IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CRONOS TECHNOLOGIES, LLC, Plaintiff, v. EXPEDIA, INC., Defendant.	)	C.A. No. 13-1538-LPS
CRONOS TECHNOLOGIES, LLC, Plaintiff, v. PRICELINE.COM, INC., Defendant.	)	C.A. No. 13-1541-LPS
CRONOS TECHNOLOGIES, LLC, Plaintiff, v. TRAVELOCITY.COM L.P., Defendant.	)	C.A. No. 13-1544-LPS

Richard D. Kirk, Stephen B. Brauerman, Vanessa R. Tiradentes, Sara E. Bussiere, BAYARD, P.A., Wilmington, DE

Brian A. Ledahl, Paul A. Kroeger, Shani M. Tutt, RUSS, AUGUST & KABAT, Los Angeles, CA

Attorneys for Plaintiffs

Jack B. Blumenfeld, Julia Heaney, Michael J. Flynn, MORRIS, NICHOLS, ARSHT & TUNNELL LLP, Wilmington, DE

John M. Jackson, Nathaniel (Nate) St. Clair II, Matthew C. Acosta, JACKSON WALKER LLP, Dallas, TX

David Folsom, JACKSON WALKER LLP, Texarkana, TX

Attorneys for Defendants

MEMORANDUM OPINION

June 8, 2015
Wilmington, DE

STARK, U.S. District Judge:

I. BACKGROUND

Plaintiff Cronos Technologies, LLC ("Cronos" or "Plaintiff") filed separate patent infringement actions against Expedia, Inc., ("Expedia") (C.A. No. 13-1538), priceline Incorporated (n/k/a The Priceline Group Inc.) and priceline.com LLC (collectively "priceline") (C.A. No. 13-1541), as well as against Travelocity.com, L.P. ("Travelocity") (C.A. No. 13-1544) (collectively, "Defendants"). (D.I. 1)[1] Cronos alleges Defendants infringe U.S. Patent No. 5,664,110 ("the '110 Patent"), entitled "Remote Ordering System," a patent which issued on September 2, 1997. (D.I. 1 Ex. A).

Pending before the Court is the issue of claim construction of various disputed terms of the patent-in-suit.[2] The parties initially completed briefing on claim construction on March 23, 2015. (D.I. 50, 52, 67, 70) Although the cases are not consolidated, the Court heard argument on claim construction on all of the cases together, on April 13, 2015. (D.I. 82) (hereinafter "Tr.")[3] Following the hearing, the parties submitted supplemental briefing and advised the Court of supplemental authority. (*See* D.I. 75, 76, 77, 78, 79, 80, 83)

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[1]Unless otherwise specified, citations to the docket are to the 13-1538 action.

[2]Also pending is Defendants' motion for partial judgment on the pleadings based on lack of patentable subject matter. (*See* D.I. 27) That motion will be addressed in due course in a separate opinion.

[3]This is the first claim construction hearing conducted by Chief Judge Stark under a scheduling order that, consistent with revised patent procedures announced in June 2014 (*see* http://www.ded.uscourts.gov/sites/default/files/Chambers/LPS/PatentProcs/LPS-PatentProcedures.pdf at p.8), includes a provision by which the Court states an intention to issue a claim construction decision within 60 days after the *Markman* hearing – or, at minimum, to provide the parties notice that this goal will not be achieved. (*See also* Tr. at 150-51)

II. LEGAL STANDARDS

The ultimate question of the proper construction of a patent is a question of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). "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) (internal quotation marks omitted). "[T]here is no magic formula or catechism for conducting claim construction." *Phillips*, 415 F.3d at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources "in light of the statutes and policies that inform patent law." *Id.*

"[T]he words of a claim are generally given their ordinary and customary meaning . . . [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312-13 (internal citations and quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). The patent 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." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While "the claims themselves provide substantial guidance as to the meaning of particular claim terms," the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent . . . ." *Id.* (internal citation omitted).

It is likewise true that "[d]ifferences among claims can also be a useful guide . . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15 (internal citation omitted). This "presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that "the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. It bears emphasis that "[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted), *aff'd*, 481 F.3d 1371 (Fed. Cir. 2007).

In addition to the specification, a court "should also consider the patent's prosecution history, if it is in evidence." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). The prosecution history, which is "intrinsic evidence," "consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent." *Phillips*, 415 F.3d at 1317. "[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the

invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*

In some cases, "the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries "endeavor to collect the accepted meanings of terms used in various fields of science and technology." *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful "to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of ordinary skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Id.* Nonetheless, courts must not lose sight of the fact that "expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* Overall, while extrinsic evidence "may be useful" to the court, it is "less reliable" than intrinsic evidence, and its consideration "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GmbH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007).

III. DISPUTED TERMS[4]

A. "Remote ordering terminal" / "user device" / "order device"[5]

Term	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
Remote ordering terminal	A display/processor unit with the ability to order items from one or more merchants without the need to travel to a merchant location	A display/processor unit that is distinct and remote from the order processing system	A display/processor unit with the ability to order items from one or more merchants without the need to travel to a merchant location
User device	Remote ordering terminal	A display/processor unit that is distinct and remote from the central computer	Remote ordering terminal
Order device	Remote ordering terminal	A display/processor unit that is distinct and remote from the central inventory database and central processing means	Remote ordering terminal

[4]The parties have agreed on the construction of certain terms, and the Court will adopt those constructions.

