receipt by the base unit receiver.

Dependent claim 8 adds that there is a distinct period of no RF transmission after the second period of RF transmission.

Dependent claim 9 adds that the defined RF profile includes a transmission interval separating periodic retransmissions of the RF signal.

### III. LAW AND ANALYSIS

#### Legal Standard for Summary Judgment

Summary Judgment is proper when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247 (1986). Summary judgment thus may be granted when no “reasonable jury could return a verdict for the nonmoving party.” *Anderson*, 477 U.S. at 248. The moving party bears the burden of proving that no genuine issue of material fact exists. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 n.10 (1986). In determining whether there is a genuine issue of material fact, the court must view all evidence in the light most favorable to the nonmoving party. *Matsushita*, 475 U.S. at 587.

In the present case, Plaintiffs have the burden of proving patent infringement of the ‘716 Patent by a preponderance of the evidence. *See Kegel Co., Inc. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1425 (Fed. Cir. 1997) (“The [patentee] has the burden of proving infringement by a preponderance of the evidence.”). Defendants conversely have the burden of proving invalidity of the ‘716 Patent by clear and convincing evidence. *See Apple Computer, Inc. v. Articulate Sys., Inc.*, 234 F.3d 14, 31 (Fed. Cir. 2002) (“One attacking the validity of a patent must present clear and convincing evidence establishing the facts that lead to the legal conclusion of invalidity.”).

Plaintiffs move for summary judgment, asking the Court to find that its 716 patent is valid and enforceable. Defendants move for summary judgment, contending Plaintiffs’ patent is invalid as it was anticipated by prior art and obvious from prior art. The Court will address the motions jointly.

## Validity of the '716 Patent

### **Anticipation**

“[A] patent is presumed valid, and this presumption exists at every stage of the litigation.” *Canon Computer Systems, Inc. v. Nu-Kote Intern., Inc.* 134 F.3d 1085, 1088 ( Fed Cir.1998). Under 35 U.S.C. § 102, the statute states in pertinent part:

A person shall be entitled to a patent unless--

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States,

Thus, invalidity by anticipation under, 35 U.S.C. § 102, requires that a single prior art reference describes every element of the claimed invention such that a person of ordinary skill in the art could practice the invention without undue experimentation. *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Anticipation is a question of fact. *Id.* at 1281. To invalidate a patent by anticipation, the party challenging the patent must prove by clear and convincing evidence that one skilled in the art would reasonably understand or infer from the prior art reference’s teaching that every claim element was disclosed in that single reference.” *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003).

Defendants contend that prior art anticipates Plaintiffs’ ‘716 patent. However, in order to establish that certain references qualify as prior art requires the Court to determine that a reference existed as of the date of the invention in question or the invention was in public use or

for sale in this country one year prior to the date of application. The parties appear to agree that the Glass reference and the I-Vote Paper existed at the time of the invention. However, the parties dispute the appropriate date of the invention, which impacts whether certain references qualify as prior art. According to Defendants, the appropriate date is January 2006, the date of the filing of the application. See *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 449 (Fed Cir. 1986) (“Further, the art must have existed as of the date of invention, presumed to be the filing date of the application until an earlier date is proved.”). Defendants contend that the provisional application filing date of January 2005 does not apply because it does not meet the written description requirement of 35 U.S.C. §112 to support its patents claims. In particular, Defendants argue that the provisional application makes no mention of handheld units and therefore, fails the written description requirement.

Defendants further contend that Plaintiffs have failed to offer sufficient corroborating evidence to support its contention of an invention date of August 2004 based on the recollections of inventor Kevin Adkins.

Plaintiffs offer as evidence of an August 2004 date, the affidavit of Michael Broderick, a founder of Turning Technologies, LLC., wherein Broderick attests: “On the plane back from London,(2004) Kevin (Adkins)disclosed to me his concept of an audience response system that would employ handheld-initiated communication.” (Broderick aff. ¶7). (Parentheticals added for clarity).

The Federal Circuit has held “[c]onception must be proved by corroborating evidence which shows that the inventor disclosed to others his ‘completed thought expressed in such clear terms as to enable those skilled in the art’ to make the invention.” *Coleman v. Dines* 754 F.2d

353, 359 -360 (Fed. Cir.1985) quoting *Field v. Knowles*, 183 F.2d 593, 601 (Fed Cir. 1950). The Court finds that Broderick's bare-boned recollection that Adkins disclosed his concept of an audience response system does not meet the standard set by the Federal Circuit in *Coleman*- i.e a "completed thought expressed in clear terms" and Plaintiffs are not entitled to the August 2004 conception date, i.e., the prior art, discussed below, predates the filing date of 716 patent.

