

**THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

FREENY, ET AL.,

*Plaintiffs,*

v.

MURPHY USA INC.,

*Defendant.*

§  
§  
§  
§  
§  
§  
§  
§  
§  
§  
§  
§

CASE NO. 2:13-CV-791-RSP

**MEMORANDUM OPINION AND ORDER**

Before the Court is the opening claim construction brief of Plaintiffs Freeny et al. (“Plaintiff”) (Dkt. No. 61 in consolidated case 2:13-cv-790, filed on July 31, 2014), the response of Defendant Murphy USA Inc. (“Defendant”) (Dkt. No. 27, filed on August 14, 2014), and the reply of Plaintiff (Dkt. No. 28, filed on August 21, 2014). The Court held a claim construction hearing on September 18, 2014. Having considered the arguments and evidence presented by the parties at the hearing and in their claim construction briefing, the Court issues this Claim Construction Order.

## Table of Contents

<b>I. BACKGROUND</b> .....	<b>3</b>
<b>II. LEGAL PRINCIPLES</b> .....	<b>4</b>
A. Claim Construction .....	4
B. Means-Plus-Function Limitations.....	8
<b>III. CONSTRUCTION OF AGREED TERMS</b> .....	<b>10</b>
<b>IV. CONSTRUCTION OF DISPUTED TERMS</b> .....	<b>11</b>
A. “automated” .....	11
B. “to automatically change . . .” / “automatically output . . .” .....	15
C. “product location price” .....	18
D. “product checkout price” / “product checkout/order price” .....	24
E. “virtual store system” .....	27
F. “a store system computer constructed to communicate” .....	30
G. “control system computer” .....	35
H. “competition pricing information system” .....	40
I. “selectively communicate price change codes” .....	45
J. “price change algorithm” .....	48
K. Means-Plus-Function Limitations.....	52
1. “product pricing unit [means for displaying / constructed to display]” .....	52
2. “means for [automatically and] electronically changing” .....	59
3. “means for receiving data . . . and for changing the first product location price” .....	70
4. “means for requesting . . .” .....	76
<b>V. CONCLUSION</b> .....	<b>80</b>

## I. BACKGROUND

Plaintiff brings suit alleging infringement of United States Patent Nos. 6,076,071 (“the ‘071 patent”) and 6,513,016 (“the ‘016 patent”)(collectively, the “Asserted Patents”) by the Defendant. Plaintiff has asserted that claims 1, 5, 8, 16, 24, 28, 30, 31, and 36 of the ‘071 patent and claims 1, 5, 8, and 12 of the ‘016 patent are infringed by products and services of the Defendant. (Dkt. No. 27 at 4.)

The application leading to the ‘071 patent was filed on July 6, 1998. The ‘071 patent issued on June 13, 2000 and is entitled “Automated Synchronous Product Pricing and Advertising System.” The ‘016 patent issued from a continuation application of the ‘071 patent and was filed on January 20, 2000 and issued on January 28, 2003. The ‘016 patent also is entitled “Automated Synchronous Product Pricing and Advertising System.” The ‘071 and ‘016 patents share the same specification.<sup>1</sup> In general, the Asserted Patents are directed to various embodiments of a product pricing system for displaying and changing prices of products at stores. The Abstract of the ‘071 patent states:

An automated product pricing system including a physical store system, a virtual store system, and a control system. The physical and virtual store systems are capable of transmitting sales data indicative of the number of sales of identified respective products. The control system is adapted to receive the sales data from the physical store system and the virtual store system. In response thereto, the control system generates price change data including a changed price of an identified product based on the sales data received from at least one of the physical and virtual store systems. The price change data is then transmitted by the control system to at least one of the physical and virtual store systems to thereby change the price of the identified product.

Asserted claim 1 of the ‘071 patent is shown below:

1. An automated product pricing system, comprising:

---

<sup>1</sup> Because the patents share the same specification, for the purposes of this opinion the Court will only cite to the ‘071 patent specification, realizing that the ‘016 patent has equivalent citations.

product pricing unit means for displaying a first product location price indicative of the unit price of a product such that the first product location price is perceivable by a first shopper when the first shopper is selecting the product for purchase;

means for electronically changing the first product location price to a second product location price following the first shopper selecting the product for purchase, the second product location price being different than the first product location price, the second product location price being perceivable by a second shopper when the second shopper is selecting the product for purchase; and

means for requesting from the first shopper a first product checkout/order price for the purchase of the product and from the second shopper a second product checkout/order price for the purchase of the product, the first and second product checkout/order prices not exceeding the respective first and second product location prices perceivable by the first and second shoppers when the first and second shoppers were selecting the product for purchase.

## II. LEGAL PRINCIPLES

### A. Claim Construction

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See id.* at 1313; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312-13; *accord Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim’s meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314-15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Phillips*, 415 F.3d at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); accord *Teleflex, Inc. v. Ficoso N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor’s lexicography governs. *Id.* The specification may also resolve the meaning of ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v.*

*Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); accord *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). “[T]he prosecution history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations and internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

The “determination of claim indefiniteness is a legal conclusion that is drawn from the Court’s performance of its duty as the construer of patent claims.” *Exxon Research & Eng’g Co.*

*v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Section 112 entails a “delicate balance” between precision and uncertainty:

On the one hand, the definiteness requirement must take into account the inherent limitations of language. Some modicum of uncertainty, the Court has recognized, is the price of ensuring the appropriate incentives for innovation. . . . At the same time, a patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them. Otherwise there would be a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims. And absent a meaningful definiteness check, we are told, patent applicants face powerful incentives to inject ambiguity into their claims. . . . Eliminating that temptation is in order, and the patent drafter is in the best position to resolve the ambiguity in patent claims.

*Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2128-29 (2014) (citations omitted). Therefore, in order for a patent to be definite under § 112, ¶2, “a patent’s claims, viewed in light of the specification and prosecution history, [are required to] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Id.* at 2129. The determination of “definiteness is measured from the viewpoint of a person skilled in the art at the time the patent was filed.” *Id.* at 2128. (emphasis original, citations omitted). “The definiteness requirement . . . mandates clarity, while recognizing that absolute precision is unattainable.” *Id.* This standard reflects rulings that have found that “the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” *Id.* at 2129. “Whether a claim reasonably apprises those skilled in the art of its scope is a question of law that [is] review[ed] de novo.” *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1374 (Fed. Cir. 2008). As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Nautilus*, 134 S. Ct. at n.10.

## **B. Means-Plus-Function Limitations**

Where a claim limitation is expressed in “means plus function” language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112, ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112, ¶ 6 mandates that “such a claim limitation ‘be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.’” *Id.* (citing 35 U.S.C. § 112, ¶ 6). Accordingly, when faced with means-plus-function limitations, courts “must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations].” *Id.*

Construing a means-plus-function limitation involves multiple steps. “The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation’s function, “the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* Moreover, the focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.*

“While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function.” *Default Proof Credit Card System, Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291,



1298 (Fed. Cir. 2005). “The question is not whether one of skill in the art would be capable of implementing a structure to perform the function, but whether that person would understand the written description itself to disclose such a structure.” *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008). Further, the identified structure needs to be more than a “black box.” *See Blackboard, Inc. v. Desire2Learn Inc.*, 574 F.3d 1371, 1382-83 (Fed. Cir. 2009). The structure needs to be described in detail and not abstraction. *See id.*

Where computer-implemented inventions are at issue and claimed using means-plus-function limitations, the Federal Circuit “has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor.” *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). Rather, the patent must disclose sufficient algorithmic structure (or some other description) explaining how the computer performs the claimed function. *See id.* at 1332-37; *Blackboard*, 574 F.3d at 1383-84; *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008). The term “algorithm” in computer systems has broad meaning and encompasses “in essence a series of instructions for the computer to follow,” *In re Waldbaum*, 457 F.2d 997, 998 (CCPA 1972), whether in mathematical formula, or a word description of the procedure to be implemented by a suitably programmed computer. *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376 (Fed. Cir. 2011) (“i.e., . . . a step-by-step procedure for accomplishing a given result”).

If an algorithm is required, that algorithm may be disclosed in any understandable form: a mathematical formula, in prose, as a flow chart, or in any other manner that provides sufficient structure. *See Finisar*, 523 F.3d at 1340. But, “simply reciting ‘software’ without providing some detail about the means to accomplish the function is not enough.” *Id.* at 1340-41. Nonetheless, even though the algorithm may be expressed in any understandable way, the

purported algorithm cannot “merely provide[] functional language” and must provide a “step-by-step procedure” for accomplishing the claimed function. *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1365 (Fed. Cir. 2012). Further, “[i]t is well settled that simply disclosing software, however, without providing some detail about the means to accomplish the function, is not enough.” *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013) (citation and internal quotations and alterations omitted).

In limited circumstances, a general purpose computer may suffice as structure for a generic function (such as “processing”) if the function is “coextensive with the structure disclosed.” *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming. As such, it was not necessary to disclose more structure than the general purpose processor that performs those functions.”). However, a construction narrowing the functions to “specific computer-implemented functions” requires corresponding algorithms to be disclosed. *Id.* at 1317.

### III. CONSTRUCTION OF AGREED TERMS

The Court hereby adopts the following agreed constructions:

<u>Term</u>	<u>Agreed Construction</u>
<p><b>“display means for displaying at least one product, and for displaying a product location price”</b>            (‘071 patent, claim 30)</p>	<p><b>This phrase should be construed under 35 U.S.C. § 112(6).</b></p> <p><b>Function: “displaying a product for sale and a price for that product”</b></p> <p><b>Structure: “an electronic display screen and equivalents thereof”</b></p>

<p><b>“sales and inventory data”</b>  ('071 patent, claims 5, 28; '016 patent, claims 5,12)</p>	<p><b>Plain and ordinary meaning</b></p>
<p><b>“competition price data” / “competition pricing data”</b>  ('071 patent, claims 5, 28, 36; '016 patent, claims 5,12)</p>	<p><b>Plain and ordinary meaning</b></p>
<p><b>“store product advertising media unit constructed to selectively output”</b>  ('071 patent, claim 31)</p>	<p><b>“an electronic unit that selectively displays advertising media”</b></p>
<p><b>“advertising message”</b>  ('071 patent, claim 31)</p>	<p><b>Plain and ordinary meaning</b></p>
<p><b>“pricing and advertising information”</b>  ('071 patent, claims 5, 28; '016 patent, claims 5,12)</p>	<p><b>Plain and ordinary meaning</b></p>

(Dkt. No. 30, August 28, 2014 Joint Claim Construction and Prehearing Statement.)

#### IV. CONSTRUCTION OF DISPUTED TERMS

The parties’ positions and the Court’s analysis as to the disputed terms are presented below. As an initial note, during the claim construction hearing Plaintiff expressly stated that it did not object to any of the Court’s proposed constructions as presented at the hearing.

##### A. “automated”

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
<p>“automated”  (all asserted claims)</p>	<p>This term appears in the preamble of the claims and is not limiting</p>	<p>“functions entirely without intervention by a human operator”</p>

The disputed term “automated” appears in each claim in both the ‘071 and ‘016 patents.

##### (1) The Parties’ Positions

Plaintiff submits that the term “automated” appearing in the preamble is not a limitation. (*See, e.g.*, Dkt. No. 61 at 6.) Plaintiff argues that the word “automated” in the preamble “[a]n automated product pricing system” does not recite any essential structure or step, nor is it necessary to give life, meaning, and vitality to the claim. (*Id.*) Rather, each asserted claim recites in its body a complete set of structures for electronically controlling product pricing. (*Id.*) The Plaintiff further argues that even if “automated” is a limitation, Defendant’s construction is incorrect because in ordinary English, “automated” does not mean “functions entirely without intervention by a human operator.” (*Id.*) Rather, “automated” means “using a computer” or “working with little or no human actuation.” (*Id.* at 7.) Plaintiff argues that Defendant’s reliance on a dictionary definition is in error. (*Id.*) Plaintiff also argues that because some claims include the term “automatic” for particular limitations, making the entire system be “automatic” would make those limitations redundant. (*Id.* at 7-8.) Plaintiff also argues that there is support in the specification for some human intervention for some of the steps, which is inconsistent with Defendant’s construction. (*Id.* at 9.)

Defendant responds that the term “automated” in the preamble recites an essential feature of all of the Asserted Claims and claim limitations and of the systems described in the specification. (*See, e.g.*, Dkt. No. 27 at 6.) Defendant argues that the pervasive use of the term “automated” in the Title, Abstract, Background and preamble indicates the intent to describe a system and method devoid of any human operator intervention. (*Id.*) This distinction from known prior art based on the advantages of automation clearly indicates that the life, meaning and vitality of the Asserted Claims is the complete removal of human operator (i.e. manual) intervention. (*Id.*) Defendant argues that Plaintiff’s reliance on other courts’ construction of the term “automated” is neither controlling nor indicative of how other courts have construed the

term. (*Id.*) Defendant also argues that any redundancy of the term “automated” in the claims was intended by the patentee and is evidenced by the fact that the patentee stated that the concept of “automation” was an implicit limitation of the claims. (*Id.* at 6-7.)

Plaintiff replies that Defendant fails to show why the preamble recites an essential feature of the claims or is necessary to give life, meaning, or vitality to the claims. (*See, e.g.*, Dkt. No. 28 at 1.) Plaintiff argues that Defendant’s reliance on a portion of the specification about reducing manual labor for price changes does not require the extreme position of having no human operator intervention whatsoever. (*Id.* at 2.) Plaintiff argues that the patentee never intended the system to be completely devoid of any human control, as the specification in one embodiment requires a human operator to control the pricing algorithm. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether the “automated” term appearing in the preamble is a limitation. The Court agrees with the Plaintiff and finds that, in this instance, the preamble is not limiting.

Each independent claim in the ‘071 and ‘616 patents includes in the preamble the following phrase: “[a]n automated product pricing system.” Further, each dependent claim includes a reference to the “automated product pricing system” that it is dependent upon. Not one claim refers back to the “automated” term appearing in the preamble. However, many claims do include additional references to the term “automatic[]” (such as claims 24 and 36 of the ‘071 patent and claim 8 of the ‘016 patent) in connection with additional limitations.