[5]The Court agrees with the parties that the disputes presented by each of these three claim terms are identical. (*See* Tr. at 29)

The '110 Patent discloses two embodiments, one of which is the "dumb terminal" embodiment wherein the "database of [user-discernible] representations is found ***within*** the DFTC 12, rather than in the DPU 10 RAM 34." ('110 Patent, col. 14 ll. 9-11) (emphasis added) Defendants' proposed construction, which adds the limitation that the display/processor unit ("DPU") is ***distinct and remote***, would improperly exclude from the claims this dumb terminal embodiment. Even recognizing that the dumb terminal embodiment is the subject of very few lines of the specification, the Court is not persuaded that there is a clear and unambiguous disclaimer or that the patentee dedicated this embodiment to the public. Therefore, the Court will adopt Plaintiff's proposal, which is based on the specification language and does not exclude any disclosed embodiment. (*See id.* at col. 1 ll. 12-15) ("Remote ordering systems have been proposed for providing homeowners and business-persons the ability to order staple items from one or more merchants without the need to travel to a merchant location.")

B. "Communication means"

Plaintiff's Proposal	**Defendants' Proposal**	**Court's construction**

Term is subject to 35 U.S.C. § 112(6). Function is: "(1) associating said memory and said order processing system upon user command for remotely accessing said order processing system over a multi-user network, (2) transmitting said at least one list to said order processing system using said data from said user and/or merchant identifier means, and (3) receiving new and/or replacement user-discernible item data from said order processing system during association of said memory and said order processing system, said new and/or replacement user-discernible item data corresponding only to said at least one item or group of items of said at least one list." Structure for (1), (2) and (3) is "device that communicates via a telephonic serial data transfer, a serial or parallel transfer of information over a data bus or link, or a serial transfer of information over a communications network such as the internet," '110 Patent 5:15-21.	Term is subject to 35 U.S.C. § 112(6). Function is: "(1) associating said memory and said order processing system upon user command for remotely accessing said order processing system over a multi-user network, (2) transmitting said at least one list to said order processing system using said data from said user and/or merchant identifier means, and (3) receiving new and/or replacement user-discernible item data from said order processing system during association of said memory and said order processing system, said new and/or replacement user-discernible item data corresponding only to said at least one item or group of items of said at least one list." Structure is (1) modem 38, (2) modem 38, (3) no structure disclosed.	Term is subject to 35 U.S.C. § 112(6). Function is: "(1) associating said memory and said order processing system upon user command for remotely accessing said order processing system over a multi-user network, (2) transmitting said at least one list to said order processing system using said data from said user and/or merchant identifier means, and (3) receiving new and/or replacement user-discernible item data from said order processing system during association of said memory and said order processing system, said new and/or replacement user-discernible item data corresponding only to said at least one item or group of items of said at least one list." Structure for (1), (2) and (3) is "device that communicates via a telephonic serial data transfer, a serial or parallel transfer of information over a data bus or link, or a serial transfer of information over a communications network such as the internet"

The parties agree this claim term is in means-plus-function format. *See* 35 U.S.C.

§ 112(6). They further agree on the claimed functions. Their dispute goes to the corresponding structure.

Defendants' read the function to include a sorting function as part of step 3, based on the phrase "said new and/or replacement user-discernible item data corresponding ***only*** to said at least one item or group of items of said at least one list" (emphasis added). The parties agree that there is no disclosed structure for sorting the data, but Plaintiff contends that the function is limited to "receiving" data, which is performed by a modem or other disclosed structure. (*See* '110 Patent, col. 5 ll. 15-21) In other words, Plaintiff reads the "only" limitation as a descriptor for the type of information which is received, rather than as an additional function.

The Court agrees with Plaintiff's reading of the function, and finds that the "communication means" does not execute any sorting function. The specification discloses, "Depending upon the actual physical location of the merchant database 14, this communication can be a telephonic serial data transfer, a serial or parallel transfer of information over a data bus or link, or a serial transfer of information over a communications network such as the Internet. Other known communication means are envisioned." (*Id.*) The Court agrees with Plaintiff that this satisfies the requirement for a corresponding structure under § 112(6).

C. "Data entry device" / "machine recognition"

Term	**Plaintiff's Proposal**	**Defendants' Proposal**	**Court's Construction**
Data entry device	Device that provides coded information to the remote ordering terminal	Device that transfers coded item, user and merchant data to the remote ordering terminal	Device that provides coded information to the remote ordering terminal

Machine recognition	Plain and ordinary meaning	Transferring said identifying code to the user's ordering device	Plain and ordinary meaning

The central dispute in relation to these terms is whether the data entry device "provides" data to the remote ordering terminal or whether it must "transfer" such data. While the specification discloses that an optical scanning wand can transfer coded information to the DPU 10, it goes on to state that "alternative embodiments of the data entry device 16 of the present invention employ a standard 'QWERTY' keyboard or custom keypad in communication with the remainder of the DPU 10 for manual data input, or voice recognition circuitry or magnetic stripe input means." (*Id.* at col. 3 ll. 29-38) A keyboard does not "transfer" coded information in the same way as an optical scanning wand, since a keyboard utilizes manual user input for data. (*See* D.I. 51 ¶ 43) (Rhyne Declaration, stating: "One of skill in the art would typically speak of 'inputting' something to a computer on a keyboard, not 'transferring' from a keyboard.") Defendants' proposed construction of "data entry device" would exclude the disclosed keyboard embodiment.

