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

AMERANTH, INC. §
§
    Plaintiff, §
§
§   CIVIL ACTION NO. 2-07-CV-271
v. §
§
§
MENUSOFT SYSTEMS CORP., et al., §
    Defendants. §
§
§

<u>**MEMORANDUM OPINION AND ORDER**</u>

    This memorandum opinion resolves the parties' claim construction disputes.

I.   Introduction

    Plaintiff Ameranth, Inc. ("Ameranth") asserts United States Patent Nos. 6,384,850 ("the '850 patent"), 6,871,325 ("the '325 patent"), and 6,982,733 ("the '733 patent") against Defendants Menusoft Systems Corp. ("Menusoft") and Cash Register Sales & Service of Houston, Inc. ("CRS") (collectively, "Defendants"). The '325 and '733 patents are continuations of the '850 patent, all of which have a priority date of September 21, 1999. The '850 patent issued May 7, 2002. The '325 patent issued March 22, 2005, and the '733 patent issued January 3, 2006. All three patents share nearly identical specifications. The claims that remain asserted are '850 patent Claims 1–4, 6, 11; '325 patent Claims 1–3, 5–10; and '733 patent, Claims 1–3. The independent claims are '850 patent claim 1; '325 patent claims 1, 7, 8, 9; and '733 patent claim 1.

II.   Background of the Technology

    The asserted patents are entitled "Information Management and Synchronous Communications System with Menu Generation." The patents teach synchronous menu

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generation from a central computer to wireless handheld devices or the Internet, for use primarily in the restaurant industry. The menus are interactive and serve two important functions: displaying an up-to-date menu and entering an order. The invention solves a number of problems with the prior art. First, the menus can be automatically adapted to display properly on hand-held devices, personal computers connected to the Internet, or restaurant order stations. Second, the invention provides fast synchronization between a central database and multiple hand-held devices.

III.   Legal Principles Relevant to Claim Construction

"A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

To ascertain the meaning of claims, the court looks to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. Under the patent law, the specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. A patent's claims must be read in view of the specification, of which they are a part. *Id*. For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id*. "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims." *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's claims. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita*

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Elec. Corp., 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). And, although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This court's claim construction decision must be informed by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the *claims* of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312 (emphasis added) (*quoting Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id*. The ordinary and customary meaning of a claim term "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 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention. The patent is addressed to and intended to be read by others skilled in the particular art. *Id*.

The primacy of claim terms notwithstanding, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the

specification." *Id*. Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of "a fully integrated written instrument." *Id*. at 1315 (*quoting Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id*. at 1314-17. As the Supreme Court stated long ago, "in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims." *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

> Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The 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.

Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. The prosecution history helps to demonstrate how the inventor and the PTO understood the patent. *Phillips*, 415 F.3d at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant," it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id*. Nevertheless, the prosecution history is intrinsic evidence. That evidence is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims.

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Id*. at 1319-24. The approach suggested by *Texas Digital*–the assignment of a limited role to the specification–was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id*. at 1320-21. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of the claim terms within the context of the patent." *Id*. at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.* What is described in the claims flows from the statutory requirement imposed on the patentee to describe and particularly claim what he or she has invented. *Id*. The definitions found in dictionaries, however, often flow from the editors' objective of assembling all of the possible definitions for a word. *Id*. at 1321-22.

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id*. at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

IV.   Agreed Terms

The parties have agreed that "[t]he preambles of the Asserted Claims are limitations." Joint Claim Construction and Prehearing Statement at 2. [Dkt. No. 67]

V.   Disputed Terms

A. "information management and synchronous communications system"

Term	Ameranth's Definition	Defendants' Definition
information management and synchronous communications system	a computerized hospitality system for maintaining the operational consistency of hospitality data or information between a central computer and other system components and devices involved in the real time transmission, display, sharing or exchanging of the data or information	a system consisting of multiple devices each having a local database in which a change made to any database is immediately reflected in all databases, so as to maintain consistency among all copies of stored data

"Information management and synchronous communications system" is the claimed apparatus and appears in the preamble of every asserted independent claim: "*An information management and synchronous communications system* for generating and transmitting menus comprising . . . ." Ameranth contends that the clients may be devices or Web pages, and the clients are not required to have local databases. In constrast, the defendants argue that the point of sale clients must be hardware devices and each client must contain a local database.