In general, a preamble does not limit a claim. *Allen Engineering Corp. v. Bartell Industries, Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002). A preamble is properly considered a limitation of a claim “if it recites essential structure or steps, or if it is ‘necessary to give life,

meaning, and vitality’ to the claim.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). “Conversely, a preamble is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” *Catalina*, 289 F.3d at 808 (citing *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997)).

The Court finds that the use of “automated” in the preamble is not a limitation. The use of the term “automated” in the preamble does not recite any essential structure or step, nor is it necessary to give life, meaning, and vitality to the claim. Rather, each claim recites in its body a complete set of structures for a product pricing system. Further, the requirement that the term “automatic” in the preamble provides a limitation would be contrary to claims that additionally recite an “automatic” limitation for particular steps or systems. For example, claim 24 of the ‘071 patent recites “a store system computer constructed to communicate . . . so as to automatically change the production location price and the product checkout price.” (emphasis added.) Likewise, claim 36 of the ‘071 patent recites “a control system computer adapted . . . to automatically output a price change code to the store system computer.” (emphasis added.) Having the entire system operate automatically would, at a minimum, render these claim limitations reciting “automatically” redundant and/or meaningless. Still further, the specification references the use of a manager selecting various price change algorithms to be used by a store system computer (*see, e.g.*, ‘071 patent, col. 7, ll. 57-62), which is inconsistent with a requirement that the entire system be “automatic.” The Court finds Defendant’s arguments relating to the patentee’s “implicit” comments regarding amendments to claim 1 of the ‘016 patent unpersuasive. Contrary to Defendant’s arguments, the usage of the term

“automatic” in the preamble implies that some of the later recited steps or components may be automatic but does not require that each and every limitation recited in the claim and the system in its entirety must be wholly automatic and function without human intervention.

Accordingly, the Court finds that the preamble merely sets forth the intended purpose of the claimed combination, should not be given a limiting meaning, and that no construction is necessary for this term in the preamble.

**B. “to automatically change . . .” / “automatically output . . .”**

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“to automatically change the product location price and the product checkout price”/ “to automatically change the product location price and the product checkout/order price”  (‘071 patent, claims 24, 36; ‘016 patent, claim 8)	“to electronically change the product location price and checkout price”	“electronically changing the product location price and checkout price entirely without human operator intervention”
“automatically output a price change code”  (‘071 patent, claim 36)	“electronically output instructions to change a price”	“electronically output encoded instructions to change a price entirely without human operator intervention”

The terms “to automatically change the product location price and the product checkout[/order] price” appear in claims 24 and 36 of the ‘071 patent and claim 8 of the ‘016 patent. The term “automatically output a price change code” appears in claim 36 of the ‘071 patent. Because these terms are related and have similar proposals and arguments by the parties, the Court will consider these terms together.

**(1) The Parties’ Positions**

Plaintiff submits that the term “automatically” does not mean “without human operator intervention.” (*See, e.g.*, Dkt. No. 61 at 25, 29.) Plaintiff argues that Defendant’s relied upon

dictionary definition does not support its construction and is contrary to the specification and claims. (*See id.*) Rather, the term “automated” means “using a computer” or “working with little or no human actuation.” (*Id.* at 7.) Further, Defendant’s relied upon dictionary definition uses the term “under specific conditions” and Defendant impermissibly substitutes the term “entirely.” (*Id.*) For the “automatically output a price change code” term, Plaintiffs also argue that Defendant includes the unnecessary limitation of “encoded.” (*Id.* at 29.)

Defendant responds that the intrinsic evidence supports its position that the claims and patents are directed to a system and method of changing product location and checkout prices entirely without any human operator intervention. (*See, e.g.*, Dkt. No. 27 at 6-7, 23, 28-29.) Defendant argues that Plaintiff’s assertion that “automatically” means “electronically” would mean that any use of the term “automatic” is unnecessary and redundant. (*Id.* at 23.) Defendant argues that Plaintiff’s construction of the term “automatically” as “working with little or no human actuation” is inconsistent with the ordinary meaning of the term. (*Id.*) Regarding the term “price change code,” Defendant argues that the specification it is unclear how a price change code would not be encoded. (*Id.* at 29.)

Plaintiff replies that Defendant’s proposal is not supported by the intrinsic or extrinsic evidence. (*See, e.g.*, Dkt. No. 28 at 8.) Plaintiff argues that the cases cited by Defendant do not support its position. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether the requirement of “automated” excludes any human involvement (as proposed by Defendant) or whether it means “working with little or no human actuation” (as proposed by Plaintiff). The Defendant relies heavily on an IEEE dictionary definition of the term “automatic” (in computer applications) which provides the



following definition: “pertaining to a function, operation, process, or device that, under specified conditions, functions without intervention by a human operator.”

The claim language and prosecution history is not particularly helpful as to the parties’ dispute. Likewise, while both parties cite to different Court opinions that allegedly require each party’s construction, the Court notes that these opinions are for different patents and claims and are not particularly helpful or dispositive to the issues in these patents.

The specification has various references to a “manual” operation as opposed to an “automated” operation. (*See, e.g.*, ‘071 patent, col. 2, ll. 10-12; col. 2, ll. 25-38.) In addition, the specification has numerous references to the concept of “automatic” in relation to changing prices, which are all in the context of “price change algorithms.” (*See, e.g.*, ‘071 patent, col. 7, l. 54 – col. 8, l. 23; col. 9, ll. 2-7.) Overall, the Court finds that the use of “automatic” within the specification implies that the step is performed independently and that there is no direct human intervention when performing the automatic step. This is consistent with the term’s ordinary meaning and even the extrinsic dictionary definition relied upon by Defendant. The Court rejects Plaintiff’s arguments that the term means “working with little or no human actuation” as being inconsistent with the intrinsic evidence and the ordinary meaning of the term. In addition, there is no guidance as to what “little human actuation” means, thus making the distinction between automatic and non-automatic or even semi-automatic hard to delineate. The Court further rejects Plaintiff’s proposed construction as it provides no meaning to the term “automatically” and instead appears to equate the term “automatically” with merely “electronically.” Further, during the claim construction hearing neither party objected to the Court’s proposal of “without direct human intervention” for the term “automatically.”

The Court rejects Defendant’s proposal to include the term “entirely,” as the Court is not convinced that it is necessary or warranted, and even the dictionary definition relied upon by Defendant does not use the term. Regarding the inclusion of the term “encoded” as proposed by Defendant, the Court finds that such a term is not found in the specification, the Court is unclear what it means, and the Court is not convinced that it is necessary or warranted. Separate from the “encoded” dispute, both parties agree that the constituent term “price change code” means “instructions to change a price,” and the Court finds no need to change that agreed construction.

The Court hereby construes **“to automatically change the product location price and the product checkout price”/ “to automatically change the product location price and the product checkout/order price”** to mean **“to electronically change the product location price and checkout price without direct human intervention.”** The Court notes that neither party objected to this construction as proposed during the claim construction hearing.

The Court hereby construes **“automatically output a price change code”** to mean **“electronically output instructions to change a price without direct human intervention.”**

**C. “product location price”**

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“a first product location price” (‘071 patent, claims 1, 5, 28; ‘016 patent, claims 1, 12)	“a first price for a product at a location”	“a displayed price corresponding to a product in a first location, different from a second product location price”
“a second product location price” (‘071 patent, claims 1, 5, 28; ‘016 patent, claims 1, 12)	“a second price for a product at a location”	“a displayed price corresponding to a product in a second location, different from a first product location price”

“a product location price” (‘071 patent, claims 24, 30, 36; ‘016 patent, claim 8)	Plain and ordinary meaning, but if a construction is necessary, then this phrase should be construed as:  “a price for a product at a location”	“a displayed price corresponding to an individual product in a specific location”
--	---	---

The disputed terms “a first product location price” and “a second product location price” appear in claims 1, 5, and 28 of the ‘071 patent and claims 1 and 12 of the ‘016 patent. The disputed term “a product location price” appears in claims 24, 30, and 36 of the ‘071 patent and claim 8 of the ‘016 patent. Because these terms are related and have similar proposals and arguments by the parties, the Court will consider these terms together.

**(1) The Parties’ Positions**

Plaintiff submits that the term a “product location price” is described in the specification as simply a price for a product at a location and has its plain meaning. (*See, e.g.*, Dkt. No. 61 at 13, 15, 22.) Plaintiff argues that Defendant’s inclusion of the term “display” is wrong because the claim separately recites a displaying limitation. (*See id.*) Likewise, Defendant’s requirement that the first and second product location prices be different from each other is wrong because it is also already stated as a separate requirement in the claims. (*Id.*) Further, Defendant’s requirement that the first and second location prices be at separate locations contradicts the specification, which allows for the same product at the same location. (*Id.* at 15.)

Defendant responds that the claims and specification is clear that the product location price must be displayed and be perceivable. (*See, e.g.*, Dkt. No. 27 at 10-11, 20.) Defendant argues that its construction is not redundant to the claim language because it is clear that the “displayed price” is distinct from the “display means” itself. (*Id.* at 11.) In other words, the

product location price could not indicate the unit price of a product unless it is displayed, and the product pricing unit is the item constructed to display this product location price. (*Id.* at 20.) Defendant also argues that the requirement that the first and second location prices differ is not redundant because certain claims contain that limitation while others do not. (*Id.* at 11.) Defendant also argues that its construction accommodates the existence of a first and second location that might be different. (*Id.*)

Plaintiff replies that its construction is consistent with the specification and simply means a “price for a product at a location.” (*See, e.g.*, Dkt. No. 28 at 4.) Plaintiff argues that Defendant’s inclusion of the concept of “display” and that the prices must be different is already recited in the claims and make those separately recited terms redundant. (*Id.*) Plaintiff also argues that Defendant’s requirement that the locations for the first and second location prices be different is contrary to the specification. (*Id.*)

## **(2) Analysis**

The parties’ arguments on these terms are either the same or integrally related to each other, and thus they are discussed together. Plaintiff essentially argues a plain meaning approach to the disputed terms, while the Defendant argues that various limitations are necessary for a complete understanding of the terms. The parties primarily dispute whether the price must be displayed and whether the first and second product location prices are distinct from one another.

Claims 1 and 36 of the ‘071 patent are representative of the disputed terms and are shown below in relevant part:

[claim 1] product pricing unit means for displaying **a first product location price** indicative of the unit price of a product such that **the first product location price** is perceivable by a first shopper when the first shopper is selecting the product for purchase; means for electronically changing **the first product location price** to **a second product location price** following the first shopper selecting the product

for purchase, **the second product location price** being different than **the first product location price**, **the second product location price** being perceivable by a second shopper when the second shopper is selecting the product for purchase; and

[claim 36] a product pricing unit constructed to display **a product location price** indicating the unit price of a first product;

(emphasis added). Other claims, while different, recite similar limitations.

The specification has numerous references to these terms:

The physical store system 14a, in general, is constructed to display a **product location price indicating the unit price of a product** on at least one of a plurality of product pricing units 40, to request from a shopper a product checkout price for the purchase of the product by at least one of a plurality of store checkout stations 42, to selectively print coupons, transmit video and/or audio advertising messages including the product checkout price on a store product advertising media unit 44, and to dynamically change the displayed product location prices, the requested product checkout prices, the coupons and the advertising messages in real time based on predetermined criteria thereby substantially eliminating consumer confusion and yielding the maximum economic benefit for the physical store by a store product control system 46.

A product location price associated with each of the unique electronic addresses is stored in the store system computer 50. **The product location price is indicative of the unit price of a single product.**

Upon receipt of the **product location price** data from the product decoder unit 58, the product price display unit 60 transmits and/or displays **the product location price indicative of the unit price of a product** disposed adjacent the particular product pricing unit 40 in a format perceivable by a shopper when the shopper is selecting the product for purchase. The product price display unit 60 can be a liquid crystal display, or a LED display, for example. The **product location price transmitted** or displayed by the product price display unit 60 remains until a new product location price for the particular product located adjacent the product pricing unit 40 is received by the product decoder unit 58.

(‘071 patent, col. 3, l. 66 – col. 4, l. 13; col. 4, ll. 24-27; col. 4, l. 59 – col. 5, l. 3 (emphasis added). The specification expressly states – in numerous instances – that the “product location price” is “indicative of the unit price of a single product.” (*See id.*)

Defendant seeks to include the limitation that the price be “displayed.” The Court disagrees. As shown in claims 1 and 36 of the ‘071 patent, the claim separately recites that these product location prices are to be displayed and includes many surrounding limitations on displaying these product location prices. To include a concept of “displaying” – as suggested by the Defendant – would make the surrounding limitations of “displaying” superfluous. Furthermore, Defendant’s construction implies that both the “first product location price” and the “second product location price” are always displayed, which is contrary to the specification and the claims, which suggest that the second product location price is displayed while the first product location price (which was previously displayed) is no longer displayed. (*See, e.g.*, ‘071 patent, claim 1; col. 4, l. 59-col. 5, l. 8; col. 8, l. 61-col. 9, l. 13). Still further, the specification implies that there are times when the first product location price is not displayed, such as when the price data is stored in parts of the system or transmitted from one location to another. (*See id.*) Defendant seems to recognize that the product location prices may not always be displayed, as it admits “there may be a time when a first product location price is being transmitted without display.” (*See* Dkt. No. 27 at 11.) While the product location price may be displayed and the claims specify instances where it must be displayed, the specification is clear that the “product location price” is that which is “indicative of the unit price of a single product” and not necessarily that which is always displayed. The Court rejects Defendant’s requirement to include a displayed limitation.

Defendant seeks to include the limitation that the first location price is different from the second location price in the inherent meaning of these terms. The Court disagrees. In addition to the recitation of the disputed terms, claim 1 of the ‘071 patent and claim 1 of the ‘016 patent expressly state that “the second product location price being different than the first product

location price.” To expressly include the language proposed by the Defendant would render superfluous the subsequent claim language expressly requiring the first and second location prices to be different. During the claim construction hearing, the Court asked Plaintiff whether it intends to argue that these terms need not be different, to which Plaintiff responded inconclusively. The Court rejects Plaintiff’s argument that the first and second product location prices, as claimed, do not have to be different. In context, the intrinsic record is clear that the first and second product location prices are different because the first product location price is changed (as claimed) to the second product location price. Nevertheless, the Court is not convinced that an express requirement that they are different is necessary to the terms’ construction.