A second dispute is whether the construction of data entry device must be limited to a device providing "item, user, and merchant" data to the remote ordering terminal. The claim language contains a description of the coded information which is provided, so limiting the term "data entry device" is unnecessary. What is claimed is a "remote ordering terminal comprising . . . at least one data entry device for providing said terminal with said item associated item codes and with data from said user ***and/or*** merchant identifier means." ('110 Patent, claim 1) (emphasis added) Therefore, the types of data which are transferred are described in the claims.

Further, the claims do not require "item, user, ***and*** merchant" data as proposed by Defendants. Thus, the Court will adopt Plaintiff's proposed construction of "data entry device."

There does not appear to be a meaningful dispute as to the proper construction of "machine recognition," which appears in claims 22 and 26 and relates to the function performed by the data entry device. Defendants argue that the data entry device cannot be a mouse, and, further, that clicking on a link would not meet the claim limitation requiring "machine recognition." Defendants' proposal for "machine recognition" contains the limitation that the coded information must be "transferred" from one source to another, as an attempt to distinguish from simply clicking on a link. Plaintiff contends that "machine recognition" is a term "readily understandable" to one of skill in the art, and its expert, Dr. Rhyne, expressed this opinion. (*See* D.I. 51 ¶ 39; *see also id.* at ¶ 43 ("In my opinion, one of skill in the art would not understand 'machine recognition' to mean 'transferring said identifying code to the user's ordering device' as Defendants have proposed. . . . Defendants' use of the word 'transferring' would be awkward to one of skill in the art.")) Defendants' expert Dr. Taylor, despite submitting a declaration, did not address the meaning of this term. (*See* D.I. 54) In light of Dr. Rhyne's declaration and the lack of record evidence contradicting his statements, the Court finds that one of ordinary skill in the art would readily understand the term "machine recognition" and will adopt the plain and ordinary meaning to one of ordinary skill in the art.[6]

[6]In doing so, the Court does not intend to resolve the apparent dispute as to whether a mouse click satisfies the limitations of claims 22 and 26. The Court views Defendants' contentions on this issue to be premature.

D. "central processing means"

Plaintiff's Proposal	Defendants' Proposal	Court's construction
Term is subject to 35 U.S.C. § 112(6). Function is "(1) providing remote communication over a multi-user network between said central inventory database and said user-specific database in response to a user action for teaching user-discernable item data received from said central inventory database to said user-specific database (2) interactively updating said user-discernable item data contained within said user-specific database with replacement user-discernable item data received from said central inventory database in response to a user action, and (3) aging-out infrequently accessed user-discernable item data from said user-specific database." Structure is (1) DFTC 12; (2) DFTC 12; and (3) DFTC 12 by itself or in connection with CPU 30. ('110 Patent, col. 2 ll. 55-57, col. 6 ll. 44-54, col. 9 ll. 2-21, and col. 14 ll. 5-39)	Term is subject to 35 U.S.C. § 112(6). Function is "(1) providing remote communication over a multi-user network between said central inventory database and said user-specific database in response to a user action for teaching user-discernable item data received from said central inventory database to said user-specific database (2) interactively updating said user-discernable item data contained within said user-specific database with replacement user-discernable item data received from said central inventory database in response to a user action, and (3) aging-out infrequently accessed user-discernable item data from said user-specific database." Structure is (1) no structure disclosed (2) no structure disclosed, and (3) no structure disclosed	Term is subject to 35 U.S.C. § 112(6). Function is "(1) providing remote communication over a multi-user network between said central inventory database and said user-specific database in response to a user action for teaching user-discernable item data received from said central inventory database to said user-specific database (2) interactively updating said user-discernable item data contained within said user-specific database with replacement user-discernable item data received from said central inventory database in response to a user action, and (3) aging-out infrequently accessed user-discernable item data from said user-specific database." Structure is (1) DFTC 12; (2) DFTC 12; and (3) DFTC 12.

The parties agree that this term is a means-plus-function limitation and also agree as to

the function. Defendants contend that no corresponding structure is disclosed. Plaintiff asserts that the data format/transfer computer or DFTC 12 is the corresponding structure, a position supported by the detailed description in the specification. (*See* '110 Patent, col. 2 ll. 53-57) ("A remote ordering system according to the present invention and FIG. 1 includes at least . . . a data format/transfer computer (DFTC) 12 (also referred to as a central processing means or a central computer). . .")