Claim 1 of the '850 patent indicates that the client is "a wireless handheld computer device or Web page." According to the defendants, "Web page" is not a software client but has been given a specialized definition in the specification: "an automated download procedure is provided to transfer the desktop database onto a handheld device and/or Web page." ('850 patent, 9:66-10:1); *see 3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1374 (Fed. Cir. 2003) (holding that when the patentee acts as his own lexicographer, the definition in

the specification controls, not the dictionary definition). The defendants assert that this language, "transfer the desktop database onto," explicitly requires the clients to have a local database. In addition, the defendants allege that, because a database is transferred onto the Web page, the Web page cannot be a software client. Claim 12 of the '850 patent also supports the defendants' assertion that "Web page" is not a conventional website: "at least one Web page on which *hospitality applications and data are stored*." (emphasis added).

Elsewhere in the specification, a traditional Web client is disclosed: "The software running on the user's client computer that enables the user to view HTML documents on the computer's video monitor and enter selections using the computer's keyboard and mouse is known as a browser." ('850 patent, 12:29-33). Furthermore, the specification consistently distinguishes "Web page" as distinct from handheld devices, e.g., "the menu can be downloaded to either a *handheld device* or *Web page*." ('850 patent, 3:37-38) (emphasis added).

As discussed above, the specification does mention transferring databases onto the clients. (*See also* '850 patent, 10:34-36 ("Advanced database functions are provided in the preferred embodiment of the invention, including an automated download process onto handheld devices and/or Web sites.")) The specification discusses a central database, but does not talk about local databases on the clients, e.g., "fast synchronization between a central database and multiple handheld devices." As used by the patentee, downloading or transferring databases to clients means downloading or transferring the data from the database, but not the database itself. Thus, it is not necessary that the clients have local databases.

The defendants' proposed construction suggests synchronization between the clients: "a change made to any database is immediately reflected in all databases." However, throughout the specification and claims, the patents contemplate changes being communicated between the

clients and the central server. (*E.g.*, '850 patent, 6:22-25 ("configuring a menu on the desktop PC and then downloading the menu configuration onto the POS interface on the handheld device"); 11:36-42 ("For example, a reservation made online is automatically communicated to the backoffice server which then synchronizes with all the wireless handheld devices wirelessly. Similarly, changes made on any of the wireless handheld devices will be reflected instantaneously on the backoffice server and the other handheld devices.")). Therefore, the term simply requires synchronization between the clients and the central server, not between the clients themselves.

For its part, Ameranth's proposal limits the scope to a "computerized hospitality system." The defendants' proposal does not limit the system to hospitality functions. The specification makes plain that the invention is not limited to use in restaurants and the hospitality industry: "While the preferred embodiment is for the generation of restaurant menus and the like, the broad scope of the invention is far greater." ('850 patent, 13:37-39). This limitation is accordingly rejected. The court construes the term to mean "a computerized system having multiple devices in which a change to data made on a central server is updated on client devices and vice versa."

B. "generating and transmitting menus" / "generating a second menu from said first menu and transmitting said second menu to a wireless handheld computing device or Web page"

Term	Ameranth's Definition	Defendants' Definition
generating and transmitting menus	creating or updating menus and synchronously configuring display versions for transmission	creating and transmitting [menus]
generating a second menu from said first menu	creating a second menu from constituents of the first menu and other options and synchronously configuring a handheld device or Web page version for transmission such that the displayed second menu is operationally consistent throughout the system	creating a [second menu] from the [first menu] and transmitting the [second menu] to a wireless handheld computing device or Web page
transmitting said second menu to a wireless handheld computing device or Web page	The application software is enabled to configure either a handheld or Web page version of the second menu for transmission, but does not require that the application software is enabled to configure both.	This term requires structure for "transmitting the second menu to both a wireless handheld computing device and a Web page."

The disputed term "generating and transmitting menus" is located in the preamble of each of the asserted independent claims: "An information management and synchronous communications system for *generating and transmitting menus* comprising . . . ." The '850 patent specification discusses the menu generation and transmission process:

> The menu generation approach of the present invention includes a desktop software application that enables the rapid creation and building of a menu and provides a means to instantly download the menu configuration onto, e.g., a handheld device or Web page and to seamlessly interface with standard point of sale ("POS") systems to enable automatic database updates and communication exchanges when a change or input occurs in any of the other system elements.

('850 patent, 3:16-24).

The plaintiff's and defendants' proposals are similar, except that the plaintiff requires "synchronously configuring display versions for transmission." "Synchronous" was already addressed in the immediately preceding term; adding "synchronous" here would be redundant. Furthermore, "menus" will be construed consistently throughout the claims and there is no

support for Ameranth replacing "menus" with "display versions."