Defendant seeks to include the limitation that the location of the second location price is different from the location of the first location price. The Court disagrees. The teaching of the claims and specification imply that the first and second product location prices will differ by their price but not by their location. In particular, the specification provides an example that specifically discusses changing a first price for a product to a second price for the same product at the same location. (*See, e.g.*, ’071 patent, col. 8, l. 61 – col. 9, l. 13.) Thus, contrary to Defendant’s proposed construction, the “second product location price” can be a price for the same product at the first location, just at a different time. The Court finds no basis in the intrinsic support for Defendant’s proposal, and particularly because it would exclude a preferred embodiment, the Court rejects such a requirement.

The Court finds that Plaintiff’s constructions are most consistent with the plain meaning of the terms and the intrinsic support. The Court rejects Defendant’s proposals.

The Court hereby construes “**a first product location price**” to mean “**a first price for a specific product at a location.**”

The Court hereby construes “**a second product location price**” to mean “**a second price for a specific product at a location.**”

The Court hereby construes “**a product location price**” to mean “**a price for a specific product at a location.**”

**D. “product checkout price” / “product checkout/order price”**

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“a product checkout price” / “a product checkout/order price”  (‘071 patent, claims 24, 36; ‘016 patent, claim 8)	Plain and ordinary meaning, but if a construction is necessary, then this phrase should be construed as:  “a price allocated to a product at the time of its purchase”	“price allocated to each individual product at a checkout station that has the capability of differing from the product location price”

The disputed term “a product checkout price” appears in claim 24 of the ‘071 patent and claim 8 of the ‘016 patent, while the disputed term “a product checkout/order price” appears in claim 36 of the ‘071 patent. Both parties argue that these slightly different terms have the same meaning.

**(1) The Parties’ Positions**

Plaintiff submits that these terms are readily understandable by their plain and ordinary meaning and that no construction is necessary. (*See, e.g.*, Dkt. No. 61 at 23.) Plaintiff argues that Defendant’s inclusion of the “checkout station” is an unnecessary limitation and would be included in claims that do not recite the “checkout station” limitation, such as claim 36 of the ‘071 patent. (*Id.*) Further, claim 36 specifically states that it is the “store system computer”



rather than a “checkout station” that is determining the product checkout/order price, and thus Defendant’s construction is inconsistent with the plain language of the claims. (*Id.*)

Defendant responds that Plaintiff’s argument as to why a checkout station is not necessary misses the mark because the relied upon claim language pertains to changing prices and not to the actual allocation of a price to a product at checkout. (*See, e.g.*, Dkt. No. 27 at 20.) Defendant argues that the allocation of a checkout/order price to a product occurs when the product is presented for purchase at a checkout station and the checkout station outputs the checkout/order price so the shopper is able to perceive it. (*Id.* at 21.) Defendant argues that the price does not become a “product checkout/order price” until the checkout station allocates it to the product at the point of purchase, and the specification contains no other examples as to how a product checkout/order price is defined. (*Id.*)

Plaintiff replies that Defendant’s construction should be rejected because it would exclude the preferred embodiment of a “virtual store system.” (*See, e.g.*, Dkt. No. 28 at 7.) Plaintiff argues that the term “a product checkout/order price” implies that a checkout price is different from an order price. (*Id.*) Because the specification discusses a virtual store system in which there is no checkout price, but rather an “order price” that a user selects after browsing through product choices on a computer, Defendant’s construction is wrong. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether the term is limited to a “checkout station.”

The disputed term is found in numerous claims. Claims 24 and 36 of the ‘071 patent are representative, and are reproduced below in relevant part:

[claim 24] a store checkout station constructed to request from a shopper a **product checkout price** for the purchase of the product; a store system computer constructed to communicate with the product pricing unit and the store

checkout station so as to automatically change the product location price and the **product checkout price**;

[claim 36] means for requesting from a shopper a **product checkout/order price** for the purchase of the first product; a store system computer constructed to communicate with the product pricing unit and the means for requesting so as to automatically change the product location price and the **product checkout/order price**;

(emphasis added.) The term “a product checkout price” appears in claim 24 of the ‘071 patent and claim 8 of the ‘016 patent, and it is clear that in these claims based on the claim language the “store checkout station” requests the “product checkout price.” The term “a product checkout/order price” appears in claim 36 of the ‘071 patent, and while the claim does not expressly recite the term “checkout station,” it recites the means plus function limitation of “means for requesting . . . .”

The specification has numerous references to the term a “product checkout price,” and each instance refers to a “checkout station.” (*See, e.g.*, ‘071 patent, col. 5, l. 21 – col. 6, l. 10; *see also* col. 8, l. 23 – col. 10, l. 19.) Likewise, the specification has multiple references to the term a “product order price,” which is made in the context of a “virtual store system.” (*Id.* at col. 12, ll. 8-18.) The specification specifically compares a “product order price” to a “product checkout price,” and in particular states that the “product order price” in a virtual store system is set in a similar manner as to the “product checkout price” in a physical store system. (*See id.*) There is no reference to a “checkout station” for the term “product order price.”

The Court reject’s Plaintiff’s construction as it substitutes the term “purchase” for the term “checkout” or “checkout/order.” The Court is not convinced that such a change is necessary or warranted, and the Court finds that the language used in the claims is more accurate. However, the Court also rejects Defendant’s construction. While there is support in the claims

and specification for the requirement that the “product checkout price” is determined at a “checkout station,” the specification and claims have no express support for such a requirement for the related term “product checkout/order price.” Indeed, as the Plaintiff argues, requiring a “checkout station” for a virtual store system would exclude a preferred embodiment as there is no disclosed “checkout station” in a virtual store system. Because the parties argue that both of the disputed terms have the same meaning, the inclusion of the term “checkout station” is inappropriate. Further, the fact that various claims (such as claim 24 of the ‘071 patent and claim 8 of the ‘016 patent) separately claim the use of a “checkout station” implies that a “checkout station” requirement is not necessary to the inherent meaning of the disputed terms; otherwise, the claim language would be redundant. However, the Court’s ruling does not negate the fact that various claims specifically require “a store checkout station constructed to request from a shopper a product checkout price for the purchase of the product” (emphasis added.) Lastly, the Court rejects Defendant’s inclusion of the phrase “that has the capability of differing from the product location price” because the Court is not convinced that its inclusion is necessary to the inherent meaning of the disputed term. Further, the Court notes that Plaintiff did not object to the Court’s proposed construction of this term at the claim construction hearing.

The Court hereby construes “**a product checkout price**” / “**a product checkout/order price**” to mean “**price allocated to a specific product at the time of checkout/order.**”

**E. “virtual store system”**

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
Plain and ordinary meaning, but if a construction is necessary, then this phrase should be construed as:  “Internet-based store system that allows a customer to browse, purchase, and/or order products”	“Internet-based store system that allows a customer to purchase/order products”

The disputed term “virtual store system” appears in claim 30 of the ‘071 patent.

**(1) The Parties’ Positions**

Plaintiff submits that the term “virtual store system” is readily understandable from its plain meaning and needs no construction. (*See, e.g.*, Dkt. No. 61 at 21, 22.) Plaintiff argues that virtual stores can be Internet-based stores such as websites for retail stores that allow a customer to browse items for purchase without necessarily purchasing or ordering them. (*Id.*)

Defendant responds that a “virtual store system” should be construed as an Internet-based store system that allows a customer to purchase or order products. (*See, e.g.*, Dkt. No. 27 at 19.) Defendant argues that an Internet-based store system that allows browsing, without purchasing or ordering, is not an accurate construction for this term because it ignores both the plain meaning of this term and the intrinsic evidence. (*Id.*) The specification consistently and repeatedly refers to a “shopper” accessing a “virtual store system,” not merely a browser. (*Id.*) Defendant argues that because the virtual store system is described as for “home shopping and deliveries,” shoppers must be able to purchase or order products, or the reference to “and deliveries” would not have been included. (*Id.*) Defendants also argue that the specification states “the virtual store system 18 and the physical store systems 14 operate identically except as set forth hereinafter.” (*Id.*)

Plaintiff replies that merely browsing can be a form of shopping. (*See, e.g.*, Dkt. No. 28 at 7.) “Window shopping,” for example, refers to browsing items in store windows without buying. (*Id.*) Plaintiff also argues that while the virtual store embodiment in the specification does include functionality to order products, “virtual store system” is not limited to the embodiments in the specification. (*Id.*)

## **(2) Analysis**

The parties' primary dispute is whether a "virtual store system" must include the capability of purchasing/ordering products or is the ability to "browse" for products alone sufficient to be considered a "virtual store system."

The specification states that the "virtual store system" and the "physical store system" operate identically except as specifically provided in the specification. ('071 patent, col. 11, ll. 47-49.) The virtual store system is shown in Fig. 7, and includes a browse button and an order button. ('071 patent, col. 11, ll. 49-59.) The specification is very clear that the virtual store system allows the user to both browse the products as well as purchase or order the products. (*See, e.g.*, '071 patent, col. 11, l. 49 – col. 12, l. 19.) This is consistent with the ordinary meaning of the term "store," which implies a place where products are sold, not just browsed.

The Court rejects Plaintiff's arguments. The fact that a user on an Internet-based store or other virtual store system decides not to purchase or order a product does not mean that the store or website need not have the capability for a user to purchase or order a product. The Court agrees with the Defendant's arguments that a virtual "store" that does not provide the capability for a user to purchase or order a product is not a store at all. The Court is not impermissibly limiting the term to a preferred embodiment – and thus rejects Plaintiff's arguments on that basis – but is rather giving clarity to the inherent meaning of the term itself, supported and confirmed by the specification. Further, during the claim construction hearing both parties did not argue against and appeared to agree with the Court's proposed construction.

The Court hereby construes "**virtual store system**" to mean "**Internet-based store system that allows a customer to browse products, and to purchase or order products.**"

**F. “a store system computer constructed to communicate”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
Plain and ordinary meaning, but if a construction is necessary, then this phrase should be construed as:  “a store system computer with the capability to communicate”	Indefinite

The disputed term “a store system computer constructed to communicate” appears in claims 24 and 36 of the ‘071 patent and claim 8 of the ‘016 patent.

**(1) The Parties’ Positions**

Plaintiff submits that the disputed term is readily understandable from its plain meaning and that no construction is necessary. (*See, e.g.*, Dkt. No. 61 at 23-24.) Further, Plaintiff argues that the term is not a means-plus-function limitation. (*Id.*) Plaintiff argues that this term is not ambiguous and that the Defendant has not met its high burden to show otherwise. (*Id.*)

Defendant responds that the term “store system computer constructed to communicate” is indefinite regardless of whether it is construed as a means-plus-function claim limitation. (*See, e.g.*, Dkt. No. 27 at 21.) Defendant argues that the structural elements relating to this term are confusing and undefined and do not permit a person skilled in the art to be reasonably certain as to the scope of this claim element. (*Id.*) Defendant argues that while Figure 2 shows a store system computer constructed to communicate, that many of the related components are undefined and do not provide enough structure to understand the term. (*Id.* at 22.) Defendant argues that disclosure of multiple potential structures without clear guidance as to the actual construction of the store system computer is not sufficient to satisfy the heightened *Nautilus* standard for definiteness. (*Id.* at 23.)

Plaintiff replies that the term is not indefinite and the Defendant ignores the voluminous description in the specification regarding various embodiments of the “store system computer,” its structure, and its various functions. (*See, e.g.*, Dkt. No. 28 at 8.) Plaintiff also argues that Defendant’s references to the modem units in Figure 2 is not helpful as those components are separate from the “store system computer.” (*Id.*) Plaintiff argues that Defendant has not met its burden of proving indefiniteness by clear and convincing evidence. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether this term should be given its plain meaning or whether it is indefinite. While Plaintiff’s proposed construction is nothing more than a plain meaning construction, Defendant provides no alternative construction to its indefinite argument. The Court also notes that Defendant does not provide or rely upon any expert for its proposition that the term is indefinite or that one of ordinary skill in the art would not be reasonably certain as to the scope of this claim element.

The disputed phrase is recited in various claims of the Asserted Patents. One representative example is found in claim 36 of the ‘071 patent, and is reproduced below:

36. An automated product pricing system, comprising:

a plurality of store systems, each of the store systems comprising:

a product pricing unit constructed to display a product location price indicating the unit price of a first product;

means for requesting from a shopper a product checkout/order price for the purchase of the first product;

**a store system computer constructed to communicate with the product pricing unit and the means for requesting so as to automatically change the product location price and the product checkout/order price;**

a competition pricing information system adapted to output competition pricing data indicative of the price at which at least one predetermined competitor requests from a shopper for the purchase of the first product;

a control system computer adapted to receive the competition pricing data from the competition pricing information system and to automatically output a price change code to the store system computer.

(emphasis added.) As expressly claimed in claim 36, the “store system computer” is “constructed to communicate with the product pricing unit and the means for requesting so as to automatically change the product location price and the product checkout/order price.” Other claims reciting this disputed term offer similar surrounding limitations to the term.

The specification provides numerous examples of a “store system computer”:

The store product control system 46 includes a **store system computer** 50. The **store system computer** 50 has stored thereon the unique electronic addresses for the respective product pricing units 40. A product location price associated with each of the unique electronic addresses is stored in the **store system computer** 50. The product location price is indicative of the unit price of a single product.

The **store system computer** 50 is constructed to transmit the unique electronic addresses and the product location prices associated therewith (“electronic address and product location price data”) to a transmitter unit 52 via a signal path 54. In response to receiving the electronic address and product location price data from the **store system computer** 50, the transmitter unit 52 transmits such electronic address and product location price data to the respective product pricing units 40a and 40b via signal paths 56a and 56b. The signal paths 56a and 56b can be hard wiring (copper wiring, fiber optics, coaxial cable, or the like), RF wireless (microwave, low frequency, satellite, or the like) and/or optical (laser, infrared, or the like).

