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UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

IPDEV CO.,

Plaintiff, and Counterclaim-Defendant

v.

AMERANTH, INC.,

Defendant, and Counterclaimant.

LEAD CASE NO. 3:11-cv-01810-DMS-WVG

CASE NO. 3:14-cv-01303-DMS-WVG

IPDEV'S OPENING CLAIM CONSTRUCTION BRIEF
[Patent Local Rule 4.4]

Date: December 11, 2017
Time: 9:00 a.m.
Location: Courtroom 13A
Judge: Hon. Dana M. Sabraw

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Pursuant to Patent Local Rule 4.4.a, Plaintiff and Counter-Defendant, IPDEV, Co. ("IPDEV"), respectfully submits its brief in support of its proposed claim constructions for the patents-in-suit in this case, U.S. Patent Nos. 8,738,449 ("the '449 patent") and 8,146,077 ("the '077 patent").

I. BACKGROUND OF THE PATENTED TECHNOLOGY

The '077 patent is entitled "Information Management and Synchronous Communications System with Menu Generation, and Handwriting and Voice Modification of Orders." In general, the '077 patent discloses a synchronous information management and communications system incorporating menu generation for creating menus to be used with wireless handheld computers and personal digital assistants ("PDA's"). '077 Patent, Col. 3:21-26 (ACW Ex. 1). Like IPDEV's '449 patent, the '077 patent discloses multiple embodiments of the invention.

In one embodiment of the invention, the inventors of the '077 patent disclose a solution to "a long-standing operational issue in restaurant/hotel/casino food/drink ordering when customers want something unusual and not anticipated and available through normal computerized selections." *Id.* at Col. 3:57-60. As the title of the patent suggests, this embodiment involves "[m]anual modifications to the generated menus [to] include handwritten screen captures and/or voice recorded message captures coupled with the standard menus and modifiers generated according to standard choices." *Id.* at Col. 3:51-54. "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." *Id.* at Col. 4:9-12. "Similarly, hand-held devices can link the above innovations to individual customers at specific tables through a graphical user interface on the hand-held screen that assigns each customer a number within a table." *Id.* at Col. 4:42-45.

In another embodiment of the invention, the inventors disclose a system "to

place orders from wireless remote handheld devices or from remote locations through the internet." *Id.* at Col. 13:13-16. Both embodiments disclose a system that uses a "menu configuration application" to build a menu where the menu categories are "organized hierarchically." *Id.* at Col. 7:48-Col. 8:36. A "communications control program monitors and routes all communications to the appropriate devices [and] continually monitors the wireless network access point and all other devices connected to the network such as pagers, remote devices, internet Web links and POS software." *Id.* at Col. 10:42-46. The system uses a "synchronous communications control module" as "a single point of entry for all hospitality applications to communicate with one another wirelessly or over the Web." *Id.* at Col. 12:39-42. Finally, "customizable desktop menu generation" is contemplated "in the form of customizable fonts, columns, layouts, etc." *Id.* at Col. 11:23-25.

II. APPLICABLE CLAIM CONSTRUCTION STANDARDS

As a threshold matter, claim construction in a patent interference proceeding pursuant to 35 U.S.C. § 291 does not follow the customary paradigm. Depending on the challenges raised, a given claim might have two meanings: one based upon the specification of the patent in which the claims appear and another based on the specification from which the claims were copied. The Federal Circuit refers to this concept as the "Spina rule" and it is a peculiarity of interference practice that is counterintuitive, if not contradictory, to accepted tenets of claim construction. *In re Spina*, 975 F.2d 854 (Fed. Cir. 1992). When a party "challenges written description support for an interference count or the copied claim in an interference, the originating disclosure provides the meaning of the pertinent claim language." *Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1375 (Fed. Cir. 2009). In contrast, "[w]hen a party challenges a claim's validity under 35 U.S.C. § 102 or § 103, [the District Court] must interpret the claim in light of the specification in which it appears." *Id.* Consequently, the relevant specification for claim

construction depends on whether a party in an interference proceeding challenges the written description under 35 U.S.C. § 112, ¶ 1 or challenges validity under § 102 or § 103. *See Koninklijke Philips Elec. N.V. v. Cardiac Science*, 590 F.3d 1326, 1335 (Fed. Cir. 2010); *see also Tobinick v. Olmarker*, 753 F.3d 1220, 1224 (Fed. Cir. 2014). Because Ameranth challenges written description support in the '449 patent pursuant to 35 U.S.C. § 112, ¶ 1, and does not challenge the validity of the '449 patent claims under § 102 or § 103, the Court should interpret the claims of both the '077 and '449 patents based on the specification of the '077 patent.