The DFTC is disclosed as conducting the first function: "providing remote communication over a multi-user network between said central inventory database and said user-specific database in response to a user action for teaching user-discernable item data received from said central inventory database to said user-specific database." In particular, the specification states:

> The DFTC 12 controls the flow of information between the DPU 10 and the merchant database 14 during such an interactive session. The DFTC 12 communicates with the merchant database 14 to ascertain product availability, product identification information such as name, container size, and nutritional data, and current product price. This information is then relayed back to the DPU 10 for display to the user and for addition to or substitution within the DPU 10 database.

(*Id.* at col. 5 ll. 7-15)

Figure 1 also shows this communication among the DFTC 12, multiple merchant databases 14, and multiple DPUs 10. Figure 14 contains a flow chart algorithm in which Step 252 ("Order or Price Check?") triggers communication between the user database and merchant databases to interactively update the price information. While Defendants assert that the role of the DFTC 12 is merely as a pass-through for information, and it therefore does not correspond to

the disclosed function, the Court finds there is adequate disclosure to show that the DFTC completes the first function.

Second, the DFTC is disclosed as "interactively updating said user-discernable item data contained within said user-specific database with replacement user-discernable item data received from said central inventory database in response to a user action." According to the specification:

> [I]f a DPU 10 user believes a price associated with a displayed product description is out-of-date, the user can command the DPU 10 to update the price in the DPU database within RAM 34 by accessing the merchant database via the DFTC 12. The merchant database 14 can indicate the current price, which the DFTC 12 returns to the DPU CPU 30 for substitution into the database in RAM 34.

('110 Patent, col. 6 ll. 44-51)

The specification further identifies and describes the role of DFTC 12, which is also illustrated by Figure 14. "The CPU 30 then indicates to the DFTC 12 that availability and price information is being requested for the items in the order list 52 . . . The DFTC 12 searches the merchant database for accurate product description information, unit price, and product availability, and returns this information to the DPU 10." (*Id.* at col. 11 ll. 20-45) This function appears in Fig. 14 as Step 264 ("Teach User Database Code/Product ID Correspondence").

Lastly, the DFTC, alone or in conjunction with CPU 30, is disclosed to "ag[e]-out infrequently accessed user-discernable item data from said user-specific database," but only in the dumb terminal embodiment. Plaintiff concedes that in the smart terminal embodiment the DFTC does not perform the aging out function. (*See* Tr. at 73) According to Plaintiffs, referring to Figure 12:

> This is the disclosure of the algorithm for aging out. As you see here, after it has transmitted the product description from the DFTC and DPU in 230, it asks is the rule in the consumer database? Yes or no. And if the answer is no, delete item with user database. And as the specification describes, this is referred to as aging out . . . And worthy of note, . . . this [user] database in the dumb terminal embodiment is located on the DFTC 12. So this is the one case where in the smart terminal embodiment, defendants are correct this would be done on the DPU by the CPU 30, but in the dumb terminal embodiment this is performed by the DFTC 12.

(Tr. at 72-73) Figure 12 shows at Step 230 that the data is transmitted from the DFTC to the DPU, and only after that point is the "aging out" function accomplished. However, in the dumb terminal embodiment, the DFTC performs the aging out function since the "DPU 10 is a dumb terminal which must be in communication with the DFTC 12 in order to provide user-discernible representations of scanned items . . . [and] the database of such representations is found within the DFTC 12, rather than in the DPU 10 RAM 34." ('110 Patent, col. 14 ll. 6-11)

The DFTC is not disclosed to work with the CPU in the smart terminal embodiment as the DPU does the aging out function in that embodiment. The DFTC is not disclosed anywhere in the description of the aging out function with the smart terminal embodiment. (*See id.* at col. 9 ll. 2-17) ("[I]f sufficient memory space exists within the DPU database to add a new product description and associated unit price, or if a pre-defined maximum size for the DPU 10 database would be exceeded by adding this new information to the database, the CPU 30 determines the oldest, or least accessed, product information based on access date. This oldest information is aged out, or deleted, from the database . . . In another embodiment, the CPU 30 can automatically age out information based upon frequency of use.") Hence, the Court's conclusion that adequate structure is disclosed is limited to the dumb terminal embodiment.

E. "Database," "User-specific database/identifier database," "central inventory database/merchant database"

Term	Plaintiff's Proposal	Defendants' Proposal	Court's construction
Database	A structured collection of data stored in a memory that can be searched, modified, and sorted by the content of a particular field of the data stored therein Alternatively: A structured collection of data stored in a memory in a format that can be updated, searched, modified, and sorted by a database management system by the content of a particular field of the data stored therein	An externally structured repository of data stored in a memory in a format that can be updated, modified, and searched by a database management system using any field of the data stored therein	A structured collection of data stored in a memory in a format that can be updated, searched, modified, and sorted by a database management system by the content of a particular field of the data stored therein
User-specific database/ identifier database	A database associated with a particular user identifier means that contains a portion of the data of an associated database of the order processing system	A terminal-specific database of the remote ordering terminal that contains substantially less data than an associated database of the order processing system	A database associated with a particular user identifier means that contains a portion of the data of an associated database of the order processing system
Central inventory database / merchant database	One or more databases of merchant information	A database separate and remote from the user-specific database	One or more databases of merchant information

In regard to the term "database," the parties dispute whether the data must be externally structured and whether the data must be searchable by "any" field or instead by "a particular

field." Any proposed construction which reads out of the claims the dumb terminal embodiment cannot be correct. The dumb terminal embodiment, in which the database of user-discernible data is "found within the DFTC" (*see* '110 Patent, col. 14 ll. 5-15), would be excluded if the Court adopted Defendants' construction requiring an "externally structured" collection of data.