\*\*\*

As mentioned previously, the **store system computer** 50 receives unique code data identifying purchased products from the store checkout stations 42 via the signal paths 78 and 80. In response thereto, the **store system computer** 50 can change the prices in the store based on predetermined price change algorithms. The predetermined price change algorithms utilized to change the store prices can be either manager selectable or selectable via the owner control system 12.

\*\*\*



For example, one embodiment of the present invention operates as follows. The **store system computer** 50 outputs a first product location price indicative of the unit price of a product to the product pricing units 40 via the signal paths 54 and 56. The product pricing units 40 receive the first product location price and display the first product location price on the product price display unit 60 such that the first product location price is perceivable by a first shopper when the first shopper is selecting the product for purchase. The **store system computer** 50, utilizing at least one of the price change algorithms, automatically changes the first product location price to a second product location price following the first shopper selecting the product for purchase and possibly while the first shopper is still in the store shopping. The second product location price is then transmitted to the product pricing units 40 via the signal paths 54 and 56 to be displayed on the product price display unit 60. The second product location price is different than the first product location price and is perceivable by a second shopper when the second shopper is selecting the product for purchase. The first shopper then proceeds to one of the store checkout stations 42 to pay for the product which the first shopper has selected. The first shopper provides the time-stamp media to the checkout clerk who enters the time information stored on the timestamp media into the checkout computer unit 66. The UPC code on the product is scanned by the product scanner unit 68 and is thereby input into the checkout computer unit 66. The checkout computer unit 66 then transmits the product identification data (UPC code) and the time-stamp data to the **store system computer** 50 via the signal paths 78 and 80. The **store system computer** 50 receives the time-stamp data and the product identification data and determines whether the price of the product reflected in the product identification data was changed after the time reflected in the time-stamp data. If the product location price has been changed after the time identified in the time-stamp data, the **store system computer** 50 transmits a signal to the checkout computer unit 66 via the signal paths 78 and 80 to request from the first shopper a first product checkout price not exceeding the first product location price perceivable by the shopper when the shopper was selecting the product for purchase.

(‘071 patent, col. 4, ll. 21-41; col. 7, ll. 54-62; col. 8, l. 61 – col. 9, l. 35)(emphasis added).

Defendant’s indefinite argument is based largely around the argument that because multiple structures can satisfy the “store system computer constructed to communicate” limitation, that the phrase is indefinite. The Court disagrees. The fact that multiple structures, by itself, may satisfy a claim limitation does not require a finding of indefiniteness. The term itself implies that it is simply a computer system at a store. While the specification contains various references to the “store system computer,” it is the claim language that controls and

which specifically describes the claimed “store system computer.” However, Defendant appears to provide no effect to the surrounding claim limitations and construes the term in isolation. The surrounding claim limitations provide specific guidance to this term, in that the store system computer (for claim 36) is “constructed to communicate with the product pricing unit and the means for requesting so as to automatically change the product location price and the product checkout/order price.” The claim language in each claim provides sufficient structure and limitations to the term such that no further construction is needed and that the term, in consideration with the surrounding claim limitations, is not indefinite.

Because construing the “store system computer” term will only tend to confuse rather than clarify, the term requires no further construction. Absent clear evidence to the contrary, the Court is hesitant to change the plain meaning of a term. Because a plain and ordinary meaning construction resolves the dispute between the parties as to this term, no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

Lastly, the Court finds that there is no dispute that one of ordinary skill in the art would understand the meaning of the term “store system computer” in the context of the claims. Likewise, the Court finds that there is no dispute that one of ordinary skill in the art would understand with “reasonable certainty” the scope of the invention and the bounds of the claims.

Accordingly, pursuant to the Supreme Court’s holding in *Nautilus*, the Court rejects Defendant’s arguments that the claim when “read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

The Court hereby construes “**a store system computer constructed to communicate**” to have its plain meaning.

**G. “control system computer”**

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“a computer that can control price changes”	Indefinite

The disputed term “control system computer” appears in claims 24, 30, 31, and 36 of the ‘071 patent and claim 8 of the ‘081 patent.

**(1) The Parties’ Positions**

Plaintiff submits that its proposed construction is consistent with the specification. (*See, e.g.*, Dkt. No. 61 at 25.) Plaintiff argues that the specification describes that the owner control system computer can be a computer and includes predetermined price change algorithms to send changed prices to a physical or virtual store system. (*Id.*) Thus, Plaintiff argues that the specification therefore describes the “control system computer” as a computer that functions to control changes in prices. (*Id.*) Plaintiff argues that this term is not ambiguous and that the Defendant has not met its high burden to show otherwise. (*Id.*)

Defendant responds that the term “control system computer” is indefinite because it does not appear in the specification and, therefore, there is a complete absence of guidance as to what this “computer” is. (*See, e.g.*, Dkt. No. 27 at 24.) Defendant argues that the specification discloses a “store system computer” and an “owner control system computer” and that the

claimed “control system computer” could be either structure. (*Id.*) Defendant argues that there is no way to resolve the ambiguities and that the term is indefinite. (*Id.* at 24-25.)

Plaintiff replies that the specification describes the structure and function of an “owner control system computer” and those of ordinary skill would understand that the term “control system computer” relates to the “owner control system computer” disclosed in the specification. (*See, e.g.*, Dkt. No. 28 at 9.) While Defendant argues there is ambiguity because the specification also refers to a “store product control system” and a “store system computer,” Plaintiff argues that these terms are clearly different from “control system computer.” (*Id.*) Plaintiff further argues that the specification states “the logic executed by the owner control system computer 132 can be incorporated into the store system computer 50 if desired,” highlighting that “control system computer” is distinct from “store system computer.” (*Id.*) Plaintiff argues that Defendant has not met its burden of proving indefiniteness by clear and convincing evidence. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether this term should be given its plain meaning or whether it is indefinite. While Plaintiff’s proposed construction is essentially a plain meaning construction based on the claim language, Defendant provides no alternative construction to its indefinite argument. The Court also notes that Defendant does not provide or rely upon any expert for its proposition that the term is indefinite or that one of ordinary skill in the art would not be reasonably certain as to the scope of this claim element.

The disputed phrase is recited in various claims of the Asserted Patents. One representative example is found in claim 36 of the ‘071 patent, and is reproduced below:

36. An automated product pricing system, comprising:

a plurality of store systems, each of the store systems comprising:

a product pricing unit constructed to display a product location price indicating the unit price of a first product;

means for requesting from a shopper a product checkout/order price for the purchase of the first product;

a store system computer constructed to communicate with the product pricing unit and the means for requesting so as to automatically change the product location price and the product checkout/order price;

a competition pricing information system adapted to output competition pricing data indicative of the price at which at least one predetermined competitor requests from a shopper for the purchase of the first product;

**a control system computer adapted to receive the competition pricing data from the competition pricing information system and to automatically output a price change code to the store system computer.**

(emphasis added.) As expressly claimed in claim 36, the “control system computer” is “adapted to receive the competition pricing data from the competition pricing information system and to automatically output a price change code to the store system computer.” Other claims reciting this disputed term offer similar surrounding limitations to the term.

The specification provides numerous examples of a “control system computer”:

The **owner control system** 12 is adapted to communicate with the physical store systems 14a and 14b via respective signal paths 24a and 24b. The **owner control system** 12 also communicates with the product supplier systems 16a and 16b via respective signal paths 26a and 26b, the virtual store system 18 via a signal path 28 and the competition pricing information system 20 via a signal path 30.

\*\*\*

Referring now to FIG. 1 in combination with FIG. 6, the **owner control system** 12 is shown in more detail. The **owner control system** 12 includes an owner control system computer 132 and a modem 134. The **owner control system computer** 132 communicates with the modem 134 via a signal path 136. The **owner control system computer** 132 can be a Packard Bell Platinum 2010, for example. The **owner control system** computer 132 can connect automatically to each of the physical store systems 14 via the signal paths 24a and 24b, the product supplier systems 16a and 16b via the signal paths 26a and 26b, the

competition pricing information system 20 via the signal path 30, and the virtual store system 18 via the signal path 28.

It should be noted that the logic executed by **the owner control system computer** 132 can be incorporated into the store system computer 50 if desired, and/or if the owner only has one physical store. If the logic executed by the **owner control system computer** 132 is incorporated into the store system computer 50, the **owner control system computer** 132 can be eliminated.

The **owner control system computer** 132 includes a plurality of predetermined price change algorithms to send price change codes, including changed prices, and/or price change criteria or instructions, to the physical store systems 14 or the virtual store system 18 based on the competition price data received from the competition pricing information system 20, the pricing and advertising information received from the product supplier systems 16a and 16b, the sales and inventory data received from the physical store systems 14 and/or the virtual store system 18, and combinations thereof.

(‘071 patent, col. 3, ll. 13-19; col. 10, ll. 22-51)(emphasis added). The specification teaches “the logic executed by the owner control system computer 132 can be incorporated into the store system computer 50 if desired, and/or if the owner only has one physical store,” in which case “the owner control system computer 132 can be eliminated.” (*Id.* at col. 10, ll. 35-41.)

Defendant’s indefinite argument is based largely around the argument that because multiple structures can satisfy the “control system computer” limitation and that there is not a clear distinction between the disputed term and a “store system computer,” that the phrase is indefinite. The Court disagrees. The fact that multiple structures, by itself, may satisfy a claim limitation does not require a finding of indefiniteness. Likewise, the fact that the owner control system computer can be incorporated into the store system computer does not render the term indefinite but highlights the fact that a “control system computer” may be distinct from a “store system computer.” The term itself implies that it is simply a computer that acts as a control system. While the specification contains various references to the “control system computer,” it is the claim language that controls and which specifically describes the claimed “control system

computer.” However, Defendant appears to provide no effect to the surrounding claim limitations and construes the term in isolation. The surrounding claim limitations provide specific guidance to this term, in that the control system computer (for claim 36 of the ‘071 patent) is “adapted to receive the competition pricing data from the competition pricing information system and to automatically output a price change code to the store system computer” and the control system computer (for claim 24 of the ‘071 patent) is “adapted to selectively communicate price change codes indicate of different prices for the same product to the store system computer of each of the physical store systems whereby the price changes at the physical store systems for the product are capable of being individualized at each physical store system.” The claim language in each claim provides sufficient structure and limitations to the term such that no further construction is needed and the term, in consideration with the surrounding claim limitations, is not indefinite.

Because construing the “control system computer” term will only tend to confuse rather than clarify, the term requires no further construction. Absent clear evidence to the contrary, the Court is hesitant to change the plain meaning of a term. Because a plain and ordinary meaning construction resolves the dispute between the parties as to this term, no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

Lastly, the Court finds that there is no dispute that one of ordinary skill in the art would understand the meaning of the term “control system computer” in the context of the claims. Likewise, the Court finds that there is no dispute that one of ordinary skill in the art would understand with “reasonable certainty” the scope of the invention and the bounds of the claims. Accordingly, pursuant to the Supreme Court’s holding in *Nautilus*, the Court rejects Defendant’s arguments that the claim when “read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

The Court hereby construes “**control system computer**” to have its plain meaning.

**H. “competition pricing information system”**

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“a computer system that provides information relating to the pricing of one or more products by one or more competitors”	Indefinite

The disputed term “competition pricing information system” appears in claim 36 of the ‘071 patent.

**(1) The Parties’ Positions**

Plaintiff submits that its proposed construction is consistent with the specification. (*See, e.g.*, Dkt. No. 61 at 28.) Plaintiff argues that the specification describes that the “competition pricing information system” is designed to provide “competition price data” and “can include a program for obtaining information from an internet 35 search engine . . . which look[s] for the prices at which predetermined competitors are selling the same or similar products.” (*Id.*) Plaintiff argues that this term is not ambiguous and that the Defendant has not met its high burden to show otherwise. (*Id.*)



Defendant responds that the term “competition pricing information system” is indefinite because the specification provides no information regarding its scope. (*See, e.g.*, Dkt. No. 27 at 27.) Defendant argues that the competition pricing information system is illustrated in Figure 1 as a featureless box and the specification states without detail that it communicates with the owner control system and provides competition price data. (*Id.*) Defendant argues that Plaintiff cannot be permitted to capture within the scope of “competition pricing information system” any conceivable computer system that provides information related to competitor pricing. (*Id.* at 28.) As there is no description of a “competition pricing information system” sufficient to inform a person skilled in the art, with reasonable certainty, how to implement or avoid this feature, the term is indefinite. (*Id.*)

Plaintiff replies that the term is not indefinite because the specification sufficiently describes the term and the surrounding claim language further delimits the scope of the term. (*See, e.g.*, Dkt. No. 28 at 10.) Plaintiff argues that Defendant has not met its burden of proving indefiniteness by clear and convincing evidence. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether this term should be given its plain meaning or whether it is indefinite. While Plaintiff’s proposed construction is essentially a plain meaning construction based on the claim language, Defendant provides no alternative construction to its indefinite argument. The Court also notes that Defendant does not provide or rely upon any expert for its proposition that the term is indefinite or that one of ordinary skill in the art would not be reasonably certain as to the scope of this claim element.

The disputed phrase is recited in various claims of the Asserted Patents. One representative example is found in claim 36 of the ‘071 patent, and is reproduced below:

36. An automated product pricing system, comprising:

a plurality of store systems, each of the store systems comprising:

a product pricing unit constructed to display a product location price indicating the unit price of a first product;

means for requesting from a shopper a product checkout/order price for the purchase of the first product;

a store system computer constructed to communicate with the product pricing unit and the means for requesting so as to automatically change the product location price and the product checkout/order price;

**a competition pricing information system adapted to output competition pricing data indicative of the price at which at least one predetermined competitor requests from a shopper for the purchase of the first product;**

a control system computer adapted to receive the competition pricing data from the competition pricing information system and to automatically output a price change code to the store system computer.

(emphasis added.) As expressly claimed in claim 36, the “competition pricing information system” is “adapted to output competition pricing data indicative of the price at which at least one predetermined competitor requests from a shopper for the purchase of the first product.”

The specification provides numerous examples of a “competition pricing information system”:

The **competition pricing information system** 20 can include a program for obtaining information from an internet search engine, such as YAHOO or EXCITE which look for the prices at which predetermined competitors are selling the same or similar products.

