

**UNITED STATES DISTRICT COURT  
DISTRICT OF MINNESOTA**

3M Innovative Properties Company  
and 3M Company,

Plaintiffs,

v.

EnvisionWare, Inc.,

Defendant.

**MEMORANDUM OPINION  
AND ORDER**

Civil No. 09-1594 ADM/FLN

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H. Keeto Sabharwal, Esq., Robert E. Sokohl, Esq., Lori A. Gordon, Esq., and Nirav N. Desai, Esq., Sterne, Kessler, Goldstein & Fox, PLLC, Washington, D.C.; Kevin D. Conneely, Esq., Leonard, Street and Deinard, P.A., Minneapolis, MN, on behalf of Defendant.

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**I. INTRODUCTION**

On November 2, 2010, a Markman hearing was held before the undersigned United States District Judge in this patent infringement action by Plaintiffs 3M Innovative Properties Company and 3M Company (collectively “3M”) against Defendant EnvisionWare, Inc. (“EnvisionWare”). 3M alleges that EnvisionWare infringed claims of U.S. Patent No. 6,232,870 (“the ‘870 patent”), U.S. Patent No. 6,484,780 (“the ‘780 patent”), and U.S. Patent No. 6,857,568 (“the ‘568 patent”). EnvisionWare denies the infringement allegations and counterclaims for a declaratory judgment of non-infringement, invalidity, and unenforceability of the patents.

## II. BACKGROUND

The three patents at issue are used in the library industry. See generally Compl. [Docket No. 1]. The '568 patent is used in library self-service checkout. Compl. Ex. C ('568 patent) at [57]. The '568 patent covers self-service library terminals with two distinctive features: "fines and fees" and "store and forward." See Compl. ¶ 14. "Fines and fees" refers to the feature that allows library patrons to pay at the self-service terminal. Compl. ¶ 14. "Store and forward" refers to the feature that allows terminals to store transaction information while a library's computer network is down and then transfer that data when the network is again connected, so as to not disrupt library traffic due to network problems. Compl. ¶ 14.

The '780 and '870 patents both relate to the use of hand-held Radio Frequency Identification ("RFID") devices in libraries. Compl. Ex. A ('870 Patent) at [57], Ex. B ('780 patent) at [57]. RFID technology utilizes a reader and a tag. Compl. ¶ 17. The RFID tag is a small circuit and antenna that contains information. Compl. ¶ 17. The RFID reader communicates with the RFID tag, typically reading the information stored on the tag. Compl. ¶ 17. The '780 patent covers a hand-held RFID device designed for library use. '780 patent at [57]. The '870 patent is a method patent that covers methods for using a hand-held RFID in the library setting. '870 patent cols.18-20. The three methods at issue allow hand-held readers to (1) determine quickly whether a specific book is on a shelf, (2) determine whether books are in the proper shelving order, and (3) input new information, such as damage, about a library book. Id.

3M alleges that several EnvisionWare products, also used in the library industry, infringe the three patents at issue. On July 30, 2010, the parties filed a Joint Claim Construction

Statement [Docket No. 42], agreeing to the construction of all but eleven terms. At issue were three terms used in the '568 patent—"controller," "remind," and "so that the loan transactions can be later transferred to the circulation system;" four terms from the '870 patent—"an algorithm," "received signals," "obtaining," and "input information to the RFID device as to that item;" and three terms from the '780 patent—"integrated unit," "substantially simultaneously," and "a trigger for intermittent activation of the device." Each term is discussed below.

### III. DISCUSSION

#### A. Standard of Review

Claim construction is a matter of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). In construing claims, courts should look first to intrinsic evidence, which includes the claims, the specification, and the prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Claim terms are "generally given their ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (quotation and citations omitted). However, a patentee can choose to be "his or her own lexicographer by clearly setting forth an explicit definition for a claim term." Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed. Cir. 1999). Claim terms "should be construed consistently with [their] appearance in other places in the same claim or other claims of the same patent." Rexnord Corp. v. The Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001). In addition, the specification is usually "dispositive; it is the single best guide to the meaning of a disputed term." Vitronics, 90 F.3d at 1582. Courts are

nonetheless cautioned not to import limitations from the specification into the claims. Phillips, 415 F.3d at 1323; The Laitram Corp. v. NEC Corp., 163 F.3d 1342, 1347 (Fed. Cir. 1998).