Claim construction is a legal determination exclusively within the province of the Court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). "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." *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). When construing claim terms, the Court should first look to the intrinsic record, which includes the claim language, specification and prosecution history. *Sunovion Pharms., Inc. v. Teva Pharms., USA, Inc.*, 731 F.3d 1271, 1276 (Fed. Cir. 2013). The Court should initially consider the language of the claim itself, which should generally be given its "ordinary and customary meaning." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). 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." *Phillips*, 415 F.3d at 1313. Claims, however, do not stand alone and "must be read in view of the specification, of which they are a part." *Id.* at 1315. The specification is usually "dispositive" and "is the single best guide to the meaning of a disputed term." *Id.*

In addition to the claim language and the specification, a court should also consider the patent's prosecution history, if it is in evidence. *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 certain cases, "the district court will need to look beyond the patent's intrinsic evidence and 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 Pharms., U.S.A., Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 841 (2015). Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317 (internal quotations and citations omitted). While extrinsic evidence may be useful to the Court, it is "unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1319. Nevertheless, "extrinsic evidence can help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean." *Id.*

III. THE EVIDENCE SUPPORTS IPDEV'S CONSTRUCTIONS OF THE DISPUTED CLAIM TERMS IN THE '449 AND '077 PATENTS

IPDEV's constructions of the disputed claim terms of the '449 and '077 patents most naturally align with the '077 patent's description of the invention, its prosecution history and the extrinsic evidence. Accordingly, IPDEV respectfully requests the Court to adopt the constructions identified below.

A. "Graphical User Interface" (Claims 1, 9 and 13)

Although the parties all agree that the graphical user interface ("GUI") "presents graphical representations of data on a computer screen and enables a user to make selections of the graphically represented data," the parties disagree on whether this "graphical user interface" is provided by an "application program" or an "operating system," and whether it is necessary for the Court to inject "display"

into its definition. To the extent the Court deems construction of this claim term necessary, IPDEV proposes the following construction: "a computer environment wherein an application program presents graphical representations of data on a computer screen and enables a user to make selections of the graphically represented data."

IPDEV's construction is supported by the specification of the '077 patent, wherein the inventors explain that "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 [whereby] [t]he 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." '077 Patent, Col. 6:30-36; *see also id.* at Col. 6:12-30.[1]

Extrinsic evidence also supports IPDEV's proposed construction. For example, contemporaneous technical dictionary definitions do not incorporate an "operating system" in their definition. *See, e.g.*, ACW Ex. 2, Microsoft Computer Dictionary (4th Ed. 1999), p. 207 (defining "graphical user interface" as: "A visual computer environment that represents programs, files, and options with graphical images, such as icons, menus, and dialog boxes on the screen. The user can select and activate these options by pointing and clicking with a mouse or, often, with the keyboard."). Additionally, IPDEV's expert explained that there are many examples where the GUI tools are not provided by the operating system but rather by a separate "window manager" application. *See* ACW Ex. 3 at 23.

[1] Notably, the Eastern District of Texas relied on this same disclosure and construed "graphical user interface" as "computer environment wherein an application program presents graphical representations of data on a computer display screen and enables a user to make selections of the graphically represented data." *Ameranth, Inc. v. Menusoft Sys. Corp.*, 2-07-cv-271, 2010 WL 1610079, at *8 (E.D. Tex. April 21, 2010).