\*\*\*

The owner control system computer 132 includes a plurality of predetermined price change algorithms to send price change codes, including changed prices, and/or price change criteria or instructions, to the physical store systems 14 or the virtual store system 18 based on the competition price data received from the **competition pricing information system** 20, the pricing and advertising information received from the product supplier systems 16a and 16b, the sales and

inventory data received from the physical store systems 14 and/or the virtual store system 18, and combinations thereof.

\*\*\*

As another example, the competition price data received from the **competition pricing information system** 20 by the owner control system 12 may indicate that a competitor's price on a first product is lower than the price of the first product in the physical store systems 14 and/or the virtual store system 18. Such competition price data is then analyzed by at least one of the algorithms stored in the owner control system 12 and a determination may be made to lower the price of the particular product. The owner control system 12 then outputs a price change code to the physical store systems 14 and/or the virtual store system 18 to lower the price of the particular product. The price change code lowering the price of the particular product can also include instructions to cause the store system computer 50, for example, to output product advertising data to the store product advertising media unit 44 to provide advertising messages, such as coupons, video messages and/or audio messages to accompany the lowering of the price of the product and to thereby notify shoppers of the lowering of the price of the product.

(‘071 patent, col. 3, ll. 33-37; col. 10, ll. 42-51; col. 11, ll. 9-28)(emphasis added).

Defendant's indefinite argument is based largely around the argument that because multiple structures can satisfy the "competition pricing information system" limitation, that the phrase is indefinite. The Court disagrees. The fact that multiple structures, by itself, may satisfy a claim limitation does not require a finding of indefiniteness. The term itself implies that it is simply a system that provides pricing information on competitor's products. While the specification contains various references to the "competition pricing information system," it is the claim language that controls and that which specifically describes the claimed "competition pricing information system." However, Defendant appears to provide no effect to the surrounding claim limitations and construes the term in isolation. The surrounding claim limitations provide specific guidance to this term, in that the competition pricing information system is "adapted to output competition pricing data indicative of the price at which at least one predetermined competitor requests from a shopper for the purchase of the first product." The

claim language provides sufficient structure and limitations to the term such that no further construction is needed and that the term, in consideration with the surrounding claim limitations, is not indefinite.

Because construing the “competition pricing information system” term will only tend to confuse rather than clarify, the term requires no further construction. Absent clear evidence to the contrary, the Court is hesitant to change the plain meaning of a term. Because a plain and ordinary meaning construction resolves the dispute between the parties as to this term, no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

Lastly, the Court finds that there is no dispute that one of ordinary skill in the art would understand the meaning of the term “competition pricing information system” in the context of the claims. Likewise, the Court finds that there is no dispute that one of ordinary skill in the art would understand with “reasonable certainty” the scope of the invention and the bounds of the claims. Accordingly, pursuant to the Supreme Court’s holding in *Nautilus*, the Court rejects Defendant’s arguments that the claim when “read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

The Court hereby construes “**competition pricing information system**” to have its plain meaning.

**I. “selectively communicate price change codes”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
“transmit instructions regarding a change in price”	“transmitting a group of encoded instructions, each containing a price change for a specific product”

The disputed term “selectively communicate price change codes” appears in claims 24 and 30 of the ‘071 patent and claim 8 of the ‘016 patent.

**(1) The Parties’ Positions**

Plaintiff submits that its proposed construction is consistent with the specification. (*See, e.g.*, Dkt. No. 61 at 26.) Plaintiff argues that a “price change code” is some form of information regarding a change of price. (*Id.*) Plaintiff argues that Defendant’s use of the term “encoded” is not found in the claims or the specification. (*Id.*) Plaintiff also argues that, contrary to Defendant’s construction, price change criteria or instructions are not necessarily price changes for a specific product. (*Id.*) Rather, it can be a set of instructions defining circumstances under which a price change for one or more products should occur. (*Id.*)

Defendant responds that the plain language of the claims states that the price change codes are indicative of changed prices, not merely instructions or criteria that could relate to a price change. (*See, e.g.*, Dkt. No. 27 at 25.) Defendants further argue that the claim term undeniably references price change codes, and it is unclear how a price change code would not be “encoded.” (*Id.*)

Plaintiff replies that “codes indicative of different prices” is not the same as “encoded instructions, each containing a price change” as proposed by Defendant. (*See, e.g.*, Dkt. No. 28

at 9.) Plaintiff argues that a “code indicative of different prices” could be data representing multiple prices for a product, for example, rather than an instruction to change a price. (*Id.*) Plaintiff argues that the word “encoded” is vague and unhelpful, and that Defendant has not explained why “codes” should be construed as “encoded instructions.” (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether the price change code is limited to a single product or can be generic to a group of products.

The disputed term “selectively communicate price change codes” appears in claims 24 and 30 of the ‘071 patent and claim 8 of the ‘016 patent. Each reference to the term in the claims is the same: “selectively communicate price change codes indicative of different prices for the same product.” Thus, by the simple language of the claims, the price change codes must be “indicative of different prices for the same product.”

The specification has numerous references to the term “selectively.” In one instance, the specification states “store system computer 50 is programmed to selectively change the product checkout price and product location price in three modes.” (*Id.* at col. 8, ll. 31-33.) There is no indication that the term has any special meaning other than its plain and ordinary meaning. This is confirmed by the fact that the parties agreed that the word “selectively” in the context of “store product advertising media unit constructed to selectively output” has its plain meaning. (*See, e.g.*, Dkt. No. 30 (August 28, 2014 Joint Claim Construction and Prehearing Statement).) Thus, the Court finds that the term “selectively” has its plain and ordinary meaning. Further, both parties seem to agree that the term “communicate” means “transmit,” and the Court finds that is appropriate in this claimed context.

Thus, the parties largely do not dispute the word “selectively” or even “selectively communicate.” Instead, the parties’ dispute revolves around the meaning of the term “price change codes.” The specification has numerous references to “price change codes.” (*See, e.g.*, ‘071 patent, col. 5, ll. 9-15; col. 10, l. 42 – col. 11, l. 28.) The specification references that price change algorithms may send “price change codes” which include “changed prices, and/or price change criteria or instructions.” (*See, e.g.*, ‘071 patent, col. 10, ll. 43-46.) The specification is clear that the price change codes can be used to raise or lower or change the price of a particular product. (*See id.*; *see also* col. 11, ll. 1-28.)

The Plaintiff argues that the term “price change code” merely means “instructions regarding a change in price,” whereas the Defendant argues that the term means a “group of encoded instructions, each containing a price change for a specific product.” The specification never uses the term “group” or “encoded,” and the Court rejects Defendant’s inclusion of these terms as not being necessary or warranted. However, the Court finds that the specification and the claims require that the price change codes must be able to change the price of a particular product and not just generic instructions of changes in price in general. Indeed, the simple language of the claims requires the price change codes must be “indicative of different prices for the same product,” implying that the price change codes are not merely instructions or criteria that could relate to a price change.

The plain meaning of the term “code” implies statements or instructions used to mark, represent, or identifying something. Both parties use the term “instructions” to connote the concept of a “code,” and the Court agrees that this word is appropriate. As noted above, the specification expressly states that “price change codes” includes “changed prices,” and the Court finds no reason to disregard this meaning. Lastly, in the context of the term “automatically

output a price change code,” both parties agreed (but for the “encoded” dispute) that the term “price change codes” means “instructions to change a price.” Further, the Court notes that Plaintiff did not object to the Court’s proposed construction of this term at the claim construction hearing.

The Court hereby construes “**selectively communicate price change codes**” to mean “**selectively transmit instructions to change a price for a specific product.**”

**J. “price change algorithm”**

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
Plain and ordinary meaning, but if a construction is necessary, then this phrase should be construed as:  “a set of rules used to determine a change in price”	Indefinite

The disputed term “price change algorithm” appears in claim 1 of the ‘016 patent.

**(1) The Parties’ Positions**

Plaintiff submits that the term is readily understandable from its plain meaning and needs no construction. (*See, e.g.*, Dkt. No. 61 at 29.) In the alternative, Plaintiff’s proposed construction is consistent with the plain meaning of the term and with the specification. (*Id.* at 30.) Plaintiff also argues that “price,” “change,” and “algorithm” are commonly understood words in the English language, and that Defendant cannot show by clear and convincing evidence that one of ordinary skill in the art would not understand their meaning with reasonable certainty. (*Id.*)

Defendant responds that the specification does not disclose a single price change algorithm, nor does it contain any flow charts or step-wise instructions for implementing an



automatic or computerized price change. (*See, e.g.*, Dkt. No. 27 at 29.) Defendant argues that general references to “predetermined” algorithms, limits, and other parameters convey no useable information for understanding the step-by-step processes of these algorithms. (*Id.*) Defendant argues that even if some meaning can be assigned to “price change algorithm” based on a skilled artisan’s programming abilities, the claim term is still indefinite if the skilled artisan cannot be reasonably certain as to the nature and scope of the precise algorithm recited in the claims. (*Id.*) Defendant further argues that references to “predetermined” aspects of a price change algorithm, without disclosure of the algorithm itself, are not sufficient. (*Id.* at 30.)

Plaintiff replies that Defendant’s arguments on this term miss the mark. (*See, e.g.*, Dkt. No. 28 at 10.) Plaintiff argues that the specification need not teach how to implement a “price change algorithm” in order for the term to be understandable to those skilled in the art because the term is readily understandable based on its plain meaning: “a set of rules used to determine a change in price.” (*Id.*) Plaintiff argues that Defendant’s cited case law and arguments are directed to a means-plus-function limitation and not to the simple recitation of “price change algorithm.” (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether this term should be given its plain meaning or whether it is indefinite. While Plaintiff’s proposed construction is nothing more than a plain meaning construction, Defendant provides no alternative construction to its indefinite argument. The Court also notes that Defendant does not provide or rely upon any expert for its proposition that the term is indefinite or that one of ordinary skill in the art would not be reasonably certain as to the scope of this claim element.

Claim 1 of the '016 patent includes the disputed term, and the relevant portion is reproduced below:

means for automatically and electronically changing, based on received data analyzed by at least one **price change algorithm**, the first product location price to a second product location price following the first shopper selecting the product for purchase, the second product location price being different than the first product location price, the second product location price being perceivable by a second shopper when the second shopper is selecting the product for purchase;

(emphasis added.) The specification has numerous references to a “price change algorithm.” (See, e.g., '071 patent, col. 7, l. 54 – col. 8, l. 22; col. 9, ll. 2-7; col. 10, l. 42 – col. 11, 28.) It is clear that the predetermined price change algorithms are used to change product prices. (See *id.*)

The Defendant argues that the term is indefinite because the specification provides no flow charts or step-wise instructions for implementing a price change algorithm, and since one of ordinary skill in the art must implement its own algorithm the term is indefinite. First, the Court disagrees that there is no support in the specification for price change algorithms. While the specification may not provide flow charts or detailed algorithms citing every line of a computer program, the specification provides guidance to this term in prose as noted above. The Court finds that this is sufficient detail to provide one of ordinary skill guidance as to the meaning of the term. Second, even if there was little support for this term, the term is readily understood by one of ordinary skill in the art and there is no dispute that the specification provides no specific meaning to the term other than its plain meaning. While Defendant does not argue that the term is a means-plus-function limitation, its arguments and cited case law are directed to arguments made for the corresponding structure in a means-plus-function limitation. This is not applicable to the disputed term “price change algorithm,” which both parties agree is not a means-plus-function limitation.

Thus, the Court finds that there is no dispute that one of ordinary skill in the art would understand the meaning of the term “price change algorithm” in the context of the claimed invention. Likewise, the Court finds that there is no dispute that one of ordinary skill in the art would understand with “reasonable certainty” the scope of the invention and the bounds of the claims. Accordingly, pursuant to the Supreme Court’s holding in *Nautilus*, the Court rejects Defendants’ arguments that the claim when “read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

The Court finds that the term has its plain and ordinary meaning. However, on balance, the Court finds that a construction is helpful to the jury. The plain meaning of the term “algorithm” implies a set of rules or procedures for solving a problem. The Court finds that the Plaintiff’s construction is consistent with the plain meaning of the term, a construction that the Defendant appears to not dispute as the plain meaning. For clarity, the Court finds that the rules are computer-implemented rules, which is consistent with the specification and claims. Further, the Court notes that Plaintiff did not object to the Court’s proposed construction of this term at the claim construction hearing.

The Court hereby construes “**price change algorithm**” to mean “**a set of computer-implemented rules used to determine a change in price.**”

**K. Means-Plus-Function Limitations**

1. “product pricing unit [means for displaying / constructed to display]”

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“product pricing unit means for displaying”  (’071 patent, claim 1)	“an electronic device with a display screen for displaying at least one price for a product”  (Should not be construed as a means-plus-function limitation under 35 U.S.C. § 112(6))	This term should be interpreted under 35 U.S.C. §112 ¶ 6.  <u>Function</u> : “displaying a price corresponding to a product disposed adjacent the particular unit in a format perceivable by a shopper when the shopper is selecting the product for purchase”  <u>Structure</u> : “an electronic unit, located proximate to individual products, having a liquid crystal display or LED display and an electrical connection to a product decoder unit”
“product pricing unit constructed to display”  (’071 patent, claim 36; ’016 patent, claim 8)	[same as above]	[same as above]

The term “product pricing unit means for displaying” is found in claim 1 of the ’071 patent, while the term “product pricing unit constructed to display” is found in claim 36 of the ’071 patent and claim 8 of the ’016 patent. Both parties argue that both terms have the same meaning.

**(1) The Parties’ Positions**

Plaintiff submits that, while one of the terms recites means, that it is not a means-plus function limitation because it recites sufficient structure by use of the term “product pricing unit.” (See, e.g., Dkt. No. 61 at 10.) Plaintiff argues that the specification shows that the term

“product pricing unit” was a known structure to those of ordinary skill at the time of the invention and could be any number of electronic price displays. (*Id.*) The specification even mentions specifically “product pricing units” that were sold by the company PRICER AB in Sweden. (*Id.*) Thus, the recitation of this structure takes it out of a means-plus-function limitation. (*Id.*) Plaintiff further argues that even if a means-plus function limitation were to be adopted, that Defendant’s constructions are unduly limiting and not based in the claims or specification. (*Id.* at 11.) Likewise, the related term “product pricing unit constructed to display” does not recite the word means and is not presumed to be a means-plus function limitation, and it recites sufficient structure by use of the term “product pricing unit.” (*Id.* at 12.)