While courts can consider extrinsic evidence to educate themselves about the patent and technology at issue, it is improper to rely on extrinsic evidence in construing claims unless, after consideration of all the intrinsic evidence, ambiguity remains. Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1373 (Fed. Cir. 1998); Vitronics, 90 F.3d at 1584. Extrinsic evidence is “evidence which is external to the patent and file history, such as expert testimony, inventor testimony, dictionaries, and technical treatises and articles.” Vitronics, 90 F.3d at 1584. Dictionaries may be useful to courts in understanding the ordinary and customary meaning of words, and courts may “rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.” Phillips, 415 F.3d at 1322-23. Where the meaning of a word is readily understood without need for clarification or explanation, no claim construction is necessary. See U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“[Claim construction] is not an obligatory exercise in redundancy.”).

## **B. ‘568 Patent**

### **1. “Controller”**

The term “controller” is used in claims 6, 7, 8, 9, 15, 16, and 22 of the ‘568 patent. As used in those claims, the term refers to a component of the self-service terminal. When read in the context of the patent, the term “controller” is unambiguous and carries its ordinary meaning. Indeed, EnvisonWare’s offered construction of “a device that controls . . .” is not helpful in understanding the term and is merely redundant. Jurors will readily understand the meaning of

the word “controller” as it is used in the patent. As such, no construction of the term is necessary.

## **2. “Remind”**

The term “remind” is used in claims 6, 7, 8, 9, and 15 of the ‘568 patent. As used, the term refers to the function and use of the “controller.” As used in the context of the patent, “remind” is unambiguous and is given its ordinary meaning. Any further construction may well confuse rather than assist the jury. No construction of the term “remind” is necessary.

## **3. “So that the loan transaction can be later transferred to the circulation system”**

The term “so that the loan transaction can be later transferred to the circulation system” is used in claims 9, 16, and 22 of the ‘568 patent. In each claim, the term describes the operation of the self-service terminals and what is known as the “store and forward” feature. 3M argues that the meaning of the term is clear and no construction is necessary. However, as EnvisionWare argues, the term’s meaning has been narrowed by the intrinsic evidence and prosecution history of ‘568 patent.

The intrinsic evidence and prosecution history make clear that transfer of loan transaction data must occur over “the link” and must occur after “the link” to the network is re-established. For instance, the written description states that “this loan transaction information can be later transferred . . . when the communication link . . . is back Up [sic].” ‘568 patent col.7 ll.60-62. The background section includes similar language. Furthermore, during prosecution, 3M distinguished the patent from prior art by making clear that its claimed invention transferred data over the link, not merely storing data to be transferred by other means. See Desai Decl. Ex. I at

29 (“[T]here is no disclosure in [the prior art] that loan transactions are transmitted elsewhere by the smaller library circulation system . . .”). As such, the construction of this term must clarify that transfer must occur (1) over the link and (2) when the link is re-established.

Although EnvisonWare’s proposed construction of “to transfer data to the circulation system over the link when the link is re-established” incorporates those limitations, it is too narrow. At oral argument, 3M expressed concern that EnvisonWare’s proposed construction could be read to *require* transfer. 3M’s concerns are well founded, the language “to transfer data” could be read to be mandatory. In order to avoid possible mandatory readings, but still incorporate the narrowing of the language from the intrinsic evidence and the prosecution history, the Court will adopt the construction “so that the loan transaction data can be transferred to the circulation system over the link when the link is re-established.”