Defendants provide no persuasive reason for why the database must be searchable by "any" field, so long as it is organized and searchable in some way, by some particular field. Hence, the Court will adopt Cronos' alternative construction (which includes a "database management system" limitation), which also addresses Defendants' concern that the claim limitation does not encompass a list. (*See* Tr. at 82-83)

Turning to "user-specific database" and "identifier database," the parties dispute whether the database must be specific to the remote ordering terminal at the DPU. Again, Defendants' proposed construction would read out of the claims the dumb terminal embodiment, in which the database is found within the DFTC rather than in the DPU. (*See* '110 Patent, col. 14 ll. 9-10) Therefore, the user-specific database and identifier database are not specific to the remote ordering terminal. Instead, the specification and claim language support Cronos' proposal, in which the user-specific database is associated with a particular user.

The parties further dispute the relative size of the user-specific or identifier database. Defendants propose that it "contains substantially less data" than the order processing system as a whole, but they explained at the hearing they would be satisfied with any construction that makes clear there is a "meaningfully different" amount of data in the user database than in the larger database. (*See* Tr. at 93-94) The Court finds that "substantially less" introduces confusing ambiguity into the claims. Plaintiff's proposal that the user database contain only "a portion of"

the total data accurately conveys the relative size of the user database.

Finally, with respect to "central inventory database" and "merchant database," the parties dispute whether the merchant database must be "separate and remote" from the user database. The specification states,

> [I]t is to be understood that throughout this document the merchant database 14 refers to a database of information not having one specific physical location. That is, the merchant database 14 can be physically located within the DFTC 12, within another computer or memory device located at the site of the DFTC 12 and connected thereto, or within a computer or memory device at a merchant location.

('110 Patent, col. 2 l. 64-col. 3 l. 4) This portion of the specification explicitly discloses an embodiment in which the location of the merchant database is within the DFTC 12, as in the dumb terminal embodiment. Defendants' proposed construction would read out this limitation and, therefore, is not correct.

F. "management means"

Plaintiff's Proposal	**Defendants' Proposal**	**Court's Construction**
Term is subject to 35 U.S.C. § 112(6). Function is "controlling said display and said communication means, said management means responsive to said user input and said central processing means." Structure is disclosed in '110 Patent, col. 4 ll. 30-39; the CPU 30.	Term is subject to 35 U.S.C. § 112(6). Function is "controlling said display and said communication means, said management means responsive to said user input and said central processing means." No structure defined.	Term is subject to 35 U.S.C. § 112(6). Function is "controlling said display and said communication means, said management means responsive to said user input and said central processing means." Structure is the CPU 30.

The parties agree that the term "management means" is a means-plus-function limitation and agree as to the function of the claim term. They disagree about whether: (1) a structure has been disclosed, and (2) if the disclosed structure is a general purpose computer, whether an algorithm must also be disclosed. Plaintiff asserts that the CPU 30 is the corresponding structure and, further, that it needs no special programming to do the function so no algorithm is required. (*See* Tr. at 99-100) The Court concludes that even if an algorithm is necessary, one has been adequately disclosed in Figure 11.

Defendants' position that an algorithm is required is largely based on the portion of the specification which states, "The CPU 30 is in charge of creating and displaying order lists on the display 36." ('110 Patent, col. 4 ll. 33-34) Defendants contend that no algorithm has been disclosed for "creating and displaying." (D.I. 76 at 2) "A microprocessor or general purpose computer lends sufficient structure only to basic functions of a microprocessor. All other computer-implemented functions require disclosure of an algorithm." *EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, et al., No. 2014-1392 (Fed. Cir. May 6, 2015). However, "[w]hen the function can be achieved by any general purpose computer without special programming no algorithm need be disclosed." *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1362, 1364 (Fed. Cir. 2012) (internal quotation marks omitted); *see also In Re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316-17 (Fed. Cir. 2011). Here, to the extent the CPU 30 is performing a specialized function, Fig. 11 provides the algorithm to satisfy the requirement that a structure be disclosed.

G. Claim 22 - Order of Steps

Term	Plaintiff's Proposal	Defendants' Proposal	Court's construction
Accumulating from said identifier database selected ones of said user-cognizable identifiers	No construction necessary. Improper to use *Markman* proceedings to order claim limitations.	Occurs at the user device prior to the commanding step.	No construction necessary.
Selectively associating a transaction identifier having user and/or merchant identification with said user device to identify a selected merchant database and/or to identify said user to a selected merchant database	No construction necessary. Improper to use *Markman* proceedings to order claim limitations.	Occurs at the user device prior to the commanding step.	No construction necessary.
Commanding said user device to establish remote communication between said user device and said selected merchant database corresponding to said merchant identification through said central computer over said communications link including said multi-user network	No construction necessary. Improper to use *Markman* proceedings to order claim limitations.	Occurs after the accumulating and selectively associating steps.	No construction necessary.