The term "generating a second menu from said first menu" is located in claim 1, element (g) of the '850 patent: "application software for *generating a second menu from said first menu* and transmitting said second menu to a wireless handheld computing device or Web page." Ameranth contends that the second menu is created "from constituents of" the first menu. But this term itself contains no language indicating that the second menu is a subset of the first menu. The separate limitation immediately following the claim at issue discloses that the second menu is generated from the first menu by allowing selection of categories and items from the first menu. As this limitation is independent and clearly stated, there is no need to import the restriction into the term at issue. As such, "generating a second menu from first said menu" is construed consistently with the preamble as "creating a second menu from first said menu."

The term "transmitting said second menu to a wireless handheld computing device or Web page" is located in claim 1, element (g) of the '850 patent. The limitation states: "application software for generating a second menu from said first menu and *transmitting said second menu to a wireless handheld computing device or Web page*." (emphasis added). The defendants argue that the software must be capable of both transmitting to a handheld computing device <u>and</u> transmitting to a Web page. Ameranth responds that software does not have to be capable of transmitting to both types of clients; transmitting to one or the other only is sufficient. The plaintiff notes that the term reads "handheld computing device *or* Web page"; it does not say "*and*." The specification also contains this disjunctive language: "In one embodiment, the present invention is a software tool for building a menu, optimizing the process of how the menu can be downloaded to *either a handheld device or Web page . . . .*" ('850 patent, 3:35-39).

In support of its argument, the defendants cite *Cyrix Corp. v. Intel Corp.*, 846 F. Supp. 522 (E.D. Tex. 1994), *aff'd*, 42 F.3d 1411 (Fed. Cir. 1994). In *Cyrix*, the claim limitation at issue stated, "address generating means connected, *in the alternative*, to receive *either* (i) said linear address from said segmentation unit, or (ii) said offset part . . . from said page cache or said page table entry . . . ." *Id.* at 542. The court held that the claimed address generating means must "hav[e] the *capability* of" receiving both the segmentation and page cache options. *Id.* at 530. But it was not necessary for the segmentation and page cache entries to be actually stored in the memory at the same time. *Id.* Based upon *Cyrix*, the defendants contend that the software must be capable of transmitting a second menu to both wireless handheld devices and Web pages.

The defendants' argument is persuasive. The court construes this term "application software for . . . transmitting said second menu to a wireless handheld computing device or Web page" to mean "application software, which is capable of transmitting to both wireless handheld computing devices and Web pages, transmitting the second menu to a wireless handheld computing device or Web page."

C. **"menus"**

Term	Ameranth's Definition	Defendants' Definition
menus	computer hospitality data representing collections of linked levels of choices or options intended for display in a graphical user interface	a database and structured set of displays for the data

The disputed term is located in the preamble of each of the asserted independent claims: "An information management and synchronous communications system for generating and transmitting *menus* comprising . . . ." The specification defines "menu" as

> Menus are typically utilized to provide end users of applications with available choices or processing options . . . . [Menu] [o]ptions can have additional subordinate or child options associated with them. . . . Thus, such a menu system comprises cascading sets of menus which are

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> displayable in context to show the parent/child relationships between options of the context menu.

('850 patent, 5:18–31). Based in part on their requirement of local databases on the client devices, the defendants contend that "menus" must include a database. In support of their database requirement, the defendants cite the following language from the specification: "The steps taken in building a menu are as follows: . . . 7. Download the menu database to the handheld device." ('850 patent, 7:4–12). But, as discussed above in "information management and synchronous communications system," the patent's use of "database" appears to define that term as "data." Furthermore, the written description indicates that the menus' purpose is to be displayed, not to act as storage, e.g., "facilitates user-friendly and efficient generation of computerized menus for . . . non-PC standard graphical formats, display sizes and/or applications" ('850 patent, 2:49–55), "displays menus in a readily comprehensible format" ('850 patent, 2:63–67), and "converting paper-based menus . . . to small PDA-sized displays and Web pages." ('850 patent, 3:32–35). Thus, the court rejects the requirement that there is a storage limitation included in the construction of menus.

Ameranth's proposed construction limits the menus to "computer hospitality data." There is no support for this limitation. The court construes the term "menus" as "computer data representing collections of linked levels of choices or options intended for display in a graphical user interface."