Defendant responds that the terms are means-plus-function limitations because sufficient structure to perform the function of displaying is not recited in the claim, including in the term “product pricing unit.” (*See, e.g.,* Dkt. No. 27 at 8-10.) Defendant argues that the term “product pricing unit” is not used commonly to refer to a structure for displaying. (*Id.* at 8.) While Plaintiff cites to portions of the background as evidence of a well-known meaning, none of the devices are referred to as a “product pricing unit” but for a single reference to “active product price units” installed by a single company. (*Id.*) Defendant argues that such a lone reference does not demonstrate that the term “product pricing unit” is commonly understood to include a particular structure and is certainly not enough to overcome the presumption that arises from the use of the word “means.” (*Id.*) Defendant argues that its proposed structure is the only structure found in the specification to perform the recited function and is taken from the express language found in the specification. (*Id.* at 9.) Likewise, while the related term “product pricing unit constructed to display” does not recite the word means, nothing in the claim term “product pricing unit” recites sufficient structure for performing a displaying function and, as noted above,

the term “product pricing unit” is not commonly understood to include any structure for displaying.” (*Id.* at 10.)

Plaintiff replies that the term “product pricing unit” is a specific type of electronic device that takes the terms out of a means-plus-function limitation. (*See, e.g.*, Dkt. No. 28 at 2-3.) Plaintiff argues that even if the term is a means-plus-function limitation, the corresponding structure proposed by Defendant is unduly narrow, particularly in that a “product decoder unit” is entirely separate from the product price display unit and that the disclosed displays include more than just LCD and LED displays. (*Id.*)

## **(2) Analysis**

The parties’ primary dispute is whether these terms are means-plus function limitations. In particular, the parties dispute whether the term “product pricing unit” by itself provides structure.

Claim 1 of the ‘071 patent and claim 8 of the ‘016 patent are representative and the relevant portions of those claims are reproduced below:

[claim 1 of the ‘071 patent] **product pricing unit means for displaying** a first product location price indicative of the unit price of a product such that the first product location price is perceivable by a first shopper when the first shopper is selecting the product for purchase;

[claim 8 of the ‘016 patent] a **product pricing unit constructed to display** a product location price indicating the unit price of a product;

(emphasis added.)

Much of the dispute between the parties relates to the discussion of the “product pricing unit” as disclosed in the background section, reproduced below:

A number of **electronic display technologies** are available today, such as liquid crystal displays, light emitting diode displays, flat panel video displays, audio convertors, etc. **which may be utilized as product displays at the product**

**station.** For example, companies such as PRICER AB of Sweden and others are installing active product price units which can be controlled from the local store computer.

(‘071 patent, col. 1, ll. 53-59)(emphasis added.) The background expressly mentions that the company PRICER AB of Sweden offers “product price units.” (*Id.*) Likewise, while not explicit, this disclosure also references that a variety of “electronic display technologies” can be “utilized as product displays at the product station,” implying that such displays are “product price units.” (*Id.*) The specification has numerous other references to a “product pricing unit:”

The physical store system 14a, in general, is constructed to display a product location price indicating the unit price of a product on at least one of a plurality of product pricing units 40, . . .

\*\*\*

The individual products (not shown) in the store are stamped with a machine readable code, such as the UPC (universal product code) bar code. **Each of the product pricing units 40 are located proximate to one of the individual products** and has a unique electronic address identifying the particular product. The unique electronic address can be the universal product code.

\*\*\*

The store product control system 46 includes a store system computer 50. The store system computer 50 has stored thereon the unique electronic addresses for the respective product pricing units 40. A product location price associated with each of the unique electronic addresses is stored in the store system computer 50. The product location price is indicative of the unit price of a single product.

\*\*\*

Upon receipt of the product location price data from the product decoder unit 58, the product price display unit 60 transmits and/or displays the product location price indicative of the **unit price of a product disposed adjacent the particular product pricing unit 40 in a format perceivable by a shopper** when the shopper is selecting the product for purchase. The product price display unit 60 can be a liquid crystal display, or a LED display, for example. The product location price transmitted or displayed by the product price display unit 60 remains until a new product location price for the particular product located adjacent the product pricing unit 40 is received by the product decoder unit 58. In practice, it is contemplated that to overcome inadvertent mistakes, all the

electronic address and product location price data will be transmitted periodically from the store product control system 46 to the product pricing units 40 even though there may have not been any price changes.

\*\*\*

For example, one embodiment of the present invention operates as follows. The store system computer 50 outputs a first product location price indicative of the unit price of a product to the product pricing units 40 via the signal paths 54 and 56. **The product pricing units 40 receive the first product location price and display the first product location price on the product price display unit 60 such that the first product location price is perceivable by a first shopper when the first shopper is selecting the product for purchase.** The store system computer 50, utilizing at least one of the price change algorithms, automatically changes the first product location price to a second product location price following the first shopper selecting the product for purchase and possibly while the first shopper is still in the store shopping. The second product location price is then transmitted to the product pricing units 40 via the signal paths 54 and 56 to be displayed on the product price display unit 60.

(*See, e.g.*, '071 patent, col. 3, l. 66 - col. 4, l. 2; col. 4, ll. 14-20; col. 4, ll. 21-27; col. 4, l. 59 – col. 5, l. 8; col. 8, l. 61 – col. 9, l. 10)(emphasis added).

While claim limitations that contain the word “means” are presumed to be means-plus-functions limitations, this presumption is rebutted “where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format.” *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1427-28 (Fed. Cir. 1997). Conversely, “[i]f a claim term does not use the word ‘means,’ [courts] presume that means-plus-function claiming does not apply.” *Power Integrations v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1364 (Fed. Cir. 2013). “If, however, the claim term recites a function without reciting sufficient structure for performing that function, the presumption falls and means-plus-function claiming applies.” (*Id.*) This is a strong presumption, rebuttable only by “a showing that the limitation essentially is



devoid of anything that can be construed as structure.” *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1374 (Fed. Cir. 2012).

Overall, the Court finds that the parties have not rebutted either presumption. The Applicant was very intentional in selectively using the term “means.” The Court finds that the intentional use of “means” must be given effect. In particular, the Court finds that Plaintiff has not rebutted the presumption that the use of “means” is a means-plus-function limitation. Likewise, the Court finds that the Defendant has not rebutted the presumption that the term “product pricing unit constructed to display” should not be a means-plus-function limitation, particularly because the use of the term “product pricing unit” cannot be considered to be “devoid” of anything that can be construed as structure.

Regarding the construction of the means-plus-function limitation in claim 1 of the ‘071 patent, the Court must determine the recited function and corresponding structure. The recited function in the claim is clearly expressed as “displaying a first product location price indicative of the unit price of a product.” The corresponding structure that is clearly linked to the recited function is “an electronic unit, located proximate to individual products, having a liquid crystal display or LED display and an electrical connection to a product decoder unit.” (*See, e.g.*, ‘071 patent, col. 4, ll. 59 – 66.) The Court notes that neither party objected to this proposed construction at the claim construction hearing for the “product pricing unit means . . .” term in claim 1 of the ‘071 patent.

Regarding the construction of the “product pricing unit constructed to display” limitation found in claim 36 of the ‘071 patent and claim 8 of the ‘016 patent, as noted above the Court finds that this is not a means-plus-function limitation. The Court must be mindful of not impermissibly limiting the term to specific embodiments found in the specification. The Federal

Circuit has consistently held that “particular embodiments appearing in the written description will not be used to limit claim language that has broader effect.” *Innova/Pure Water*, 381 F.3d at 1117. The Court rejects Defendant’s construction (besides being limited to the corresponding structure of a means-plus-function limitation) as being impermissibly limited to specific embodiments in the specification. For example, claim 36 of the ‘071 patent specifies that the product pricing unit is constructed to “display a product location price indicating the unit price of a first product.” There is no requirement in the claim that the product pricing unit must be adjacent or proximate to the products or be composed of a LCD or LED display or a product decoder unit. Rather, consistent with the plain meaning of the term, it is merely a unit or device that displays the price of a product. The Court finds that the claim language in each claim provides sufficient structure and limitations to the term such that no further construction is needed and that the term merely has its plain meaning.

Because construing the “product pricing unit” term will only tend to confuse rather than clarify, the term requires no further construction. Absent clear evidence to the contrary, the Court is hesitant to change the plain meaning of a term. Because a plain and ordinary meaning construction resolves the dispute between the parties as to this term, no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

The Court hereby construes “**product pricing unit means for displaying**” in claim 1 of the ‘071 patent to be a means-plus-function limitation with a recited function of “**displaying a first product location price indicative of the unit price of a product**” and a corresponding structure of “**an electronic unit, located proximate to individual products, having a liquid crystal display or LED display and an electrical connection to a product decoder unit.**”

The Court hereby construes “**product pricing unit constructed to display**” to have its plain meaning.

2. “means for [automatically and] electronically changing”

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
<p>“means for electronically changing”</p> <p>(‘071 patent, claims 1, 5)</p>	<p><u>Function:</u> “electronically changing the price of a product at a location”</p> <p><u>Structure:</u> “a computer such as a Packard Bell Platinum 2010 with a modem capable of transmitting price change commands and equivalents thereof”</p>	<p><u>Function:</u> “electronically changing the price of a product at a location”</p> <p><u>Structure:</u> Indefinite</p>
<p>“means for automatically and electronically changing”</p> <p>(‘016 patent, claim 1)</p>	<p><u>Function:</u> “electronically changing the price of a product at a location”</p> <p><u>Structure:</u> “a computer such as a Packard Bell Platinum 2010 with a modem capable of transmitting price change commands and equivalents thereof”</p>	<p><u>Function:</u> “automatically and electronically changing the price of a product at a location”</p> <p><u>Structure:</u> Indefinite</p>

The disputed term “means for electronically changing” appears in claims 1 and 5 of the ‘071 patent, while the related term “means for automatically and electronically changing”

appears in claim 1 of the '016 patent. Both parties agree that these terms are means-plus-function limitations governed by 35 U.S.C. § 112(6).

**(1) The Parties' Positions**

Plaintiff submits that the recited function for these terms is “electronically changing the price of a product at a location.” (*See, e.g.*, Dkt. No. 61 at 14.) Plaintiff argues that the specification recites that the “owner control system” is responsible for determining when price changes should be made and, accordingly, sending messages to electronically change the price of products at the various physical store locations. (*Id.*) Consistent with the specification, Plaintiff argues that the structure corresponding to this limitation should be construed as “a computer such as a Packard Bell Platinum 2010 with a modem capable of transmitting price change commands and equivalents thereof.” This makes the limitation definite, and Defendant cannot meet the high standard to prove otherwise. (*Id.*)

Defendant responds that while the recited functions are slightly different, they are both carried out by a computer programmed with “price change algorithms” and, therefore, the corresponding structure is actually the algorithm, not the computer. (*See, e.g.*, Dkt. No. 27 at 12.) Defendant argues that because the price change algorithms are not disclosed in the specification, this claim term is indefinite. (*Id.*) Defendant argues that Plaintiff’s proposed structure is insignificant because it merely recites a computer and not the algorithm. (*Id.*) Defendant argues that the specification contains no flow charts or step-wise descriptions of what is meant by a “price change algorithm.” (*Id.* at 13.) Rather, the patentee specifically reserved the details of the price change algorithms, rather than disclosing them to the public, by summarily referring to them as “predetermined price change algorithms.” (*Id.*) Defendant argues that the algorithm must be disclosed with more detail than a simple reference to a class or

type of algorithm, as “[d]isclosure of a class of algorithms ‘that places no limitations on how values are calculated, combined or weighted is insufficient to make the bounds of the claims understandable.’” (*Id.*)

Plaintiff replies that these limitations are not about calculating a price change (a function that might require an algorithm) but rather about changing a price by sending a price change message from one location to another location. (*See, e.g.*, Dkt. No. 28 at 4-5.) Plaintiff argues that the addition of the “means for receiving data” limitation in dependent claim 5 creates the presumption that the “means for electronically changing” in claim 1 does not require a price change algorithm. (*Id.* at 5.) As set forth in the specification, the function of sending a price change message is performed by a computer with a modem connected through various signal paths; this is not just a recitation of a computer, but rather a specific structure that performs the function of sending a price change command from one point to another. (*Id.*) Plaintiff also argues that this function does not require special programming, and thus no algorithm is required. (*Id.*)

## **(2) Analysis**

The parties appear to agree on the recited functions for the disputed terms. The parties’ primary dispute is the corresponding structure for the recited functions and, in particular, whether there is sufficient disclosure (or any disclosure at all) in the specification so as to render the means-plus-function limitations not indefinite. The Court also notes that Defendant does not provide or rely upon any expert for its proposition that the term is indefinite.

Claim 1 of the ‘071 patent and claim 1 of the ‘016 patent are the independent claims that recite the disputed terms and the relevant portions of those claims are reproduced below:

[claim 1 of the '071 patent] **means for electronically changing the first product location price to a second product location price** following the first shopper selecting the product for purchase, the second product location price being different than the first product location price, the second product location price being perceivable by a second shopper when the second shopper is selecting the product for purchase;

[claim 1 of the '016 patent] **means for automatically and electronically changing**, based on received data analyzed by at least one price change algorithm, **the first product location price to a second product location price** following the first shopper selecting the product for purchase, the second product location price being different than the first product location price, the second product location price being perceivable by a second shopper when the second shopper is selecting the product for purchase;

(emphasis added.) There appears to be no dispute that these terms are means-plus-function limitations governed by 35 U.S.C. 112, ¶ 6. Further, there appears to be no serious dispute between the parties as to the recited function. However, the parties' recited functions paraphrase the claim language and ignore a potentially significant concept for claim 1 of the '016 patent, and the Court finds that a recited function that most closely aligns with the actual claim language is more accurate. This is further confirmed by the fact that the different language found in claim 1 of the '016 patent was expressly added in an amendment dated July 7, 2000. (*See, e.g.*, Dkt. No. 27-4.) To give meaning to these words and to avoid them being meaningless, the Court finds that they must be included in the resulting function. Thus, the Court finds that the recited function is (as expressly recited in the claims) the following: for claim 1 of the '071 patent **“electronically changing the first product location price to a second product location price,”** and for claim 1 of the '016 patent **“automatically and electronically changing the first product location price to a second product location price based on received data analyzed by at least one price change algorithm.”**

While the Plaintiff's recited function is generally consistent with this concept, its briefing suggests that it is changing the function to be merely that of sending a price change message as opposed to changing the prices. (*See, e.g.*, Dkt. No. 28 at 4-5.) The Court rejects Plaintiff's implicit function, and finds that this is an attempt to not only change the function but to alter the corresponding structure. The recited functions require electronically changing the first product location price to a second product location price. According to the express language of the claims, this function is not limited to merely sending a price change from one location to another as the Plaintiff suggests. Thus, for similar reasons, the Court rejects Plaintiff's proposed corresponding structure, as it effectively does not provide any structure to the recited functions.