Ameranth's proposed definition improperly imports limitations into the claim, in this case attempting to import "provided by an operating system" and "display" into the definition of "graphical user interface." In ascertaining the proper scope of patent claims, however, "courts must take extreme care [...] lest they simultaneously import into the claims limitations that were unintended by the patentee." *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1325 (Fed. Cir. 2003). Indeed, "[i]t is improper for a court to add extraneous limitations to a claim, that is limitations added wholly apart from any need to interpret what the patentee meant by particular words or phrases in the claim." *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 950 (Fed. Cir. 1993) (citation omitted). The Court should not adopt Ameranth's proposed definition, as doing so would violate this well-established claim construction canon. Moreover, the claim already requires "an operating system *including* a first graphical interface," rendering Ameranth's proposed construction redundant. Additionally, there is no meaningful distinction between "computer *display* screen" and "computer screen" and Ameranth has failed to articulate one. IPDEV's proposed construction is the correct one as it comports with the commonly understood meaning of "graphical user interface" and is consistent with the specification of the '077 patent.

B. "Cascaded Sets Of Linked Graphical User Interface Screens" (Claims 1, 9 and 13)

IPDEV's proposed construction of the term "cascaded sets of linked graphical user interface screens" to mean "graphical user interface screens that are organized hierarchically" is based on the specification of the '077 patent as well as the understanding of one skilled in the art and should be adopted by the Court.

The '077 patent specification uses the word "cascading" only once. Specifically, it teaches that "in a typical desktop or interactive application, selection of a 'file' from a menu bar may cause display of a context menu which provides 'file' options." '077 Patent, Col. 6:40-43. It continues, explaining that "[i]f a file

option having subordinate options is selected, the child options are displayed in context in a child menu or submenu proximate to the selected parent option." *Id.* at Col. 6:44-47. "Thus, such a menu system comprises *cascading sets of menus* which are displayable in context to show the parent/child relationships between options of the context menu." *Id.* at Col. 6:49-51 (*emphasis added*). The specification of the '077 patent further describes the parent/child relationships between these menu options as "hierarchical." *See id.* at Col. 7:37-43; Col. 8:6-8. Accordingly, IPDEV's construction that the "graphical user interface screens are organized hierarchically" is strongly supported by the specification of the '077 patent.

Moreover, extrinsic evidence also supports IPDEV's proposed construction. First, one skilled in the art would use the word "cascade" to describe a succession of stages in a process, each of which triggers or initiates the next, also referred to as a "hierarchy." *See* ACW Ex 3. at 14-15. Second, a "graphical user interface screen" refers simply to the common set of graphical representations of objects that a user can interact with on a screen, *e.g.*, knobs, icons, windows, sliders, *etc*. *Id.* Third, the idea of "linked" is commonly used and indicates that the GUI screens are organized or connected in some fashion, *e.g.*, a user can easily move between screens. *Id.* at 14. Finally, one skilled in the art would use the word "set" to simply mean a group, in this case a group of linked GUI screens. *Id.*[2] This logical reasoning from one skilled in the art reinforces the propriety of IPDEV's construction.

The Joint Defense Group ("JDG") asserts that this phrase should be construed to mean "two or more linked graphical user interface screens that are displayed in an overlapping fashion such that at least a portion of each selected

[2] While stating that this claim term does not require construction, Ameranth nonetheless proposes the following construction: "sets of graphical user interface screens whose members are linked and arranged in succession." To the extent that "in succession" means hierarchically, then IPDEV's and Ameranth's proposed constructions are equivalent.

screen remains visible." However, there is nothing in the phrase "cascaded set of linked graphical user interface screens" that implies some portion of each screen must "remain visible." The phrase "cascaded set of linked" is descriptive of how the GUI screens are interconnected logically, *e.g.*, how one moves between the group of GUI screens. This phrase does not impart any sort of screen "visibility" characteristic to the group. *See, e.g.*, ACW 3 at 15-16. Unlike IPDEV's construction, the JDG's proposed construction has no support in the specification of the '077 patent, rendering its proposed construction improper.

C. "Menu Configuration Software" (Claims 1 and 9)

IPDEV's proposed construction of "any software application capable of generating a menu configuration, downloading the menu configuration to a user based on the user's request, and carrying out the functions recited in the remainder of the claim" should be adopted by the Court because it is the only reasonable construction based on the specification of the '077 patent.