Also, there is an additional threshold issue which the Court must address. Plaintiffs move the Court, as part of their Summary Judgment Motion, to construe claims not originally presented to the Court at the time of the claim construction hearing. According to Plaintiffs, these additional constructions are necessary due to prior art proffered by Defendants only after the *Markman* hearing. Plaintiffs ask the Court to construe the terms "plurality of handheld devices" and "an address and the user selection."

Defendants argue that they will be prejudiced at this point in the litigation since these constructions were presented by Plaintiffs after the claim construction briefing, expert reports and discovery, thus disadvantaging Defendants.

According to the parties, Plaintiffs' infringement claims and certain allegedly invalidating prior art, including the FAP reference, are dependent upon the Court's construing these claims. The Court is aware of its competing obligation to construe all disputed claims while affording all parties an opportunity to investigate through discovery and expert opinion disputed claims. While Defendants have offered responses to Plaintiffs' constructions, they have also alleged prejudice. Therefore, the Court will withhold ruling on these disputed terms until Defendants have an opportunity to obtain discovery and/or obtain their own expert opinion on the disputed terms or inform the Court that they are prepared to rely on their constructions as presented in the



motions and briefs. Defendants shall inform the Court in writing, no later than December 5, 2012, how they intend to proceed.

The Court will now discuss the relevant prior art as argued by the parties for both anticipation and obviousness.

### **Glass Reference and Anticipation**

According to Defendants, the Glass reference, publication date of December 2003, anticipates the '716 patent. Glass teaches "a wireless response system includes at least one base unit and a plurality of response units. The at least one base unit has a wireless receiver for receiving wireless signals over a plurality of wireless communication channels." (Glass abstract). Defendants contend Glass "teaches a handheld communication system that transmits a signal upon entry of a selection by the user non-synchronously." Defendants further contend Glass acknowledges, in its Background section, that acknowledgment and retransmissions were known in February 2003 when the Glass application was filed.

Plaintiffs argue that Glass does not anticipate because it describes only a one-way communication system in which communications from the base unit are nonexistent. Because Glass does not teach a receiver that includes a transceiver ( a receiver that can both send and receive) it fails to anticipate every claim of the '716 patent and therefore, fails to anticipate.

Defendants counter that the Glass reference incorporates by reference the transceiver found in U.S. Patent No. 5,724,357. Plaintiffs respond that the portion incorporated has nothing to do with a transceiver. All that is incorporated by reference is found at paragraph 19 wherein it states:

If a radio frequency signal is used, it may be encoded with data bits using leading

edge-to-leading edge timing or trailing edge-to-trailing edge timing as disclosed in commonly assigned U.S. Pat. No. 5,724,357, the disclosure of which is hereby incorporated herein by reference.

Thus, the incorporated portion of the '357 patent is limited to the encoding of the frequency signal. Furthermore, Plaintiffs contend the Glass reference was before the USPTO examiner and the '716 patent was allowed over Glass.

The Federal Circuit has held “[m]aterial not explicitly contained in the single, prior art document may still be considered for purposes of anticipation if that material is incorporated by reference into the document.” *Advanced Display Systems, Inc. v. Kent State University* 212 F.3d 1272, 1282 (Fed. Cir. 2000) citing *Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc.*, 127 F.3d 1065, 1069, 44 USPQ2d 1336, 1339-40 (Fed.Cir.1997). “To incorporate material by reference, the host document must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents.” *Advanced Display*, 212 F.3d at 1282.

The Court finds that Glass does not anticipate claim 1 of the '716 patent because it does not describe every claim of the '716 patent; namely, the transceiver, and Glass did not incorporate the transceiver of the '357 patent but only incorporated by reference radio frequency encoding with described data bits.