Interactively updating only said selected one of said user-cognizable identifiers in said identifier database or user-specific items with current information provided by said merchant database over said communications link in response to a user action at said user device	No construction necessary. Improper to use *Markman* proceedings to order claim limitations.	Occurs after the accumulating, selectively associating, and commanding steps.	No construction necessary.

The parties dispute whether it is proper as part of the claim construction process to order claim steps and, if so, whether the above steps should be ordered. Claim 22 is a method claim comprising seven individual steps, and Defendants propose that steps 3 through 6 must be carried out in a precise order, and that this should be made clear through claim construction.[7]

"Unless the steps of a method actually recite an order, the steps are ordinarily not construed to require one. However, such a result can ensue when the method steps implicitly require that they be performed in the order written." *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (2003). "First, we look to the claim language to determine if, as a matter of logic or grammar, they must be performed in the order written. . . . If not, we next look to the rest of the specification to determine whether ***it*** 'directly or implicitly requires such a narrow construction.'" *Id.* at 1369-70 (emphasis in original; internal citations omitted) There is nothing improper about considering the order of steps issue in connection with claim construction.

Here, however, Defendants have failed to persuade the Court that the order of steps they

[7]Defendants state this dispute "relates to Cronos's infringement contention that the alleged 'user device' in the accused methods is in communication with the web server (Step 5) prior to performing steps 3 and 4." (D.I. 52 at 25)

seek to impose on claim 22 is correct.[8] Adopting Defendants' proposal would read out of the claims a disclosed embodiment, i.e., the dumb terminal. While the specification largely describes the use of the smart terminal embodiment to allow the user to create an off-line list prior to contacting a merchant – and in this embodiment Defendants' proposed order of steps does appear to be required – the claims are not limited to the smart terminal embodiment. Defendants' proposed order of steps is not required as a matter of either logic or grammar.

H. "Interactively receivable as a result of said central processing means, responding to said user input at said order device, transmitting to said central inventory database said at least one order list comprising a list of items to be ordered or a provisional list of items for which updated user-discernable item data is desired"

[8]In the dumb terminal embodiment, the database of user-discernible representations is stored within the DFTC 12. (*See* '110 Patent, col. 14 ll. 9-10) The merchant database can also be located in the DFTC 12. (*See id.* at col. 2 l. 67-col. 3 l. 1) In such an embodiment, Step 5 – "commanding said user device to establish remote communication between said user device and selected merchant database" – may occur prior to steps 3 and 4, contrary to Defendants' proposed order, since the user device and the merchant databases are both stored within the DFTC 12. Further, the dumb terminal embodiment contemplates that Step 6, "interactively updating" the selected items from the user database, can be performed at "regular interval[s]" without any relation to the prior steps. (*See id.* at col. 14 ll. 11-15)

Plaintiff's Proposal	Defendants' Proposal	Court's Construction
Plain and ordinary meaning	Indefinite. Or, alternatively: Received at the central processing means in response to a user input at the order device that causes the central processing means to receive the order list or provisional list, to transmit the order list or provisional list to the central inventory database, to receive replacement user-discernible item data for each item in the order list or provisional list from the central inventory database, and to transmit the replacement user-discernible item data.	Interactively receivable at the central processing means in response to a user input at the order device that causes the central processing means to receive the order list or provisional list, to transmit the order list or provisional list to the central inventory database, to receive replacement user-discernible item data for each item in the order list or provisional list from the central inventory database, and to transmit the replacement user-discernible item data.

Defendants assert that Claim 45 is indefinite because it attempts to claim a system but includes method steps. Such hybrid claims are ambiguous and, therefore, indefinite, because it is unclear whether infringement of such claims occurs when one creates the system or when one performs the method. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). Here, however, the claim language makes clear that the claim does not recite method steps, even though it uses active verbs to define "interactively receivable."[9]

[9]Plaintiff also asserts that Defendants' indefiniteness argument is untimely. Defendants respond that their argument arises from Dr. Rhyne's deposition testimony, and therefore was brought before the Court at the earliest opportunity. The Court finds that Defendants' indefiniteness argument, which relies heavily on Dr. Rhyne's testimony, was not untimely. Additionally, the Court accepted supplemental briefing on the issue of indefiniteness, giving Plaintiff a "full and fair opportunity" to be heard on the issue.

Defendants have to prove indefiniteness by clear and convincing evidence. *See Intel Corp. v. VIA Techs. Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003). Defendants attempt to meet this burden by relying on Cronos' expert's deposition, in which he opined that Claim 45 includes method steps. (*See* D.I. 79 at 4) (quoting Rhyne deposition)[10] However, the extrinsic evidence (Rhyne's testimony) does not supplant the meaning that emerges from the intrinsic evidence, including the language of the claim itself. The limitations to which Defendants point – "transmitting to said central inventory database" and "comprising a list of items to be ordered" – are not, here, method steps and do not create confusion as to when infringement occurs.

This case is distinguishable from *IPXL*, which required that the "user use[]" the system, making it unclear whether infringement occurred when the system was created or only when the user used the system.