D. "graphical user interface"

Term	Ameranth's Definition	Defendants' Definition
graphical user interface	presentation of graphical representations of data on a computer display screen which enables a user to make selections of the graphically represented data	Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "a type of environment that represents programs, files, and options by means of icons, menus, and dialog boxes on the screen"

The disputed term is located in each of the asserted independent claims: "an operating system including a graphical user interface." The term "graphical user interface" (or GUI), as used in the claims, is consistent with its meaning as understood by one of ordinary skill in the art. The parties' proposed definitions are different in two important respects. First, the plaintiff characterizes a GUI as a "presentation" whereas the defendant calls it an "environment." A GUI is interactive, as it is an "interface," and "presentation" only addresses one side of what a GUI is. On the other hand, "environment" does not connote the graphical nature of a GUI.

The specification explains a GUI by the manner in which it is used:

> Generally, a particular application program presents information to a user through a window of a GUI by drawing images, graphics or text within the window region. The user, in turn communicates with the application by "pointing" at graphical objects in the window with a pointer that is controlled by a hand-operated pointing device, such as a mouse, or by pressing keys on a keyboard.

('850 patent, 5:10–16).

The Court adopts a hybrid of the parties' constructions. The Court construes "graphical user interface" to mean "computer environment wherein an application program presents graphical representations of data on a computer display screen and enables a user to make

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selections of the graphically represented data."

E. "first menu" / "second menu"

Term	Ameranth's Definition	Defendants' Definition
first menu	a menu consisting of specific menu categories and menu items within those	Other than the construction of the term "menu," Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "a first [menu]"
second menu	a menu which includes constituents of the first menu and may include additional options	Other than the construction of the term "menu," Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "a second [menu]"

The disputed terms are located in each of the asserted independent claims: "a *first menu*

consisting of menu categories" that is "stored on said data storage device," and the "data storage

device [is] connected to said central processing unit." The claims also require "application

software for generating a *second menu* from said first menu and transmitting said second menu

to a wireless handheld computing device or Web page." Creation of the second menu is

described in more detail below:

> wherein the application software facilitates the generation of the second
> menu by allowing selection of catagories [sic] and items from the first
> menu, addition of menu categories to the second menu, addition of menu
> items to the second menu and assignment of parameters to items in the
> second menu using the graphical user interface of said operating system,
> said parameters being selected from the modifier and sub-modifier menus.

('850 patent, Claim 1).

From the use of "first menu" and "second menu" in the claims, it is apparent that the first

menu resides on the central server. The central server's software creates the second menu from

the first menu, then transfers the second menu to the client devices and Web pages.

The use of these terms in the claims, plus the construction of the term "menu," makes the meaning of "first menu" and "second menu" fairly clear. Therefore, the court concludes the terms need no construction.

F. "menu categories"

Term	Ameranth's Definition	Defendants' Definition
menu categories	data which enables or reflects a first level of menu choices or options	the classes of items stemming from the root of a menu tree

The disputed term is located in each of the asserted independent claims: "a first menu consisting of *menu categories*." Claim 1 of the '850 patent describes the term "menu categories": "a first menu consisting of menu categories, said menu categories consisting of menu items." "Menu categories" is also disclosed in the specification: "A hierarchical tree structure [] is used to show the different relationships between the menu categories [] (e.g., soups, salads, appetizers, entrees, deserts, etc.)." ('850 patent, 6:14-17).

The parties dispute the need for menu categories to be at the top level, or in other words, "stemming from the root of a menu tree." Ameranth argues that categories can be nested within categories. To support its position, Ameranth cites the following passage from the specification: "In the above example, Menu is the root. Entrees is a *menu category*. Red Meat is an *Entree category*." ('850 patent, 6:66-67) (emphasis added). Thus, according to the plaintiff, "Red Meat" is a category located within the "Entrees" category. However, "Red Meat" is not explicitly described as a "menu category." Next, in support of Ameranth's construction, one skilled in the art would consider "Red Meat" to be a category within a category, not a menu item. But, as discussed below, the patents use the terms "menu category" and "menu item" in a way that is inconsistent with their ordinary meanings.