#### **Nordic Reference and Anticipation**

\_\_\_\_\_ According to Defendants, the Nordic References anticipate the '716 patent. The Nordic Semiconductor nRF24E1 computer chip, with its proprietary ShockBurst technology (a method of transferring data within the Nordic chip), uses a protocol like the ALOHA protocol wherein

remote computers are linked through UHF radio to a central computer.<sup>1</sup> The Nordic chip is a unified microprocessor, memory, and transceiver that handles the sending and receiving of messages through its communication protocol using ShockBurst technology. The communication protocol of the ALOHA system involves the use of a remote computer receiving input from a user who transmits that information, via wireless radio frequency, assembling the packet of information that includes address information and data payload. These packets are sent from the remote computer without awaiting for an initiating polling signal from the central computer. According to Defendants, this is the same as the communication protocol of the '716 patent. Defendants further contend the Nordic papers taught its use for handheld devices. In particular, Defendants contend the Application Note entitled "Frequency Agility Protocol for nRF24XX" ("FAP Note"), published in October 2004 includes an RF transceiver, a processor, and computer readable memory banks and transmit packets which include device identifiers (addresses) and give examples of how to use the Nordic chip in game controllers, joysticks, toys, remote controls, etc...

Plaintiffs opposition to the Nordic references as anticipating prior art relies on their proposed new constructions which will be addressed at a future date as discussed previously, thereby leaving the Court unable to determine now whether Nordic anticipates.

### **X10 and anticipation**

The X10 reference describes a wireless communication system that uses a keychain remote that allows users to control lighting and other electrical appliances in their home.

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<sup>1</sup> The Nordic Semiconductor nRF24E1 transceiver chip was selected by Adkins in the commercial embodiment of the 716 patent. It is a 2.4 Ghz radio chip with an embedded microcontroller and transceiver.

Plaintiffs' opposition to the X10 as anticipating prior art, relies on their new proposed constructions, precluding the Court's ruling on the issue as described above.

**Abramson reference and anticipation**

As addressed briefly above, the ALOHA system was described in "the Aloha System" by Norman Abramson, published in Computer-Communication Networks (Prentice-Hall 1973). It describes a communication network linking remote computers on various campuses through UHF radio to a base unit central computer. It is undisputed that ALOHA system does not describe handheld units, therefore, the Court holds it does not anticipate the 716 patent.

**I-Vote Reference and Anticipation**

The I-Vote Paper describes a system containing a server, receivers and handheld devices communicating by means of the ZigBee protocol. According to the I-Vote paper, communication is initiated by a person sending a message to the server. The server sends the message to the receivers who send it to the handheld devices. Upon receipt of the message the handhelds vibrate, indicating to the user it is time to vote. Plaintiffs contend the I-Vote does not describe whether the signal is sent wirelessly or via some hardware. According to Plaintiffs, this lack of enablement disqualifies the I-Vote as anticipatory prior art. Also, the originating signal does not originate in the handheld device and therefore, differs from Plaintiffs' device.

Defendants contend the I-Vote expressly describes the handhelds as wireless and the originating "go" signal is similar to Plaintiffs' communication protocol.

The Court agrees that the I-Vote does describe wireless handhelds. Under the section titled Scalability it states, "the personal voting devices must be handheld and need to be wireless so that they do not restrict movement within the sporting arena." Further on its states, "each

device is wireless and acts as a transceiver (it transmits and receives messages)..."

However, under the Section titled Additional Features of the I-Vote System it reads,

A "go" signal originates with an official person sending a message to the server. The server then sends the message to the receivers who send it on to the handheld devices. The "go" signal results in a single short vibration in each of the handhelds, similar to the vibration of cell phones. The vibration (along with the changes on the public display) alerts the user that it is time to vote...

Given that the I-Vote System requires a "go" signal sending a message to vote to the handhelds first, the communication protocol differs from that of Plaintiffs' patent and does not constitute anticipatory prior art.

## **ii. Obviousness**

Invalidity by obviousness under 35 U.S.C. § 103 requires that the differences between the subject matter sought and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. *KSR Int'l v. Teleflex Inc.*, 550 U.S. 398, 405 (2007). To invalidate a patent, the challenging party must establish obviousness by clear and convincing evidence. *Kao Corp. v. Unilever U.S., Inc.*, 441 F.3d 963, 968 (Fed. Cir. 2006).

Obviousness is a question of law that depends on several underlying factual inquiries. *KSR*, 550 U.S. at 406. A court must examine the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the pertinent art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). A court may also consider secondary considerations of non-obviousness, such as commercial success, long felt but unsolved need, failure of others, and the like. *Id.*

Unlike anticipation, a party challenging the validity of a patent may combine prior art

references to establish obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed.Cir.2006). “When relying on a combination of prior art references to establish obviousness, the fact finder must determine “whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims.” *Black & Decker Inc. v. Robert Bosch Tool Corp.* 476 F.Supp.2d 887, 895 -896 (N.D. Ill., 2007) quoting *In re Kahn*, at 988.