## **C. ‘870 Patent**

### **1. “An algorithm”**

The term “an algorithm” is used in claim 6 of the ‘870 patent, describing the method for using a hand-held RFID reader to determine whether library items are in a desired order. At oral argument, it was determined that much of the dispute between the parties regarding this term was illusory. Both parties agreed that in the context of the patent, “an algorithm” refers to a method of sorting books. The Court will give the term the construction “a method of sorting or organizing.”

### **2. “Received signals”**

The term “received signals” is used in claims 1, 2, and 4 of the ‘870 patent and describes the method of using a hand-held RFID reader to locate a particular library item or items among

many. As used in the patent, the meaning of the term is readily understandable. EnvisionWare argues that “signals” refers to the electrical effects that transmit information, not the information itself. EnvisionWare’s argument is unpersuasive and overly technical. In the context of the patent and in ordinary usage, it is clear that “signals” refers both to the vehicle for transmitting information and the information itself. No construction of the term is necessary.

### **3. “Obtaining”**

The term “obtaining” is used in claims 13, 14, and 15 of the ‘870 patent and describes the first step in the method of using a hand-held RFID device to record specific information, such as damage, regarding a library item. At oral argument, the dispute between the parties for this term, like others, turned out to be largely illusory. 3M objected to EnvisionWare’s proposed construction of “gathering for interrogation” because it read the word “gathering” to require physical possession. EnvisionWare agreed that nothing in the patent would require physical possession of items. Both parties agreed that “acquiring” was sufficient in place of “gathering.” Furthermore, from the context of the patent, it is clear that the purpose of “acquiring” an item is to use the hand-held RFID reader to read the item and record the desired information, i.e. “interrogate” the item. Therefore, the Court will give the term “obtaining” the construction “acquiring in a manner to facilitate interrogation.”

### **4. “Input information to the RFID device as to that item”**

The term “input information to the RFID device as to that item” also is used in claims 13, 14, and 15 of the ‘870 patent. The term describes the method of recording new information about a library item using a hand-held RFID reader. On its face the term is hardly ambiguous; however, both parties urge narrowing constructions based on the prosecution history of the term.

3M argues that the prosecution history makes clear that “input” refers to manually inputting information, as opposed to inputting information through uploading or downloading. Johnson Decl. Ex. H at 6.

For its part, EnvisionWare disputes the disclaimer of “input” arguing that 3M used “enter” in other places in the patent and would have chosen that word had it intended that meaning. EnvisionWare also argues that the type of information must be “custom” information as observed by a user. *Id.* Because both “input” and the type of information were clearly and unmistakably disclaimed during the prosecution of the claims, the Court construes the term as “enter custom information into the RFID device as to that item.”

#### **D. ‘780 Patent**

##### **1. “Integrated unit”**

The term “integrated unit” is used in claims 1, 2, 3, 4, 5, 6, 7, 11, and 17 of the ‘780 patent in reference to the physical description of the hand-held RFID reader. EnvisionWare argues that the prosecution history requires that the term “integrated unit” be construed to require a “single housing.” EnvisionWare relies on two graphical depictions that arguably show a single housing. EnvisionWare’s argument is unpersuasive because nothing in the prosecution history limits the term to a single housing. First, 3M expressly stated that the depictions that EnvisionWare claims limit the term merely “illustrate[] *an* embodiment,” not *the* embodiment. ‘780 patent col.15 ll.62-63 (emphasis added). Furthermore, those illustrations do not clearly depict a single housing; they are ambiguous as to whether the components are in a single housing or attached by some other mechanism. This is not a clear and unmistakable disclaimer.

The term “integrated unit,” however, is in need of clarification. 3M’s proposed



construction references a “unified structure” in explaining what constitutes being “integrated.” This construction more closely accords with the common understanding of the words “integrated unit” and the prosecution history of the claims. Therefore, the Court will give the term the construction “a unit wherein the recited component parts are or can be combined into a unified structure.”