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In response to the plaintiff's argument, the defendants assert that the patent consistently uses "menu categories" as the top level class of items only–categories are not located within other categories. Figure 1 of the '850 patent depicts the hierarchical menu tree. The first level of items, e.g., appetizers, desserts, drinks, entrees, salads, sandwiches, and soups, are defined as "menu categories." ('850 patent, 6:17-18). The figure shows the very next level of items, e.g., chicken, red meat, and seafood, as well as sub-items, are "menu items" not "menu categories." ('850 patent, 6:17). The specification and claims also discuss the addition of menu items to menu categories, but they do not disclose the creation of categories within categories. (E.g. '850 patent, 7:8 ("4. Add menu items to the categories"); 8:1 ("To add menu items to categories . . . ."); claim 1 ("a first menu consisting of menu categories, said menu categories consisting of menu items")). Finally, the specification explicitly states that "[m]enu categories are created from the root." ('850 patent, 7:60).

Although it is a close call, "menu categories" are restricted to the top level items. Therefore, the term "menu categories" is defined as "the class of items stemming from the root of a menu tree."

G. "menu items"

Term	Ameranth's Definition	Defendants' Definition
menu items	data which enables or reflects menu choices or options within a menu	the set of items stemming from each menu category

The disputed term is located in each of the asserted independent claims: "said menu categories consisting of *menu items*." Ameranth argues for a broad construction of "menu items," such that it encompasses modifiers and sub-modifiers. In support of this contention, the plaintiff notes that the specification allows the user to "add the item as a modifier" ('850 patent, 7:29-30) and "add the item as a sub-modifier." ('850 patent, 7:55-56). But these phrases use the generic

word "item," as opposed to the term "menu item." The specification, however, does not equate "items" with "menu items." (*See* '850 patent, 8:36-37 ("Once the modifiers have been entered, it may be desired to assign sub-modifiers to the modifiers items."); '850 patent 13:30-31 ("a database that includes every item of merchandise").

Several statements in the specification, as well as the patent claims, indicate that "menu items" are separate and distinct from "modifiers" and "sub-modifiers": "5. Assign Modifiers to the menu items" ('850 patent, 7:9); "[o]nce the menu items have been entered, it may be desired to assign some modifiers to the menu items" ('850 patent, 8:21-22); "assignment of parameters to items in the second menu . . . , said parameters being selected from the modifier and sub-modifier menus" ('850 patent, Claim 1).

Based on the statements in the specifications, "menu items" does not encompass "modifiers" or "sub-modifiers." It appears, however, that a menu item may contain other menu items. Therefore, "menu items" is construed as "the set of data stemming from menu categories or other menu items."

H. "hierarchical tree format"

Term	Ameranth's Definition	Defendants' Definition
hierarchical tree format	configuration of information in two or more linked levels	a format having one or more sublevels branching from a common root

The disputed term is located in each of the asserted independent claims: "said first menu stored on said data storage device and displayable in a window of said graphical user interface in a *hierarchical tree format*." The specification uses the term "hierarchical tree format," but does not explicitly define it. In describing Figure 1 of the '850 patent, the specification states, "A hierarchical tree structure 2 is used to show the different relationships between the menu categories 3 . . . , menu items 4 . . . , menu modifiers 5 . . . and menu sub-modifiers 6 . . . ." ('850

patent, 6:14-21). The patent's use of "hierarchical tree format" appears consistent with the dictionary definition of that term.[1]

Ameranth argues that "hierarchical tree format" does not require a common root. But to one of ordinary skill in the art, a tree data structure connotes one or more branch or leaf nodes linked to a single common root node. Nothing in the specification or claims appears to contradict this ordinary definition of "tree" or "hierarchical tree format." Figure 1 depicts a hierarchical tree format in which "Menu" is the root node. (*See* '850 patent, 4:32-33). The written description also discloses the following statements: "Menu categories are created from the root." ('850 patent, 7:60); "When building a menu, it should be kept in mind that the menu items are stored using a tree metaphor . . . . Below is an example of how an item may be configured: . . . . In the above example, Menu is the root." ('850 patent, 6:49-66).

Because "hierarchical tree format" requires a root node, the court adopts the following construction: "a format having one or more sublevels branching from a common root."

I. "modifier menu" / "sub-modifier menu"

Term	Ameranth's Definition	Defendants' Definition
modifier menu	data which enables or reflects menu choices or options which may modify menu items	a database and a second distinct structured list of selectable options associated with menu items
sub-modifier menu	data which enables or reflects menu choices or options in addition to modifiers which may further modify menu items	a database and a third distinct structured list of selectable options associated with modifiers

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[1]*See, e.g.*, Dictionary of Algorithms and Data Structures, available at http://www.itl.nist.gov/div897/sqg/dads/HTML/tree.html (defining "tree" as "[a] data structure accessed beginning at the root node. . . . "); Webster's Computer Dictionary at 173 (defining "hierarchical file system" as "a method of organizing files in a tree structure. The topmost level, called the root directory, contains leaves, called subdirectories, that can in turn contain further subdirectories.")