Having reviewed the motions, briefs and supporting materials, including expert statements, the Court finds there are genuine issues of fact regarding the obviousness of Plaintiffs’ patent in light of the prior art that militate against summary judgment for either party. The Supreme Court in *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (U.S.,2007), held

“ a combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. (Internal citation omitted). When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill.”

Defendants argue that all the elements of the ‘716 patent are present in various prior art references. According to Defendants the ALOHA, Glass, Nordic documents and I-Vote all disclose hardware components of the ‘716 patent as well as non-polling asynchronous communications and retransmissions. As previously discussed in the anticipation section, no one reference, of those briefed by the parties that do not rely on Plaintiffs’ new constructions,

describes all the elements of the '716 patent. Thus, it is for the factfinder to determine whether a person of ordinary skill in the art would have combined the elements of the prior art, given the problem he/she faced.

For instance, Defendants' expert James E. McIntyre attests that a person of ordinary skill in the art would understand that miniaturization and modernization of computer components are obvious modifications such that it would be obvious that the Abramson reference which, according to McIntyre, describes a communication protocol similar to the '716 patent, would miniaturize its components into handheld devices. (McIntyre decl. ¶ 19). McIntyre bases his conclusion on the speculation of the Abramson reference itself wherein it states, "the vision of a user holding a portable terminal with a built-in communication module and a small protruding antenna is a tempting prospect." (Abramson pg. 516). McIntyre further attests that it would be obvious to a person skilled in the art to improve the Glass reference to include an acknowledgment signal to improve system integrity and achieve reliable communications. It would also improve battery life. (McIntyre decl. ¶ 47-48). It would also be obvious to a person skilled in the art that, in order to transmit an acknowledgment signal, the base unit would need a transceiver. The use of synchronous and asynchronous wireless communication systems was known in the art and one of ordinary skill in the art would be familiar with the above and would recognize that an asynchronous system would be a good choice. (McIntyre decl. ¶50-51). McIntyre opines that the use of such a system solves a number of problems, including battery life, the need for maintaining a list of devices to be polled on the base unit, and simpler design and development (McIntyre decl. 52-53). As such, McIntyre opines that it would be obvious for a person skilled in the art to combine asynchronous RF protocols such as those found in the

Glass reference with acknowledgment and retransmission techniques which are merely a combination of known techniques. (McIntyre decl. ¶55-56).

According to Plaintiffs' expert, Dr. Bartone, the ALOHA system does not render the '716 patent obvious because its (ALOHA's) communication protocol does not require the first transmission be initiated by a handheld device; rather, it allows for the initial transmission from either the remote device or the receiver. (Bartone dep. pg 10-11). Abramson also does not, according to Plaintiffs, make the miniaturization of the Aloha system obvious. Plaintiffs argue that even if all the elements of an invention were independently known it does not render the patent obvious without demonstrating a reason for a person of ordinary skill in the art to combine them. Plaintiffs contend Defendants do not cite any of the prior art containing a version of the Aloha system and handheld devices in their anticipation argument thus, presenting further evidence that miniaturization is not obvious. In addition, at least one reference or prior art discourages the use of handheld devices.

Plaintiffs also contend that the Glass reference does not make obvious the '716 patent. According to Plaintiffs, it was commonly understood at the time of the '716 patent that wireless two-way radio frequency communication systems would have to be a receiver-controlled system. (Adkins dep. pg 125). Plaintiffs contend this understanding is supported by Glass which proposes a one way handheld-initiated system which eliminates transmissions from the receiver to handheld device. The inventor of Glass did not combine the handheld one-way communication system with an earlier invention of his the '357 patent that does disclose two-way communication. Therefore, Plaintiffs contend it is not obvious to do so. Furthermore, Plaintiffs contend Glass teaches away from two-way communications using handheld devices



and include acknowledgments since Glass teaches that acknowledgments in handheld initiated wireless communication systems are no longer required. (Glass ¶0003).

Plaintiffs also contend that the use of the Nordic RF transceiver chip was not due to its providing all the advantages of the '716 patent rather, Plaintiffs contend it was used simply because it was cost-effective and available.

Finally, Plaintiffs contend the success of the '716 patent itself, with sales of approximately \$120 million represents a secondary indicia of non-obviousness. (Kauer Decl. ¶ 4). Also, Plaintiffs' patent offers competitive advantages over polling-based products, such as a reduction in processing time which corresponds to reductions in size, weight and cost and no registration period is needed with Plaintiffs' system.