Throughout the '077 patent, the data set representing the menu that is downloaded to the wireless handheld computing device is referred to as the "menu configuration." For example, the specification of the '077 patent teaches that "[t]he 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." '077 Patent, Col. 3:27-34 (*emphasis added*). This "menu configuration" is generated through the use of any type of "software." For example, the '077 patent specification explains that "[t]he software applications for performing the functions falling within the described invention can be written in any commonly used computer language [and] [t]he discrete programming steps are commonly known and thus programming details are not necessary to a full description of the invention." *Id.* at Col. 12:57-61. Indeed, "[t]he inventive concept encompasses the generation of a menu in any context known to those

skilled in the art where an objective is to facilitate display of the menu so as to enable selection of items from that menu." *Id.* at Col. 15:26-28; *see also id.* at Col. 13:13-16, Col. 15:38-43; Claims 1 and 9. Accordingly, one skilled in the art at the time of the invention would understand "menu configuration software" to mean "any software application capable of generating a menu configuration, downloading the menu configuration to a user based on the user's request, and carrying out the functions recited in the remainder of the claim."

Extrinsic evidence likewise supports IPDEV's construction. One skilled in the art at the time of the invention would readily understand that the "menu configuration software" generates the "programmed handheld menu configuration" by accessing the "master menu file structure" and that assembling the programmed handheld menu configuration can be accomplished by using any software and standard programming techniques. *See* ACW Ex. 3 at 13-14.

The JDG contends that the phrase "menu configuration software enabled to" is drafted in means-plus-function format pursuant to 35 U.S.C. § 112, ¶ 6. IPDEV disagrees. At the outset, the Court must presume that this claim term is *not* drafted in means-plus-function format because this claim term does not recite the term "means." *See Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). This presumption can only be overcome "if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Id.* at 1349 (internal citations and quotations omitted). Accordingly, the presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See id.* As explained below, the claims recite sufficiently definite structure and acts to one skilled in the art, and the JDG cannot overcome the presumption that § 112, ¶ 6 does not apply.

First, "software" is not a nonce word that operates as a substitute for "means" in the context of 35 U.S.C. § 112, ¶ 6. "Rather, it is a noun with a specific structural meaning, defining the set of coded instructions and programs governing the operation of computer hardware." *WhitServe, LLC v. GoDaddy.com, Inc.*, 65 F.Supp.3d 317, 321 (D. Conn. 2014); *see also Affinity Labs of Texas, LLC v. Samsung Elecs Co.*, 1:12-cv-557, 2014 WL 12605382, at *5 (E.D. Tex. June 4, 2014) ("software is a structure-connoting term to one of skill in the art"). Indeed, extrinsic evidence in the form of dictionary definitions and expert testimony confirm that "software" is a structure-connoting term to one skilled in the art. *See, e.g., WhitServe*, 65 F.Supp.3d at 321 (citing two contemporaneous dictionary definitions of "software" supporting a finding that "software" is structure); *Linear Tech Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1319-21 (Fed. Cir. 2004) ("Technical dictionaries [] are evidence of the understandings of persons of skill in the technical arts"); ACW Ex. 3 at 13-14.

Moreover, where "software" or a similar term is coupled with a description of its operation in the claim language, § 112, ¶ 6 is inapplicable. *See, e.g., Syncpoint Imaging, LLC v. Nintendo of Am., Inc.*, 2:15-cv-00247, 2016 WL 55118, at *23-24 (E.D. Tex. Jan. 5, 2016) (§112, ¶6 did not apply to "instructions for [performing a function]"); *Collaborative Agmts., LLC v. Adobe Sys., Inc.*, 15-cv-03853-EMC, 2015 WL 7753293, at *4-9 (N.D. Cal. Dec. 2, 2015) (§ 112, ¶ 6 did not apply to "code segment for [performing a function]"); *WhitServe*, 65 F.Supp.3d at 321-22 (§112, ¶6 did not apply to "software executing on said computer for [performing a function]"); *Affinity Labs*, 2014 WL 12605382, at *4-7 (§112, ¶6 did not apply to "software … configured to [perform a function]). Thus, assuming *arguendo* the term "software" by itself does not disclose sufficient structure, determining whether 35 U.S.C. § 112, ¶ 6 applies requires ascertaining whether the claim language conveys to one skilled in the art a sufficient description of the operation of the software. *See Affinity Labs*, 2014 WL 12605382 at * 5. As

explained below, the claim language provides a more than adequate description of the operation of the claimed "menu configuration software."