## **2. “Substantially simultaneously”**

The term “substantially simultaneously” is used in claims 1, 2, 3, 4, 5, 6, 7, 11, and 17 of the ‘780 patent and refers to the reading of RFID tags by the hand-held RFID reader. At first blush, the term “substantially simultaneously” appears to be an oxymoron. The ordinary understanding of the word “simultaneously” is binary, either something happens simultaneously or it does not. To cure this defect, 3M argues that the term should be read to mean “in immediate or nearly immediate succession in time.” On the other hand, EnvisonWare proposes to cure this defect with the construction “in substantially overlapping durations.” Based on the intrinsic evidence, EnvisonWare’s construction is persuasive.

3M argues that, given the background technology at the time of the patent, the term should be read to mean that tags are read in quick succession. 3M argues that the prevailing RFID technology at the time was time division multiple access (“TDMA”). TDMA readers are able to read multiple tags in succession because they have an “anti-collision protocol” which essentially prevents the multiple tags from interfering with each other. See van der Weide Decl. ¶ 19. 3M argues that because the patent specification discusses “multi-item identification algorithms,” ‘780 patent col.13 ll.34-35, the term “substantially simultaneously” should be read as an improvement on TDMA technology that allows rapid, in-succession reading of RFID tags.

3M further argues that when read in rapid succession, it appears to the user as if tags were read simultaneously.

This argument fails because TDMA technology is not referenced in the intrinsic evidence. Further, other technologies, known as frequency division multiple access (“FDMA”) and code division multiple access (“CDMA”), were in existence at the time of the patent and could read tags at the same time, not in succession. Bandy Decl. ¶¶ 39-41 . Further, 3M’s argument that rapid succession reading creates the appearance simultaneity to a user is irrelevant. The patent claims that the RFID *reader* will read tags “substantially simultaneously.” E.g., ‘780 patent col.19 l.4 (emphasis added). Finally, the same specification cited by 3M in support of its argument states that the patented device can “process multiple items *at one time.*” ‘780 patent col.13 l.27 (emphasis added). Any discussion of TDMA is inapposite in light of this unambiguous language. Therefore, 3M has not acted as its own lexicographer, it did not clearly set forth an explicit definition for “substantially simultaneously” that references successive reading, and its construction will not be adopted.

While “simultaneously” cannot mean “in succession,” an inherent ambiguity still exists due to the normally binary understanding of the word “simultaneously.” EnvisionWare’s proposed construction solves this tension while remaining true to the plain meaning of the words. “Simultaneously” plainly means that the reader will read the tags at least partially at the same time. On the other hand, the use of “substantially” clearly indicates that not all the reading occurs at the same time. EnvisionWare’s proposed construction incorporates both these considerations. Therefore, the Court will give the term “substantially simultaneously” the construction “in substantially overlapping durations.”

### 3. “A trigger for intermittent activation of the device”

The term “a trigger for intermittent activation of the device” appears in claim 17 of the ‘870 patent and refers to a design feature of the hand-held RFID reader. The meaning of this term is unambiguous on its face. However, EnvisionWare argues that the prosecution history shows that “trigger” must be a button or lever and that “intermittent activation” refers to a “power saving mode.” EnvisionWare’s argument is not convincing. First, EnvisionWare attempts to limit the “trigger” to a button or lever based on the graphical illustrations of an embodiment, discussed above. As previously noted, those illustrations are not clear and unmistakable disclaimers by 3M. Furthermore, with respect to the “power saving mode,” 3M merely agreed that the device could shift into low-power mode, not that such a mode was a necessary limitation on the term. See 2d Desai Decl. Ex. A, van der Weide Dep. at 161 (“Anything’s possible.”). Thus, Envisionware’s narrowing constructions are not warranted. As the meaning of the term is otherwise readily understandable, no construction is necessary.

### IV. CONCLUSION

Based upon the foregoing, and all of the files, records and proceedings herein, **IT IS HEREBY ORDERED** that, in interpreting the ‘568, ‘870, and ‘780 patents, the disputed terms will be construed in accordance with this Order.

BY THE COURT:

s/Ann D. Montgomery  
ANN D. MONTGOMERY  
U.S. DISTRICT JUDGE

Dated: December 6, 2010.