The disputed terms are located in each of the asserted independent claims: "a *modifier menu* stored on said data storage device and displayable in a window of said graphical user interface" and "a *sub-modifier menu* stored on said data storage device and displayable in a window of said graphical user interface." Although the specification does not contain the exact terms "modifier menu" and "sub-modifier menu," Figure 1 depicts a "modifiers window" and a "sub-modifiers window." The specification states, "The Sub-Modifiers window lists the sub-modifiers that correspond to the modifier that is selected." ('850 patent, 6:32-34). The modifiers window appears to list the modifiers that correspond to the menu item that is selected.

The defendants, consistent with their arguments regarding "menu," contend that the "modifier menu" and "sub-modifier menu" must contain a database. For essentially the reasons set forth above, the court is not persuaded that modifier menu and sub-modifier menu must contain databases. Therefore, "modifier menu" means "a list of choices or options that may modify a menu item." Likewise, "sub-modifier menu" means "a list of choices or options that may further modify a modifier."

J. "facilitates" / "allowing"

Term	Ameranth's Definition	Defendants' Definition
facilitates	configured to perform	Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "makes easier"
allowing	enabling but not requiring	Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "permitting"

The disputed terms are located in each of the asserted independent claims: "wherein the

application software *facilitates* the generation of the second menu by *allowing* selection of cat[e]gories and items from the first menu." The plaintiff argues that its proposals "reflect that the application software is configured or enabled to perform certain recited functions, but that those functions are not required to be performed." Plaintiff's Brief at 26. Plaintiff's assessment of facilitates, at least as it is used in Claim 1 of the '850 patent, is not entirely accurate. The language of claim 1 reads,

> [A]pplication software for generating a second menu from said first menu and transmitting said second menu to a wireless handheld computing device or Web page, wherein the application software *facilitates* the generation of the second menu by allowing selection of cat[e]gories and items from the first menu, addition of menu categories to the second menu, addition of menu items to the second menu and assignment of parameters to items in the second menu . . . .

'850 patent, Claim 1 (emphasis added). In other words, the "information management and synchronous communications system for generating and transmitting menus" includes application software that generates and transmits the second menu. The parties have agreed that the preamble is a limitation. Therefore, the apparatus of the claims has the purpose of "generating and transmitting menus," and the application software must perform the recited functions of generating and transmitting a second menu.

The plaintiff is correct that the "allow[ed]" functions, namely selection, addition, and assignment, as recited by the claims, are not required to be performed. However, those functions are not what the application software facilitates. The application software facilitates the generation of the second menu—which the claim requires—by permitting one or more of the optional functions of selection, addition, or assignment. The plaintiff's proposal "configured to perform" would make the generation of the second menu optional. The court therefore adopts the defendant's construction for "facilitates." The court adopts the plaintiff's construction for

"allowing."

K. "selection of categories and items"

Term	Ameranth's Definition	Defendants' Definition
selection of categories and items	including menu category and item data from the first menu in the second menu	Other than menu categories and items, Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "selection" means "an act or instance of selecting," menu categories and menu items having the meaning discussed above.

The disputed term is located in each of the asserted independent claims: "wherein the application software facilitates the generation of the second menu by allowing *selection of cat[e]gories and items* from the first menu." When viewed in the context of the claim language, and considering that "menu categories" and "menu items" have already been construed, the meaning of this term is fairly straightforward. Therefore, the Court is not inclined to define this term.

L. "addition of menu categories"

Term	Ameranth's Definition	Defendants' Definition
addition of menu categories	including at least one additional menu category in the second menu	Other than menu categories, Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "addition" means "the act or process of adding," and menu categories has the meaning discussed above.
addition of menu items	including at least one additional menu item in the second menu	Other than menu items, Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "addition" means "the act or process of adding," and menu items has the meaning discussed above.

The disputed terms are located in each of the asserted independent claims: "wherein the application software facilitates the generation of the second menu by allowing . . . *addition of menu categories to the second menu*" and "wherein the application software facilitates the generation of the second menu by allowing . . . *addition of menu items to the second menu*." The following passage from the specification describes "addition of menu categories":

> [I]f it is desired to add a category to the menu, the following four options are available: (1) clicking on Edit, Add Category; (2) right mouse clicking on Menu, then clicking on Add Category; (3) highlighting Menu, then typing Ctrl+T or (4) clicking on the Add Category icon on the toolbar.