The Defendant argues that the "means for electronically changing" is based upon the use of price change algorithms, and because these algorithms are not disclosed, that there is no corresponding structure and the claims are indefinite. While the Court agrees that the "means for electronically changing" functions require the use of price change algorithms, the Court disagrees that the terms are indefinite for lack of corresponding structure.

The specification has numerous references to "price change algorithms" and how the claimed system electronically changes the first product location price to a second product location price:

As mentioned previously, the store system computer 50 receives unique code data identifying purchased products from the store checkout stations 42 via the signal paths 78 and 80. In response thereto, the store system computer 50 can **change the prices in the store** based on **predetermined price change algorithms**. The **predetermined price change algorithms** utilized to change the store prices can be either manager selectable or selectable via the owner control system 12.

One of the **price change algorithms** which the store system computer 50 has stored thereon is a program to detect the rate of purchase for each product and compare such rate with a predetermined limit. If the rate of purchase of the product exceeds the predetermined limit, the price of the product is increased

automatically by a predetermined amount. If the rate of purchase of the product is below the predetermined limit, the price of the product is decreased automatically by a predetermined amount to stimulate demand.

Another **price change algorithm** which is stored on the store system computer 50 is a program to detect the amount of product remaining in inventory, or on the shelf. If the amount of product left on the shelf falls below a predetermined limit, then the store system computer 50 outputs a special signal such as a flashing screen or a printout on a special printer to notify the managers that the number of products on the shelf needs to be increased. Alternatively, or in addition, the store system computer 50 can automatically increase by a predetermined amount the price of the product based on the reduced supply of product on the shelf or in inventory.

The store system computer 50 can also have other **predetermined price change algorithms** thereon such as **price change algorithms** to **automatically change prices** to match competitor pricing specials, to reflect purchasing specials and/or to achieve end of the month sales projections.

When a product price **change** is made or received by the store system computer 50, it is important that the price **change** be implemented in a manner such that the product checkout price requested from the shopper for the purchase of the product at one of the store checkout stations 42 not exceed the product location price displayed by the product pricing unit 40 located proximate to the product so as to reduce consumer irritation with price discrepancies. As will be described hereinafter, the store system computer 50 is programmed to selectively **change** the product checkout price and product location price in three modes.

\*\*\*

The store system computer 50, utilizing at least one of the **price change algorithms**, **automatically changes** the first product location price to a second product location price following the first shopper selecting the product for purchase and possibly while the first shopper is still in the store shopping. The second product location price is then transmitted to the product pricing units 40 via the signal paths 54 and 56 to be displayed on the product price display unit 60. The second product location price is different than the first product location price and is perceivable by a second shopper when the second shopper is selecting the product for purchase.

\*\*\*

In the second and third modes of operation, the store time-stamp unit 126 is not utilized to assure that the product checkout price of a product does not exceed the product location price of the product after a **change** in the price of the product has been made.



In the second mode of operation, the product checkout price requested from the shopper at one of the store checkout stations 42 for the purchase of a product is **changed** by the store system computer 50 a predetermined time later than the product location price displayed by the product pricing unit 40 located proximate to the product is changed by the store system computer 50. By **changing** the product checkout price a predetermined time, such as one hour, later than the product location price, this substantially increases the probability that shoppers will not be charged a price at one of the store checkout stations 42 which is greater than the product location price displayed by the respective product pricing unit 40 when the shopper selected the product for purchase.

In a third mode of the present invention, the product location price and the product checkout price are **changed** simultaneously by the store system computer 50 when the price of the product is decreased, and the product checkout price is changed a predetermined time later than the product location price by the store system computer 50 when the price of the product is increased.

When a product checkout price of a product is decreased, the decreased price can be transmitted to the store product advertising media unit 44 (as discussed above) to notify shoppers of the price reduction via audio or video. Thus, the store system computer 50 **automatically changes** both the product checkout price and the product advertised price simultaneously

\*\*\*

The owner control system computer 132 includes a plurality of **predetermined price change algorithms to** send price change codes, including changed prices, and/or price change criteria or instructions, to the physical store systems 14 or the virtual store system 18 based on the competition price data received from the competition pricing information system 20, the pricing and advertising information received from the product supplier systems 16a and 16b, the sales and inventory data received from the physical store systems 14 and/or the virtual store system 18, and combinations thereof.

In other words, the owner control system computer 132 is adapted to transmit the price change codes to the physical store systems 14a and 14b and/or the virtual store system 18 to: (1) change the prices at the physical store systems 14a and 14b, and/or the virtual store system 18; and/or (2) select one or more of the **price change algorithms** stored on the physical store systems 14a and 14b and/or the virtual store system 18 to be used thereby in changing the product location and product checkout prices. Different price change codes can be transmitted independently to each of the physical store systems 14, and/or the virtual store system 18 so that the price changes at the physical store systems 14 and/or the virtual store system 18 can be individualized to meet the local supply and/or demand, for example.

For example, the pricing and advertising data received from the product supplier system 16a by the owner control system 12 may indicate that a particular product is in short supply. Such pricing and advertising data is then analyzed by at least one of the algorithms stored in the owner control system 12 and a determination may be made to raise the price of the particular product. The owner control system 12 then outputs a price change code to the physical store systems 14 and/or virtual store system 18 to raise the price of the particular product.

As another example, the competition price data received from the competition pricing information system 20 by the owner control system 12 may indicate that a competitor's price on a first product is lower than the price of the first product in the physical store systems 14 and/or the virtual store system 18. Such competition price data is then analyzed by at least one of the algorithms stored in the owner control system 12 and a determination may be made to lower the price of the particular product. The owner control system 12 then outputs a price change code to the physical store systems 14 and/or the virtual store system 18 to lower the price of the particular product. The price change code lowering the price of the particular product can also include instructions to cause the store system computer 50, for example, to output product advertising data to the store product advertising media unit 44 to provide advertising messages, such as coupons, video messages and/or audio messages to accompany the lowering of the price of the product and to thereby notify shoppers of the lowering of the price of the product.

(‘071 patent, col. 7, l. 54 – col. 8, l. 33; col. 9, ll. 2-13; col. 9, l. 59 – col. 10, l. 19; col. 10, l. 42 – col. 11, l. 28)(emphasis added). Based on the specification, it is clear that the changing of the prices is accomplished by “price change algorithms [that] send price change codes, including changed prices, and/or price change criteria or instructions.” (‘071 patent, col. 10, ll. 42-46.) While the Court notes that claim 1 of the ‘016 patent expressly recites the use of “price change algorithms” and claim 1 of the ‘071 patent does not, the Court finds that this distinction is not significant as the only structure and procedure in the specification that can perform either of the recited functions is based on the use of “price change algorithms.”

The Federal Circuit has made clear that a complete absence of disclosure for a recited function performed by a general-purpose computer or microprocessor results in a finding of indefiniteness. *See, e.g., Aristocrat*, 521 F3d at 1533. However, “[w]hen the specification

discloses some algorithm, on the other hand, the question is whether the disclosed algorithm, from the viewpoint of a person of ordinary skill, is sufficient to define the structure and make the bounds of the claim understandable.” *Noah Systems, Inc. v. Intuit Inc.*, 675 F.3d 1302 (Fed. Cir. 2012). Defendant relies heavily on the recent Federal Circuit case of *Triton Tech of Texas, LLC v. Nintendo of America, Inc.* for the proposition that the limited disclosure of the “price change algorithms” in the specification renders the terms indefinite. While the Court recognizes that “[d]isclosure of a class of algorithms that places no limitations on how values are calculated, combined, or weighted is insufficient to make the bounds of the claims understandable,” the Court finds that (as noted above) the specification provides specific guidance as to various embodiments of a “price change algorithm” that show how values are calculated and combined. *See Triton Tech*, 2014 U.S. App. LEXIS 10997 at \*8 (Fed. Cir. June 13, 2014).

For these claim terms, the Court finds that, as a whole, the specification provides sufficient structure to the price change algorithms and the “means for . . . changing . . .” functions. As described above, the Court finds that the specification provides numerous examples of price change algorithms that can be used and which are clearly linked to the recited functions. This is not an instance where a “price change algorithm” is merely referenced in the specification with no details or related disclosure. Although the disclosure may not necessarily be in the form of an algorithm or flowchart, they are sufficiently recited in prose to provide some structure and guidance to the “price change algorithm” term and the “means for . . . changing . . .” functions. *See Finisar*, 523 F.3d at 1340-41 (a patentee may express an algorithm “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure).

Pursuant to the rationale described above, the Court finds that the specification generally provides a description of the price change algorithms at col. 7, l. 54 – col. 11, l. 28 in the specification of the ‘071 patent. While the specification provides various examples and references to “price change algorithms,” the Court finds that not all of these provide sufficient algorithms and instructions as to the recited “price change algorithm” to rise to the level of a corresponding structure. “[E]ven described ‘in prose,’ an algorithm is still a step-by-step procedure for accomplishing a given result.” *Ergo Licensing*, 673 F.3d at 1365 (citations omitted). The Court finds that the specification provides a step-by-step procedure for an algorithm that detects the rate of purchase for a product and detects the amount of product remaining in inventory to be used to change the prices:

One of the price change algorithms which the store system computer 50 has stored thereon is a program to detect the rate of purchase for each product and compare such rate with a predetermined limit. If the rate of purchase of the product exceeds the predetermined limit, the price of the product is increased automatically by a predetermined amount. If the rate of purchase of the product is below the predetermined limit, the price of the product is decreased automatically by a predetermined amount to stimulate demand.

Another price change algorithm which is stored on the store system computer 50 is a program to detect the amount of product remaining in inventory, or on the shelf. If the amount of product left on the shelf falls below a predetermined limit, then the store system computer 50 outputs a special signal such as a flashing screen or a printout on a special printer to notify the managers that the number of products on the shelf needs to be increased. Alternatively, or in addition, the store system computer 50 can automatically increase by a predetermined amount the price of the product based on the reduced supply of product on the shelf or in inventory.

(‘071 patent, col. 7, l. 63 – col. 8, l. 18.) However, the bare-boned references in the specification to price change algorithms to “match competitor pricing specials, to reflect purchasing specials and/or to achieve end of the month sales projections” (col. 8, ll. 18-22) – without more – does not provide a step-by-step procedure for accomplishing the price changes and is insufficient for a

corresponding structure according to Federal Circuit precedent. The Court notes that because one of the recited functions recites the “automatically” term, the Court is obligated to account for that functionality in the corresponding structure. Accordingly, for the “automatically and electronically changing” function the Court adopts the “without direct human intervention” language that the Court used (and to which the parties did not dispute) for the other “automatically” terms described above. This distinction appears to be supported by the specification, which teaches that price change algorithms can be selected either (automatically) via the owner control system or by a manager. (*See, e.g.*, ‘071 patent, col. 7, ll. 57-62.)

Furthermore, the Court’s finding is supported by Defendant’s corresponding structure on the related (and separately disputed) term “means for receiving data . . . and for changing the first product location price” found in claims 5 and 28 of the ‘071 patent and claim 12 of the ‘016 patent. For that “changing” function, the Defendant proposed the corresponding structure of “encoded price change instructions from control system computer.” It is unclear why such a related function could have a corresponding structure in one instance and be indefinite in another instance. Further, the Court notes that Plaintiff did not object to the Court’s proposed construction of these terms at the claim construction hearing.

Accordingly, the Court finds that the patent discloses the corresponding structure for the “electronically changing . . .” function as **“a general-purpose computer programmed to change a product price by performing a price change algorithm as found in column 7, line 63 – column 8, l. 18.”**

Accordingly, the Court finds that the patent discloses the corresponding structure for the “automatically and electronically changing . . .” function as **“a general-purpose computer**

programmed to change a product price without direct human intervention by performing a price change algorithm as found in column 7, line 63 – column 8, l. 18.”

3. “means for receiving data . . . and for changing the first product location price”

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
<p>“means for receiving data . . . ”</p> <p>(‘071 patent, claim 5, 28; ‘016 patent, claim 12)</p>	<p>The entire phrase “means for receiving data . . . and for changing the first product location price to the second product location price based on the received data” should be construed as a whole.</p> <p><u>Function:</u> “receiving competition price data, pricing and advertising information, sales and inventory data, and/or combinations thereof and sending price change commands based on the received data”</p> <p><u>Structure:</u> “at least one networked computer with a software program that calculates price changes based on an analysis of competition price data, pricing and advertising information, and/or sales and inventory data, and equivalents thereof”</p>	<p><u>Function:</u> <i>Not expressly provided.</i></p> <p><u>Structure:</u> Indefinite</p>
<p>“means . . . for changing the first product location price”</p> <p>(‘071 patent, claims 5, 28; ‘016 patent, claim 12)</p>	<p><i>See above construction – entire phrase should be construed together</i></p>	<p><u>Function:</u> “electronically changing a displayed price for a product in a first location”</p> <p><u>Structure:</u> “encoded price change instructions from control system computer”</p>

The disputed term “means for receiving data selected from the group consisting of competition price data, pricing and advertising information, sales and inventory data, and

combinations thereof and for changing the first product location price to the second product location price based on the received data” appears in claims 5 and 28 of the ‘071 patent and claim 12 of the ‘016 patent. Both parties agree that this term is a means-plus-function limitation governed by 35 U.S.C. § 112(6). While Plaintiff seeks to construe this term as a single means-plus function limitation, Defendant seeks to construe it as two separate means-plus function limitations.