The Court finds there are genuine issues of fact concerning the obviousness of the '716 patent, in light of the prior art, sufficient to deny both parties' motions for summary judgment. Both experts disagree on whether it would be obvious to combine elements of different prior art and differ on the motivation to combine such elements. As *Graham* clearly places the issue of whether a person of ordinary skill in the art would combine references, the differences between the prior art and the patent at issue as well as their scopes and certain secondary factors with the factfinder and the Court concludes that the conflicting testimony of the experts presents factual issues for a jury to consider. Therefore, for the foregoing reasons, the Court denies summary judgment for both parties on the issue of obviousness.

#### **Written Description**

A patent specification is required to set forth a written description of the invention. 35 U.S.C. § 112, ¶ 1. The description must describe the invention in sufficient detail to allow one

skilled in the art to reasonably conclude that the inventor was in possession of, i.e., actually invented, the claimed subject matter as of the filing date. *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). The written description requirement is a question of fact and is separate from the enablement requirement. *Id.*

Plaintiffs argue that they are entitled to summary judgment on Defendants' defense that the '716 Patent is invalid for failing to meet the written description requirement. Plaintiffs address all three of Defendants' arguments. Defendants first argue that the asserted claims of the '716 Patent are invalid because the '716 Patent fails to disclose, with any reasonable clarity, the length of "the distinct period of no RF transmission." Plaintiffs argue that (1) no particular length is claimed and (2) the Court has already found in its *Markman* Order that the "period of no RF transmission" is depicted and described in the specification. Because the Court has already rejected the Defendants' argument in its *Markman* Order (Doc. # 38 at 18-21), that "the distinct period of no RF transmission" requires a set period of time with a definable start and end point, the Court holds that Plaintiffs have demonstrated that no issue of material fact exists.

Defendants next argue that claim 9 is invalid by reference to its requirement of a "transmission interval separating periodic retransmissions of the RF signal." Defendants argue that the '716 Patent does not sufficiently describe a system that generates an interval in the range of one second to attoseconds, which Defendants claim is the range of possible interval lengths described in the specification. Plaintiffs argue that the Court concluded in its *Markman* Order that claim 9 does not claim a particular length of interval. With respect to claim 9, the Court concluded in its *Markman* Order that the communication protocol of the wireless system includes regular or irregular amounts of time between repeated retransmission attempts of the handheld

device's RF signal. (Doc. # 38 at 24-25.) It is, therefore, not necessary that the '716 Patent sufficiently describe a system that generates an interval in the range of one second to attoseconds. The '716 Patent need only sufficiently describe regular and irregular amounts of time. Because the '716 Patent describes the claimed transmission interval, the Court holds that Plaintiffs have demonstrated that no issue of material fact exists.

Defendants lastly argue that claims 1, 2, 4, and 9 are invalid because the '716 Patent allegedly fails to show a relationship between the handheld devices and the receiver. Plaintiffs argue that the specification shows such relationship. Plaintiffs also refer to Bartone's expert testimony stating that a person of the ordinary skill in the art would recognize and appreciate these relationships. (Bartone Dep. ¶ 94.) Because Plaintiffs have put forth sufficient evidence showing such relationship and because Defendants have failed to demonstrate otherwise, the Court holds that no genuine issue of material fact exists. Because no genuine issues of material fact exist, the Court grants Plaintiffs summary judgment that the '716 Patent satisfies the written description requirement.

### **1. Enablement**

A patent specification is required to set forth sufficient information to enable a person skilled in the relevant art to make and use the invention. 35 U.S.C. § 112, ¶ 1. Although enablement is not precluded by the necessity for some experimentation, experimentation required to make and practice the invention must not be undue experimentation. *In re Vaeck*, 947 F.2d 488, 495 (Fed. Cir. 1991). Factors to be considered in determining whether a disclosure requires undue experimentation include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature

of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). Enablement is a question of law based on underlying factual findings. *Id.* at 735.

Plaintiffs argue that they are entitled to summary judgment on Defendants' defense that the '716 Patent is invalid for failing to meet the enablement requirement. Defendants' arguments are nearly identical to those it made for written description. Defendants first argue that claims 1-2, 4 and 9 do not claim any relationship or connection between the handheld device and that the '716 Patent does not enable one skilled in the relevant art how to make or use a wireless communication system in which the receiver performs no function. As discussed above, Defendants have failed to rebut the evidence presented by Plaintiffs, therefore, the Court finds that no genuine issue of material fact exists.