('850 patent, 6:38-42). Likewise, the specification also describes "addition of menu items":

> To add an item to a category, the following options are available: (1) highlighting the category to which it is desired to add an item and then clicking on Edit>Add Item; (2) right mouse clicking on the desired category and then clicking on Add Item; (3) highlighting the desired category, then typing Ctrl+N or (4) clicking on the Add icon on the toolbar.

('850 patent, 6:42-48).

The court construes the term "addition of menu categories" to mean "including at least one additional menu category." The court construes "addition of menu items" to mean "including at least one additional menu item."

M. "parameters"

Term	Ameranth's Definition	Defendants' Definition
parameters	data from the modifier and sub-modifier menus	a selectable group of criteria at a particular level.

The disputed term is located in each of the asserted independent claims: "wherein the application software facilitates the generation of the second menu by allowing . . . assignment of *parameters* to items." Because the claim sufficiently defines the term "parameters," i.e., "said parameters being selected from the modifier and sub-modifier menus," no additional construction is necessary.

N. "using the graphical user interface of said operating system"

Term	Ameranth's Definition	Defendants' Definition
using the graphical user interface of said operating system	performing operations to create or change a menu via the graphical user interface representation of the menu	Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "using" means "the act of employing, using, or putting into service," and the remaining terms have the meaning discussed above.

The disputed term is located in each of the asserted independent claims: "wherein the application software facilitates the generation of the second menu by allowing . . . assignment of parameters to items in the second menu *using the graphical user interface of said operating system*." The specification discusses the use of a graphical user interface:

> Generally, a particular application program presents information to a user through a window of a GUI by drawing images, graphics or text within the window region. The user, in turn, communicates with the application by "pointing" at graphical objects in the window with a pointer that is controlled by a hand-operated pointing device, such as a mouse, or by pressing keys on a keyboard.

('850 patent, 5:10-16). The patents' use of this term is consistent with the ordinary meaning as understood by one skilled in the art. The dictionary definition of "use" is "to put into service or apply for a purpose; employ." American Heritage Dictionary of the English Language (4th ed.). Because "graphical user interface" has been construed, there is no additional need to construe this term.

O. "wireless handheld computing device"

Term	Ameranth's Definition	Defendants' Definition
wireless handheld computing device	a mobile computing device which is suitable for in-hand use and is capable of wirelessly communicating with other computing devices	Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as "a palm sized wireless computing device"

The disputed term is located in each of the asserted independent claims: "transmitting said second menu to a *wireless handheld computing device*." Based on the limited briefing, the parties appear to dispute whether the handheld computing device must be palm-sized. Although a hand-held device does not necessarily need to be palm-sized, it must be sized to be held in one's hand. The court therefore construes the term to mean "a wireless computing device that is sized to be held in one's hand."

P. "specified parameters"

Term	Ameranth's Definition	Defendants' Definition
specified parameters	criteria which limit the available choices or options in a generated menu	Other than parameters, Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: Specified means "user selected" and "parameters" has the meaning discussed above.

The disputed term is located in claim 9 of the '325 patent: "wherein the facilitation of second menu generation by said application software takes into account *specified parameters*."

Quoted below is the only use of the term "specified parameters" in the specification:

> For example, in the restaurant menu generation embodiment, a modified menu can be generated to comply with a particular specification or group of criteria such as, e.g., "dinner", "low cholesterol", "low fat", "fish", "chicken", or "vegetarian". In this embodiment, only items from the master menu that satisfy *specified parameters* will be included in the generated menu.

('850 patent, 13:64-14:3) (emphasis added). The defendants do not believe that a construction of "specified parameters," apart from "parameters," is necessary. In contrast, Ameranth believes that "parameters" and "specified parameters" are defined separately by the patents. In particular, dependent claim 10 of the '325 patent further limits "specified parameters" to "recipe content." It is doubtful that recipe content would be a modifier or sub-modifier below a menu item. Therefore, "specified parameters" is different from "parameters." "Specified parameters" is construed to mean "criteria that limit the available choices or options in a generated menu."

Q. "manually modified"

Term	Ameranth's Definition	Defendants' Definition
manually modified	effecting a change as a result of a user's input or request	to change by the hands of the user

The disputed term is located in claim 1 of the '733 patent: "wherein the second menu is *manually modified* after generation." The specification gives the following description of "manually modified": "Manual modifications to the generated menus include handwritten screen captures and/or voice recorded message captures coupled with the standard menus and modifiers generated according to standard choices." ('733 patent, 3:48-51).