### **(1) The Parties’ Positions**

Plaintiff submits that the function for this limitation is “receiving competition price data, pricing and advertising information, sales and inventory data, and/or combinations thereof and sending price change commands based on the received data.” (*See, e.g.*, Dkt. No. 61 at 18.) Plaintiff argues that the specification recites that the “owner control system” is responsible for receiving competition pricing data, using that data to determine when price changes should be made, and sending messages to electronically change the price of products at the various physical store locations. (*Id.*) Plaintiff argues that its corresponding structure is based on the specification. (*Id.*)

Defendant responds that the entire phrase should not be construed together because the structure for one recited function is indefinite and the functions and programming are distinct. (*See, e.g.*, Dkt. No. 27 at 15.) For the “means for receiving . . .” term, Defendant argues that the specification is silent with regard to any structure having sufficient programming to serve as the “means for receiving data.” (*Id.*) Defendant argues that Plaintiff’s reliance on a general computer and modem as the corresponding structure is insufficient because there is no disclosure of programming to carry out the computer-implemented function. (*Id.* at 16.) Defendant argues that the data received by the computer constitutes a specific, narrow type of data delineated by

the claims and the specification and, thus, special programming is required. (*Id.*) Simply reciting “software” without providing detail about the means to accomplish the function is not enough. (*Id.*) For the “means for . . . changing” term, Defendant argues that its construction is supported by the specification and Plaintiff’s construction provides no structure at all for implementing the price change commands. (*Id.* at 18.)

Plaintiff replies that there is sufficient structure for the recited functions. (*See, e.g.*, Dkt. No. 28 at 6-7.) Plaintiff argues that the specification describes the data inputs necessary for the pricing algorithm, such as competitor pricing and sales and inventory data, as well as how a pricing algorithm would be programmed to change the product price based on changes in these data inputs. (*Id.* at 7.) Thus, one of ordinary skill in the art would therefore be able to understand the algorithms disclosed in the specification for the “means for receiving data.” (*Id.*) Plaintiff argues that Defendant’s attempt to separate the limitation into two separate limitations is nonsensical and contrary to the claim language. (*Id.*)

## **(2) Analysis**

The parties dispute both the recited function and corresponding structure for this term. A primary dispute between the parties is whether there is sufficient disclosure (or any disclosure at all) in the specification so as to render the means-plus-function limitation indefinite as to the “means for receiving” function. The Court finds that construction for this term is related to the previously discussed “means for electronically changing” terms, and that analysis is incorporated herein by reference. The Court also notes that Defendant does not provide or rely upon any expert for its proposition that the term is indefinite.

This disputed phrase appears in various dependent claims of the Asserted Patents. Claim 5 of the ‘071 patent is representative and is reproduced below:



5. An automated product pricing system as defined in claim 1, **wherein the means for electronically changing** the first product location price to a second product location price includes:

**means for receiving** data selected from the group consisting of competition price data, pricing and advertising information, sales and inventory data, and combinations thereof **and for changing** the first product location price to the second product location price *based on the received data*.

(emphasis added.) There appears to be no dispute that these terms are means-plus-function limitations governed by 35 U.S.C. 112, ¶ 6. The term clearly recites two functions – a means for receiving function and a means for changing function. The Court finds that, on balance, the disputed term should be construed together as a single means-plus function limitation despite the fact that it recites two integrated functions. The claim unambiguously recites the fact that the “means for receiving” function receives various data and that the separately claimed “means . . . for changing” function changes the first production location price to the second product location price “based on the received data.” These two functions are integrally linked, and the Court rejects Defendant’s assertion that they must be construed separately.

The Court rejects Plaintiff’s proposed function as it substitutes the concept of merely “sending price change commands” for the “means . . . for changing” function. The Court finds no basis for this substitution, a change that could significantly alter the scope of the means-plus-function limitation. On the other hand, Defendant appears to propose no function for the “means for receiving” limitation and its proposed function for the “means for changing” limitation unnecessarily includes a “displayed” term and leaves off part of the recited function. The Court finds that a recited function that most closely aligns with the actual claim language is most accurate, and the recited language in this instance is straightforward. Thus, the Court finds that the recited function is (as expressly recited in the claims) the following: **“(i) receiving data**

**selected from the group consisting of competition price data, pricing and advertising information, sales and inventory data, and combinations thereof, and (ii) changing the first product location price to the second product location price based on the received data.”**

Next, the Court must determine whether there is structure sufficiently described and clearly linked in the specification for the recited functions. “Given the purpose for requiring disclosure of an algorithm in special purpose computer implemented means-plus-function claims, [where] a claim recites multiple identifiable functions and the specification discloses an algorithm for only one, or less than all, of those functions, we must analyze the disclosures as we do when no algorithm is disclosed. *Noah*, 675 F.3d at 1318. “[W]here a disclosed algorithm supports some, but not all, of the functions associated with a means-plus-function limitation, [the Court must] treat the specification as if no algorithm has been disclosed at all.” *Id.* A disclosure as to one function does not fill the gaps in a specification as to a different, albeit related, function. *Id.* at 1319.

Similar to and as discussed in the “means for electronically changing” terms, the specification provides various examples of how this changing happens. (*See, e.g.*, ‘071 patent, col. 7, l. 54 – col. 11, l. 28.) However, as discussed for the “means for electronically changing” terms, the Court finds that the only price change algorithms that are sufficiently described to constitute a corresponding structure are those found at column 7, line 63 – column 8, l. 18. Defendant’s proposed corresponding structure for this portion of the recited function generally supports this finding.

A primary dispute between the parties is whether there is corresponding structure for the “receiving data . . .” function. The Court agrees with the Defendant that there is limited disclosure for this function in the specification, in that there is no algorithm or step-by-step

instruction of how to merely “receive” data. However, for this function, the Court finds that providing such algorithms is not necessary. While the Federal Circuit is clear that most means-plus-function limitations must have at least some structure disclosure so as to avoid an indefiniteness finding, the Federal Circuit has also recognized that for some limited functions (such as merely “receiving,” “processing,” or “storing”), details may not be necessary. *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming. As such, it was not necessary to disclose more structure than the general purpose processor that performs those functions.”). The Federal Circuit is clear that in rare circumstances if special programming is not needed the specification need not provided detailed structure:

In other words, a general-purpose computer is sufficient structure if the function of a term such as “means for processing” requires no more than merely “processing,” which any general-purpose computer may do without any special programming. If special programming is required for a general-purpose computer to perform the corresponding claimed function, then the default rule requiring disclosure of an algorithm applies. It is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed.

*Ergo Licensing*, 673 F.3d at 1365 (citations omitted). The Court finds that the “receiving” term in this instance can be performed by a general-purpose computer without any special programming. The data that the computer is receiving is not being calculated or generated or analyzed by the “receiving” step. Rather, it is merely receiving such data from other sources. The simple receipt of data does not require any special programming. As discussed above, the specification clearly provides price change algorithms and instructions on how to change prices. (*See, e.g.*, ‘071 patent, col. 7, l. 63 – col. 8, l. 18.) The specification further mentions that the

control system merely “receives” data from another source, such as the competition pricing information system, and it is the price change algorithms that analyze the data and output the changed prices. (*See, e.g.*, ‘071 patent, col. 10, ll. 42-51; col. 11, ll. 9-18.) Thus, the portion of the claim limitation requiring special programming is the “changing” function and not the “receiving” function. Thus, the Court rejects Defendant’s arguments that the means-plus-function limitation is indefinite. Further, the Court notes that Plaintiff did not object to the Court’s proposed construction of this term at the claim construction hearing.

Accordingly, the Court finds that the patent discloses the corresponding structure for the above recited function as **“a general-purpose computer programmed to change a product price based on an analysis of received data, including competition price data, pricing and advertising information, and/or sales and inventory data, by performing a price change algorithm as found in column 7, line 63 – column 8, l. 18.”**

4. “means for requesting . . .”

<u>Disputed Terms</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“means for requesting from the first shopper a first product checkout/order price” / “means for requesting from a shopper a product checkout/order price”  (‘071 patent, claims 1, 36; ‘016 patent, claim 1)	<u>Function:</u> “requesting the price of an individual product selected by a first customer”  <u>Structure:</u> “a store checkout station and equivalents thereof”	<u>Function:</u> “requesting the price of an individual product, at the time of checkout, selected by a first customer”  <u>Structure:</u> “Product UPC code scanner”

The disputed term “means for requesting from the first shopper a first product checkout/order price” is found in claim 1 of the ‘071 patent and claim 1 of the ‘016 patent, while

the related term “means for requesting from a shopper a product checkout/order price” is found in claim 36 of the ‘071 patent. Both parties agree that this term is a means-plus-function limitation governed by 35 U.S.C. § 112(6).

**(1) The Parties’ Positions**

Plaintiff submits that the function for this limitation is “requesting the price of an individual product selected by a first customer.” (*See, e.g.*, Dkt. No. 61 at 16.) Plaintiff argues that Defendant’s inclusion of the phrase “at the time of checkout” is wrong because the claim recites requesting either a “checkout” or “order” price, and thus should not be limited to just the situation where a price is requested “at the time of checkout.” (*Id.*) Regarding the corresponding structure, Plaintiff argues that the specification identifies a “store checkout station” as performing the function of requesting product checkout prices from the customer. (*Id.* at 17.) The specification further describes an exemplary structure of the “store checkout station” that includes various electronic components that can be included in the checkout station. (*Id.*) Plaintiff argues that Defendant’s structure of a “product scanner” is wrong because a product scanner is simply one of the electronic devices that the specification discusses the “store checkout station” may have, and is not the sum total of the “means for requesting.” (*Id.*)

Defendant responds that the intrinsic evidence establishes that the product checkout/order price is requested at the time of checkout. (*See, e.g.*, Dkt. No. 27 at 14.) While Plaintiff asserts that Defendant’s construction does not consider an “order” without a “checkout,” Defendant argues that there is no description of a function or structure that is directed to ordering a product without a checkout. (*Id.*) Regarding structure, Defendant argues that Plaintiff’s “checkout station” is impermissibly broad and in reality no structure at all. (*Id.*) Defendant argues that only one of the disclosed structures of a “checkout station” – the UPC code scanner – performs

the function of “requesting the price of an individual product, at the time of checkout, selected by a first customer.” (*Id.*)

Plaintiff replies that Defendant’s inclusion of “at the time of checkout” is flawed because the claim itself does not state any particular time at which the “means for requesting” performs its function. (*See, e.g.*, Dkt. No. 28 at 5.) Plaintiff also argues that the structure limited to a UPC code scanner is wrong because the specification shows that the scanning of the UPC code is not the “requesting” action, but rather a separate event that precedes the actual request. (*Id.* at 5-6.)

## **(2) Analysis**

The parties’ primary dispute is whether the general structure of a “checkout station” or the more specific “product scanner” is the corresponding structure.

This disputed term appears in various claims of the Asserted Patents. Claims 1 and 36 of the ‘071 patent are representative and are reproduced below (in relevant part):

[claim 1] **means for requesting from the first shopper a first product checkout/order price for the purchase of the product and from the second shopper a second product checkout/order price for the purchase of the product**, the first and second product checkout/order prices not exceeding the respective first and second product location prices perceivable by the first and second shoppers when the first and second shoppers were selecting the product for purchase.

[claim 36] **means for requesting from a shopper a product checkout/order price for the purchase of the first product;**

(emphasis added.) There appears to be no dispute that these terms are means-plus-function limitations governed by 35 U.S.C. 112, ¶ 6. Further, there appears to be no serious dispute

between the parties as to the recited function.<sup>2</sup> The Court rejects Defendant’s insertion of the language “at the time of checkout,” as the Court is not convinced that the inclusion of this phrase is necessary or warranted, particularly as the parties separately dispute the subsequent term of “product checkout/order price” and the language is not found in the claim. Thus, the Court finds that the recited function for these means-plus function limitations is “**requesting the price of an individual product selected by a first customer.**”

The Court agrees with Plaintiff’s arguments that the checkout station performs the recited function and not just the product scanner. While the product scanner is an integral part of the checkout station, it merely scans the UPC code on the product and inputs the product number into the checkout computer. (*See, e.g.*, ‘071 patent, col. 5, ll. 54-57.) The specification is clear that all of the components of the checkout station are involved in the “requesting” function. (*See, e.g.*, ‘071 patent, col. 5, l. 21 – col. 6, l. 16.)

The Court finds that it is the checkout station – and not merely the product scanner – that is “clearly linked” to the recited function. However, the Court disagrees with the Plaintiff that the corresponding structure is merely a non-descriptive “checkout station,” which is a fairly generic term that is devoid of sufficient structure. The Court finds that more specificity to the term “checkout station,” based on the specification, is warranted, particularly as this is a means-plus-function limitation. “While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function.” *Default*, 412 F.3d at 1298. The specification is clear that the “checkout

---

<sup>2</sup> The Court recognizes the fact that the claim language – and resulting means-plus-function limitations – are slightly different as found in claims 1 and 36 of the ‘071 patent. Because the parties agree that this is not a material distinction and it appears that the resulting corresponding structure is the same, the Court will treat the related but slightly different means-plus-function limitations as the same.

station” comprises the following components: “a product scanner unit 68, an ATM unit 70, a product price display unit 72 and an SPCS interface unit 74.” (’071 patent, col. 5, ll. 33-34.) Further, the Court notes that both parties did not dispute the Court’s proposed construction for this term at the claim construction hearing.

Accordingly, the Court finds that the patent discloses the corresponding structure as “**a checkout station comprising a product scanner unit, a SPCS interface unit, a product price display unit, an ATM unit, and a checkout computer unit.**”

## V. CONCLUSION

The Court adopts the above constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

**SIGNED this 21st day of January, 2015.**

  
ROY S. PAYNE  
UNITED STATES MAGISTRATE JUDGE