This is not a case where the inventors simply recited to "software" without providing detail about how this software accomplishes its functions. The language of claims 1 and 9 of the '077 patent sufficiently define the acts for performing the "menu configuration software" functions, precluding application of 35 U.S.C. § 112, ¶ 6. Specifically, claim 1 recites a "central processing unit," a "data storage device," and an "operating system," all structures utilized to process and manage information transmitted in the claimed system, including the "menu configuration software." '077 Patent, Col. 15:59-63. A "master menu" is stored on the "data storage device" pursuant to a "master menu file structure" and is configured to facilitate display of "graphical user interface screens" included in the "operating system" as "cascaded sets" of linked screens. *Id.* at Col. 15:64-Col. 16:4. The "menu configuration software" accesses the "master menu" stored on the "data storage device" and uses the "central processing unit" to generate a "programmed handheld menu configuration" for wireless transmission and display on a "wireless handheld computing device." *Id.* at Col. 16:5-8. The "menu configuration software" utilizes "parameters from the master menu file structure defining at least the menu categories, menu items and modifiers of the master menu." *Id.* at Col. 16:11-15. The "menu configuration software" is also "enabled to generate the programmed handheld menu configuration in conformity with a customized display layout unique to the wireless handheld computing device" (*id.* at Col. 16:20-23) and "the programmed handheld menu configuration is configured by the menu configuration software for display as programmed cascaded sets of linked graphical user interface screens appropriate for the customized display layout of the wireless handheld computing device." *Id.* at Col. 16:30-35. Accordingly, this is not a case where the term "software" is used generically—the claims expressly recite how this software functions, what structure is utilized by this software (*e.g.*, "central

processing unit," "data storage device," and "operating system") and the data processed by this software (*e.g.*, "master menu file structure"). This same functionality is recited in claim 9 and accordingly, likewise removes this claim element recited in claim 9 from the purview of 35 U.S.C. § 112, ¶ 6. *See id.* at Col. 17:55-59; Col. 17:60-Col. 18:1; Col. 18:3-12, 15-24.

Finally, § 112, ¶ 6 does not apply because the claim language, when read in light of the specification, recites sufficiently definite structure. *See Media Rights Techs., Inc v. Capital One Fin. Corp.*, 800 F.3d 1366, 1371-72 (Fed. Cir. 2015). Particularly, the '077 patent inventors elaborate on the "menu configuration application," explaining how items are arranged "hierarchically," and how to create menu categories, add menu categories, add modifiers to particular menu items, and assign sub-modifiers to menu items. *See* '077 Patent, Col. 7:44-9:65. The inventors also explain that "[a] drag-and-drop approach is used for organizing the tree structure in the generated menu" (*id.* at Col. 10:61-Col. 11:14), that the "menu generation system" can use "an API called ActiveX Data Objects ('ADO') for database access" (*id.* at Col. 11:52-57), and the menu generation approach "uses Windows CE® as the operating system." *Id.* at Col. 12:12-14. This description assists in defining structure for a skilled artisan. *See, e.g., WhitServe*, 65 F.Supp.3d at 322.

In addition to dictionary definitions, other extrinsic evidence also supports the conclusion that the term "menu configuration software" discloses specific structure to one skilled in the art and would not be considered a means-plus-function limitation. Specifically, one skilled in the art would understand that "the 'menu configuration' is a type of data structure that has important characteristics that are needed in the invention [and] unlike the master menu, which has menu information stored in a master menu file structure, the menu configuration data set is derived from the master menu for display on a wireless portable device using parameters from the master menu file structure." ACW Ex. 3 at 13-14.

Accordingly, "while both the master menu and menu configuration are data structures that contain at least some menu information, it is clear that structurally they are formed differently to provide structure that best supports the different needs." *Id.* at 14.

D. "[Generate/Format] A Programmed Handheld [Menu] Configuration" (Claims 1, 9 and 13)

IPDEV maintains that the words recited in this claim term have common ordinary meanings and accordingly, construction is unnecessary. To the extent the Court deems construction of this claim term necessary, IPDEV proposes the following construction: "the programmed handheld menu configuration is generated from the master menu by the menu configuration software using parameters from the master menu file structure and is subsequently transmitted to the wireless handheld devices connected to the system."