> For example a restaurant server taking a drink order could select from a menu of her hand-held device's screen 'Iced Tea,' and then manually write in the literal screen of her hand-held 'with lemon' as shown in FIG. 8. The manually-written information could, for example, be printed or displayed in front of a bartender preparing the drink order."

('733 patent, 4:6-11). "Similarly, a server taking a drink order could select from a menu of her hand-held device's screen 'Iced Tea,' and then record the voice message 'with lemon' using her hand-held device integral microphone." ('733 patent, 4:18-22).

Based on the specification's disclosure of voice recording as a form of manual modification, the court rejects the defendants' proposed construction "to change by the hands of the user." (*See also* '733 patent, claim 4 ("said second menu is manually modified by handwriting or voice recording after generation")). Although the specification discusses handwriting and voice recording, there is no indication that "manually modified" must be limited to the preferred embodiments. Therefore, "manually modified" is construed to mean "effecting a change as a result of a user's input or request."

R. "application software"

Term	Ameranth's Definition	Defendants' Definition
application software	computer code or instructions which perform or implement a specific hospitality-related information processing task when executed	Defendants do not believe that a construction is required for this term. If the Court concludes that a construction is required, the term should be construed as: "a computer program for an application."

The disputed term is located in each of the asserted independent claims: "*application software* for generating a second menu from said first menu." The plaintiff asks the court to limit the software to software that performs "hospitality-related" tasks. There is no support to limit the claims as proposed by the plaintiff. Given the rejection of that limitation, there is no need to further construe this term.

S. "stored"

Term	Ameranth's Definition	Defendants' Definition
stored	temporarily or permanently residing	persistently saved and retained

The disputed term is located in each of the asserted independent claims: "said first menu stored on said data storage device." The parties dispute whether "stored" requires persistent storage or whether data that is stored is merely saved temporarily. The plaintiff argues that persistence would undermine the goal of the invention because it would allow obsolete menu configurations to be retained. The only support for limiting storage to persistent storage comes from the preferred embodiment, and the court declines to import that limitation into the claim. The term "stored" means "saved temporarily or permanently."

T. "the display screen"

Term	Ameranth's Definition	Defendants' Definition
the display screen	the visual interface to a computing instrumentality	Defendants do not believe that a construction is required for this term.

The disputed term is located in claims 3, 6, and 10 of the '850 patent. Claim 3 reads in part, "wherein the second menu is capable of being displayed on *the display screen* of a wireless computing device." The use of "the display screen" in the claims and specification appears to be consistent with the ordinary meaning of that term, and no additional construction is necessary.

U. "consisting of"

Term	Ameranth's Definition	Defendants' Definition
consisting of	Ameranth's position is that this term does not need construction because it is a legal term defined by Federal Circuit caselaw Should the Court choose to construe this term, Ameranth proposes the following construction: When used to define an element in a non-preamble clause, this term limits only the element set forth in the clause to the recited constituents but does not exclude other elements from the claim as a whole.	The (d) element of '850 Claim 1, '325 Claim 1, 7-9, and '733 Claim 1 recites the term "consisting of." In this element of the claim, the term "consisting of" limits the element set forth in the clause to its recited constituents but does not exclude other elements from the claim as a whole.

The disputed term is located in each of the asserted independent claims: "a first menu *consisting of* menu categories." The parties dispute whether the claim element that "consists of" other sub-elements may include additional sub-elements not recited. The defendant relies on Federal Circuit law to support the argument that "a first menu consisting of menu categories" may only have menu categories. *See Mannesman Demag v. Engineered Metal Prod.*, 793 F.2d

1279, 1282 (Fed. Cir. 1986); *see also Vehicular Techs. Corp. v. Titan Wheel Int'l Inc.*, 212 F.3d 1377, 1382 (Fed. Cir. 2000). The plaintiff cites to no contrary authority, but argues that under the defendant's proposal, a menu would not have any categories (i.e., a menu consists of menu categories which consists of menu items, *ergo*, a menu consists solely of menu items). The plaintiff's concerns are unnecessary. Under the court's reading of the claims, a menu can consist of only menu categories wherein each menu category can consist only of menu items.

VI. Conclusion

The court adopts the constructions set forth in this opinion for the disputed terms of the '850, '325, and '733 patents. 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 April, 2010.

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CHARLES EVERINGHAM IV
UNITED STATES MAGISTRATE JUDGE