Defendants' second argument is that the '716 Patent specification does not teach one of ordinary skill in the art how to generate a transmission interval over a range of seconds to attoseconds. As discussed above, it is only necessary that the '716 Patent sufficiently describe regular and irregular amounts of time. Therefore, the Court finds that no genuine issue of material fact exists and the Court grants Plaintiffs' summary judgment that the '716 Patent satisfies the enablement requirement.

## **2. Best Mode**

A patent specification is required to "set forth the best mode contemplated by the inventor of carrying out his invention." 35 U.S.C. § 112, ¶ 1. "The purpose of the best mode requirement is to restrain inventors from applying for patents while at the same time concealing from the

public preferred embodiments of the inventions they have in fact conceived.” *Teleflex, Inc. v. Ficos North America Corp.*, 299 F.3d 1313, 1330 (Fed. Cir. 2002). An inventor’s failure to disclose the best mode renders the patent invalid. *U.S. Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209, 1216 (Fed. Cir. 1996).

To invalidate a patent for best mode, the defendant must prove by clear and convincing evidence that: (1) at the time of filing the application, the inventor possessed a best mode for practicing the invention, and (2) the inventor’s disclosure failed to enable one of ordinary skill in the art to practice the best mode of the invention. *Pfizer, Inc. v. Teva Pharms. USA, Inc.*, 518 F.3d 1353, 1364 (Fed. Cir. 2008). The test’s first prong is “subjective and focuses on the inventor’s state of mind at the time the application is filed.” *Pfizer*, 518 F.3d at 1364. The test’s second prong is “objective and depends upon the scope of the claimed invention and the level of skill in the relevant art.” *Id.* “The ‘invention’ referred to in the best mode test is the invention as defined by the claims.” *Id.*

Both Plaintiffs and Defendants argue that they are entitled to summary judgment on Defendants’ best mode defense. Defendants’ argue that the Nordic nRF24E1 chip (“Nordic chip”) and its ShockBurst technology are within the scope of the claimed invention and were the inventor’s preferred mode of practicing the invention. Defendants’ further argue that the inventor failed to disclose his best mode. Plaintiffs, on the other hand, argue that the Nordic chip and its ShockBurst technology are not within the scope of the claimed invention and were not the inventor’s preferred mode of practicing the invention. Plaintiffs further argue that regardless of whether or not the Nordic chip and its ShockBurst technology were a best mode, the inventor adequately disclosed the technology in the ‘716 Patent.

The Court must first address whether the Nordic chip and its ShockBurst technology are within the scope of the claimed invention for purposes of the best mode analysis. The Nordic chip is a unified microprocessor, memory, and transceiver that handles the sending and receiving of messages through its communication protocol using ShockBurst technology. The claims of the '716 Patent include an RF protocol for communication between a transceiver and receiver in a wireless communication system. Because the Nordic chip and its ShockBurst technology impact and aid in carrying out the claimed invention's RF communication protocol, the Court finds that the Nordic chip and its ShockBurst technology are within the scope of the claimed invention for purposes of the best mode analysis.

The Court must then determine whether Mr. Adkins, at the time of filing the application, subjectively believed that the Nordic chip and its ShockBurst technology provided the best mode for carrying out the claimed invention. Defendants argue that there is no genuine dispute that Mr. Adkins, at the time of filing the application, subjectively believed that the Nordic chip and its ShockBurst technology were the invention's best mode. Defendants' primary source of evidence comes from Mr. Adkins' deposition testimony. In Mr. Adkin's deposition, he confirmed that he knew about the capabilities of the Nordic chip and the communication protocol executed by the ShockBurst technology in 2004. (Adkins I Dep.36:17-22.) Mr. Adkins also confirmed that he ordered several Nordic chip evaluation kits prior to the filing of his provisional application. (Adkins II Dep., Def.'s 32:1-3, 37:12-38:5.) This testimony was corroborated by Mr. Adkins' third party programmer, Chris Adams, who confirmed that he received the evaluation kits in December 2004 from Mr. Adkins. (Adams Dep. 30:12-18.)