Turning to the proper construction, there is a genuine dispute as to claim scope and – particularly in light of the testimony of Dr. Rhyne – the Court finds it is necessary to construe the term. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) ("When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute."). Defendants' proposal correctly identifies "steps" that a system must be capable of undertaking in order to practice the claim. However, Defendants proposed construction would require these steps to always be performed (i.e. "received"), while the claim language is written in the form of a capability to perform these steps (i.e. "receivable"). The Court's construction amends Defendants' proposed construction to

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[10]Defendants' expert, Dr. Taylor, did not opine that this claim language is indefinite. (*See, e.g.*, D.I. 75 at 3) (citing Taylor's declarations and deposition testimony)

reflect these conclusions.

I. "user and/or merchant identifier means"

Plaintiff's Proposal	Defendants' Proposal	Court's Construction
Term is not subject to 35 U.S.C. § 112(6). Should be construed as: Information identifying the user and/or the desired merchant	Term is subject to 35 U.S.C. § 112(6). Function is "storing user and or merchant identifier." Structure is user identification control card 40.	Term is not subject to 35 U.S.C. § 112(6). Information identifying the user and/or the desired merchant

The parties disagree as to whether this term is a means-plus-function term subject to 35 U.S.C. § 112(6). The Court finds it is not. Although it contains the term "means," there is no indication that it is claiming a function. "Without an identified function, the term 'means' in this claim cannot invoke 35 U.S.C. § 112, ¶ 6. Without a 'means' sufficiently connected to a recited function, the presumption in use of the word 'means' does not operate." *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1574 (Fed. Cir. 1996).

The Court will adopt Plaintiff's proposal, which is based on the specification. (*See* '110 Patent, col. 5 ll. 36-38) ("[I]nformation identifying the user and the desired merchant, among other transaction specific information, is referred to as a transaction identifier or as identifier means.")

J. "identifier means"

Plaintiff's Proposal	Defendants' Proposal	Court's Construction
Term is subject to 35 U.S.C. § 112(6). Function is "providing said remote ordering system with user and/or merchant information." Structure is disclosed in '110 Patent, col. 5 ll. 24-38: identification control card 40 or user and merchant identification information pre-stored in the DPU 10.	Term is subject to 35 U.S.C. § 112(6). Function is "providing said remote ordering system with user and/or merchant information" Structure is user identification control card 40.	Term is subject to 35 U.S.C. § 112(6). Function is "providing said remote ordering system with user and/or merchant information." Structure is identification control card 40 or user and merchant identification information pre-stored in the DPU 10.

The parties agree this is a means-plus-function term, but disagree as to the disclosed structure. The specification states:

> The DFTC 12 also interprets information entered from user identification control cards 40 reflective of user and merchant identification. Typically, these identification control cards 40 provide information from which merchant name and location, user name, address and account number, payment arrangements, preferred product delivery option, and consumer profile can be determined. In alternative embodiments of the present invention, the DPU 10 has such user and merchant identification pre-stored therein, such that the user selects a merchant from a displayed menu of merchants. . . . In any case, information identifying the user and the desired merchant, among other transaction specific information, is referred to as a transaction identifier or identifier means.

('110 Patent, col. 5 ll. 22-38) The specification is clear that either the identification control card 40 or the DPU 10, in an alternative embodiment, are corresponding structures for the identifier means. Defendants' proposal would read out of the claims the disclosed embodiment in which

the identifier means are pre-loaded onto the DPU 10. The Court will adopt Plaintiff's proposal.

K. "input means"

Plaintiff's Proposal	**Defendants' Proposal**	**Court's construction**
Term is subject to 35 U.S.C. § 112(6). Function is "providing said order device with said item codes corresponding to said at least one user-selected item to be ordered." Structure is disclosed in '110 Patent, col. 3 ll. 5-37; col. 4 ll. 44-60; data entry device 16.	Term is subject to 35 U.S.C. § 112(6). Function is "providing said order service with said item codes corresponding to said at least one user-selected item to be ordered." Structure is a processor programmed to perform 273 and 274 of Figure 14.	Term is subject to 35 U.S.C. § 112(6). Function is "providing said order service with said item codes corresponding to said at least one user-selected item to be ordered." Structure is a processor programmed to perform 273 and 274 of Figure 14.

The parties' dispute is whether "providing said order ***service,***" as recited in Claim 45, is a typographical error. Plaintiff contends the claim should be read to recite "said order ***device***," while Defendants adhere to the language actually used in the claim, which is "said order ***service***."

The parties further disagree as to the function and structure of what they agree is a means-plus-function claim term. Plaintiff argues that "input means" refers to the data entry device, while Defendants rely on the term "service" to support their argument that "input means" is a processor which completes Steps 273 and 274 of Figure 14 (namely, the "Order pushed?" step and the "User places final order" step).

Plaintiff essentially asks the Court through claim construction to correct what Plaintiff asserts is an error in the claim language. The Court can correct an error in a patent only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification, and (2) the prosecution history does not suggest a different interpretation of the

claim. *See Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1357 (Fed. Cir. 2003).