Mr. Adkins further testified that he had settled on using the Nordic chip prior to the filing

of the provisional patent application and that in his mind, the Nordic chip was the best thing he could find in November 2004. (Adkins I Dep. 90:25-91:5, 92:6-13.) Adkins also testified that he never found anything better. (Adkins I Dep. 92:6-13.) Plaintiffs' decision to use the Nordic chip is also demonstrated by his Request for Quotation used to seek bids in November 2004 for programming work on the commercial embodiment of the '716 Patent. The Request for Quotation stated: "RI as [sic - has] chosen, as its RF solution, the Nordic nRF24E1 transceiver." (Request for Quotation, at RI002619.) Defendants also offered evidence showing that Chris Adams was told by Mr. Adkins to use the Nordic chip. (Adams Dep. 28:4-6.)

Plaintiffs argue that other known RF transceivers existed at the time that were usable in the system claimed in the '716 Patent (Adkins II Dep. 42:1-7), but that the Nordic chip was selected primarily because of its availability and low cost. (Adkins II Dep. 26:16-27:18.) Plaintiffs contend that a best mode violation cannot be found when a component is selected for its price and, in support, cite *Honeywell v. Diamond*, 499 F.Supp.924, 928 (D.D.C. 1980). Mr. Adkins' testimony, however, shows that the Nordic chip was not just selected for its availability and price, but also for other reasons including power, range, and bit rate. (Adkins II Dep. 25:23-25, 26:1-19.) Plaintiffs' have therefore, failed to rebut Defendant's evidence. In light of the documentary and testimonial evidence presented, the Court finds that the Defendants have proven, clearly and convincingly, that Mr. Adkins subjectively believed he had a best mode for carrying out his claimed invention.

The Court must lastly determine whether the '716 Patent adequately disclosed the Nordic chip and its ShockBurst technology. Defendants argue that Plaintiffs fail to meet the best mode requirement because the '716 Patent does not disclose the Nordic chip and its ShockBurst

technology. Defendants further argue that the inventor was required, at a minimum, to provide supplier/trade information in order to satisfy the best mode requirement. Plaintiffs, on the other hand, argue that the '716 Patent satisfies the best mode requirement by disclosing the transceiver in Responsive's commercially available product, model RRRF-01. ('716 Patent, col. 4, 11. 7-10.) Plaintiffs argue that although the Nordic chip itself is not disclosed, Responsive's commercial product uses a Nordic chip and that it would not require undue experimentation by a person of ordinary skill in the art to open Responsive's product and visually observe the type of transceiver that it contains.

The Federal Circuit has held that there is not a per se rule that supplier/trade name information be provided, when available, for a disclosure to meet the best mode requirement. *Transco Products Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 560 (Fed. Cir. 1994). By the same token, it is possible that "[e]ven where there is a general reference to the best mode of practicing the claimed invention, the quality of the disclosure may be so poor as to effectively conceal it." *Id.* In light of this, the Court finds that a genuine issue of material fact exists as to whether the invention's disclosure of Responsive's commercial product adequately enables one of ordinary skill in the art to practice the best mode of the invention without undue experimentation.

## **2. Enforceability of the '716 Patent**

### **1. Inequitable Conduct**

All patent applicants are under a duty to prosecute patent applications in the Patent & Trademark Office with candor, good faith, and honesty. *See* 37 C.F.R. § 1.56 (1983); *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995). A breach of this duty constitutes



inequitable conduct. *Molins*, 48 F.3d at 1178. A party alleging inequitable conduct must prove by clear and convincing evidence that the patent applicant (1) either “made an affirmative misrepresentation of material fact, failed to disclose material information, or submitted false material information, and (2) intended to deceive the [PTO]” *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1363 (Fed. Cir. 2007). Materiality and intent are separate components and the alleging party must prove each separately. *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1351 (Fed. Cir. 2002). “Information is material for the purposes of an inequitable conduct determination if a reasonable examiner would have considered such prior art important in deciding whether to allow the parent application.” *Digital Control, Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1314 (Fed. Cir. 2006). If the court finds materiality and intent, the court must then “balance the equities to determine whether the patentee has committed inequitable conduct that warrants holding the patent unenforceable.” *Cargill*, 476 F.3d 1365.