Plaintiff provides a portion of the prosecution history which uses the words "order device" (*see* D.I. 46-3 at 129) and, from this, contends that the phrase "order service" was a scrivener's error on the part of the PTO. (D.I. 50 at 20) Even assuming this satisfies the second requirement stated above (i.e., the prosecution history may not suggest a different interpretation of the claim), there is here a reasonable debate regarding the correction of the term. Although the term "order service" does not appear elsewhere in the patent, in the context of the claim as a whole it is not apparent from the face of the patent this is an error, especially as Dr. Taylor opines there is structure present in the specification associated with the issued claim language. (*See* D.I. 76) Therefore, the Court will adopt Defendants' proposed construction.

IV. CONCLUSION

An appropriate Order follows.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CRONOS TECHNOLOGIES, LLC, Plaintiff, v. EXPEDIA, INC., Defendant.	)	C.A. No. 13-1538-LPS
CRONOS TECHNOLOGIES, LLC, Plaintiff, v. PRICELINE.COM, INC., Defendant.	)	C.A. No. 13-1541-LPS
CRONOS TECHNOLOGIES, LLC, Plaintiff, v. TRAVELOCITY.COM L.P., Defendant.	)	C.A. No. 13-1544-LPS

ORDER

At Wilmington this 8th day of June, 2015:

For the reasons set forth in the Memorandum Opinion issued this date, IT IS HEREBY ORDERED that the disputed claim language of U.S. Patent No. 5,664,110 ("the '110 Patent") is

construed as follows:

Claim Term	Court's Construction
Remote ordering terminal	A display/processor unit with the ability to order items from one or more merchants without the need to travel to a merchant location
User device	Remote ordering terminal
Order device	Remote ordering terminal
Communication Means	Term is subject to 35 U.S.C. § 112(6). Function is: "(1) associating said memory and said order processing system upon user command for remotely accessing said order processing system over a multi-user network, (2) transmitting said at least one list to said order processing system using said data from said user and/or merchant identifier means, and (3) receiving new and/or replacement user-discernible item data from said order processing system during association of said memory and said order processing system, said new and/or replacement user-discernible item data corresponding only to said at least one item or group of items of said at least one list." Structure for (1), (2) and (3) is "device that communicates via a telephonic serial data transfer, a serial or parallel transfer of information over a data bus or link, or a serial transfer of information over a communications network such as the internet"
Data entry device	Device that provides coded information to the remote ordering terminal
Machine recognition	Plain and ordinary meaning

Central processing means	Term is subject to 35 U.S.C. § 112(6). Function is "(1) providing remote communication over a multi-user network between said central inventory database and said user-specific database in response to a user action for teaching user-discernable item data received from said central inventory database to said user-specific database (2) interactively updating said user-discernable item data contained within said user-specific database with replacement user-discernable item data received from said central inventory database in response to a user action, and (3) aging-out infrequently accessed user-discernable item data from said user-specific database." Structure is (1) DFTC 12; (2) DFTC 12; and (3) DFTC 12.
Database	A structured collection of data stored in a memory in a format that can be updated, searched, modified, and sorted by a database management system by the content of a particular field of the data stored therein
User-specific database/identifier database	A database associated with a particular user identifier means that contains a portion of the data of an associated database of the order processing system
Central inventory database/merchant database	One or more databases of merchant information
Management means	Term is subject to 35 U.S.C. § 112(6). Function is "controlling said display and said communication means, said management means responsive to said user input and said central processing means." Structure is the CPU 30.
Accumulating from said identifier database selected ones of said user-cognizable identifiers	No construction necessary

Selectively associating a transaction identifier having user and/or merchant identification with said user device to identify a selected merchant database and/or to identify said user to a selected merchant database	No construction necessary
Commanding said user device to establish remote communication between said user device and said selected merchant database corresponding to said merchant identification through said central computer over said communications link including said multi-user network	No construction necessary
Interactively updating only said selected one of said user-cognizable identifiers in said identifier database or user-specific items with current information provided by said merchant database over said communications link in response to a user action at said user device	No construction necessary

Interactively receivable as a result of said central processing means, responding to said user input at said order device, transmitting to said central inventory database said at least one order list comprising a list of items to be ordered or a provisional list of items for which updated user-discernable item data is desired	Interactively receivable at the central processing means in response to a user input at the order device that causes the central processing means to receive the order list or provisional list, to transmit the order list or provisional list to the central inventory database, to receive replacement user-discernible item data for each item in the order list or provisional list from the central inventory database, and to transmit the replacement user-discernible item data.
user and/or merchant identifier means (claim 1)	Term is not subject to 35 U.S.C. § 112(6). Information identifying the user and/or the desired merchant
identifier means (claim 45)	Term is subject to 35 U.S.C. § 112(6). Function is "providing said remote ordering system with user and/or merchant information." Structure is identification control card 40 or user and merchant identification information pre-stored in the DPU 10.
input means	Term is subject to 35 U.S.C. § 112(6). Function is "providing said order service with said item codes corresponding to said at least one user-selected item to be ordered." Structure is a processor programmed to perform 273 and 274 of Figure 14.

HON. LEONARD P. STARK
U.S. DISTRICT JUDGE