Defendants’ argue that the inventor committed inequitable conduct by intentionally failing to disclose known prior art to the USPTO and by failing to disclose the best mode. Plaintiffs argue that Defendants cannot meet their burden with respect to intent or materiality

The Court finds that Defendants have not presented sufficient evidence to meet a threshold finding of intent. Defendants argue that Mr. Adkins knew of certain Nordic prior art references, had a best mode, and that he did not disclose them to the USPTO. (Doc. # 80, at 29.) Intent to mislead, however, cannot be inferred from the mere failure to disclose known information. *Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*, 984 F.2d 1182, 1191 (Fed. Cir. 1993). In addition, “[s]ince the failure to disclose the best mode is not excused even if unintentional, but inequitable conduct requires a ‘threshold’ level of intent, the failure to

disclose the best mode will not constitute inequitable conduct in every case.” *Consolidated Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.2d 804, 808 (Fed. Cir. 1990) (citations omitted).

“Clear and convincing evidence must show that the applicant made a deliberate decision to withhold a known material reference.” *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1181 (Fed. Cir. 1995). Defendants have failed to present sufficient evidence indicating that the inventor made a deliberate decision to withhold known information. Because Defendants’ have failed to meet the threshold finding of intent, the Court grants summary judgment to Plaintiffs on Defendants’ inequitable conduct defense.

## **2. Patent Misuse**

Patent misuse is an affirmative defense that “arises from the equitable doctrine of unclean hands, and relates generally to the use of patent rights to obtain or to coerce an unfair commercial advantage.” *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1372 (Fed. Cir. 1998). “Patent misuse relates primarily to a patentee’s actions that affect competition in unpatented goods or that otherwise extend the economic effect beyond the scope of the patent grant.” *Id.* In order to prove patent misuse, the alleged infringer must show that “the patentee has impermissibly broadened the ‘physical’ or ‘temporal scope’ of the patent grant with anticompetitive effects.” *Windsurfing Intern. Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed. Cir. 1986). If the alleged infringer is successful in showing patent misuse, the patent is rendered unenforceable. *B. Braun Medical, Inc. v. Abbott Laboratories*, 124 F.3d 1419, 1427 (Fed. Cir. 1997). The patent remains valid however, and enforceability is restored if the misuse is purged. *Id.*

Defendants concede that their patent misuse claims rise and fall with their inequitable conduct claim. (Doc. # 80 at 29.) Because the Court has granted summary judgment to Plaintiffs

on Defendants' inequitable conduct defense, the Court further grants summary judgment to Plaintiffs on Defendants' patent misuse defense.

### **3. Infringement**

Patent infringement results when a person "without authority makes, uses or sells any patented invention, within the United States ... during the term of the patent." 35 U.S.C. § 271(a). An infringement determination involves a two-step analysis. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995). The court must first construe the asserted claims to ascertain their meaning and scope. *See Id.* Claim construction is a question of law. *See Cybor Corp. v. FAS Techs.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998). The trier of fact must then compare the properly construed claims with the accused infringing product. *See Markman*, 52 F.3d at 976. This second step is a question of fact. *See Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir. 1998). The patent owner has the burden of proving infringement by a preponderance of the evidence. *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2007).

Literal infringement results if the accused infringing product contains every limitation of the asserted claims. *Id.* "If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law." *Id.* If an asserted claim does not literally infringe, infringement may still occur under the doctrine of equivalents if there is not a substantial difference between the limitations of the claim and the accused product. *Id.* at 1250.

According to Plaintiffs' Defendants i>Clicker system literally infringes claims 1-5, 8 and 9 of the 716 patent. Defendants assert that at least as to claim 1 of the patent much depends on the Court's construction of the term "plurality of handheld devices" as requested by Plaintiffs.

The Court has already determined it will not construe those terms at present until Defendants inform the Court whether they would have their expert review and opine on the disputed terms. Therefore, the Court will withhold its ruling on infringement until the claim constructions sought by Plaintiffs are determined.

#### **4. Defendants' Counterclaims**

Defendants assert counterclaims of Lanham Act unfair competition, common law unfair competition, deceptive trade practice, defamation, and tortious interference with business relationships. Defendants concede that their unfair competition, common law, and business related counterclaims rise and fall with Defendants' inequitable conduct defense. (Doc. # 80 at 29.) Because the Court grants summary judgment to Plaintiffs on Defendants' inequitable conduct defense, it also grants summary judgment to Plaintiffs on Defendants' unfair competition, common law, and business related counterclaims.

#### **IV. CONCLUSION**

For the above reasons, the Court denies, in part, Defendants' Motion for Summary Judgment, and grants in part, and denies in part, Plaintiffs' Motion for Summary Judgment.

IT IS SO ORDERED.

s/ Christopher A. Boyko  
CHRISTOPHER A. BOYKO  
United States District Judge

Dated: November 28, 2012