This construction encompasses the functionality recited in the claims and further elucidates its meaning without improperly importing limitations from the specification into the claims. Specifically, claim 1 recites that the "programmed handheld menu configuration" is generated by the "menu configuration software" from the "master menu … *for wireless transmission to* … a wireless handheld computing device." ACW Ex. 1, Col. 16:5-8 (*emphasis added*). Claim 1 subsequently requires "synchronous *transmission of* the programmed handheld menu configuration *to* the wireless handheld computing device." *Id.* at Col. 16:41-43 (*emphasis added*). Claims 9 and 13 recite similar limitations. *See id.* at Col. 18:28-32; Col. 20:10-12. Accordingly, because the claims clearly recite that the "programmed handheld menu configuration" must be created prior to transmission, it is readily evident that it is not generated by the "wireless handheld computing device." Hence, IPDEV's proposed construction adding "subsequently transmitted to the wireless handheld devices connected to the system" comports with the plain claim language.

There is nothing in the claim, however, that requires that the "programmed handheld menu configuration" be generated "on a central server in the back office" as proposed by the JDG. Indeed, the specification of the '077 patent teaches that "[t]he inventive concept encompasses the generation of a menu in any context known to those skilled in the art where an objective is to facilitate display of the menu so as to enable selection of items from that menu." '077 Patent, Col. 15:26-29. Furthermore, "menus can be generated in accordance with the present invention in a variety of situations [and] the usable file structure for a particular data processing application can be dictated by the user or an application program prior to or during the execution of the application program." *Id.* at Col. 15:38-43. The JDG's attempt to improperly import characteristics of a preferred embodiment into this term should not be adopted. *See, e.g., Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed. Cir. 1998) ("[T]he claims, not the written description, [] define the scope of the patent right [and] a court may not import limitations from the written description into the claims."). The term does not specify which device must generate a "programmed handheld menu configuration" and the fact the specification of the '077 patent describes an embodiment where this generation occurs does not change the fact that this concept is not recited in the claims.

Moreover, statements made during the prosecution of the '077 patent do not compel a different result. While it is undeniable that Ameranth argued that menu configuration occurs prior to transmission and does not occur on the handheld device, Ameranth never limited its claims to require that the menu configuration *only* occur at the back office server, but rather that it just occurs prior to transmission and not on the handheld device. *See, e.g.,* ACW Ex. 4. (Aug. 21, 2009 Reply & Amendment, at 24) ("The display configuration of the items is determined by software code resident on the HHT itself as distinguished from the presently claimed invention wherein the claimed menu configuration occurs prior to transmission to the handheld device.").

Additionally, the JDG introduces confusion by adding the concept that the "handheld menu configuration" is somehow "optimized for display," a concept that is not addressed in '077 patent. Rather, the '077 patent merely discloses how the menu is "customized" for a device. *See, e.g.*, '077 Patent, Col. 10:20-41; Col. 11:1-14, 41-44; Col. 14:39-46; ACW Ex. 3 at 29-30. As a result, this proposed definition is unclear and unnecessarily introduces ambiguity into the claim.

E. "Wireless Handheld Computing Device" (Claims 1, 6, 9, 13 and 18)

Neither IPDEV nor the JDG believe that construction of the term "wireless handheld computing device" is necessary and the parties do not appear to dispute the meaning of "wireless" or "computing device." Instead, it appears that only the term "handheld" is in dispute. To the extent the Court deems construction of this claim term necessary, IPDEV maintains that it should be construed as "a computing device that is capable of wireless communications and can be held in one's hands."

While the specification of the '077 patent does not expressly define "wireless handheld computing device," it does provide context for ascertaining the meaning of this claim term. As an initial matter, it is not disputed that the '077 patent defines "handheld computing device" to exclude devices the size of standard personal computers ("PCs"). *See, e.g.*, '077 Patent, Col. 2:61-67; 3:35-50; 14:54-60. However, the size of the device, while smaller than a standard PC, is not limited to the size of a smart phone. For example, the inventors lump "digital wireless communication devices" into two categories: (1) "digital wireless messengers and pagers"; and (2) "portable laptop and handheld devices." '077 Patent, Col. 1:41-45. The inventors also explain that the system "incorporates menu generation for creation of menus to be used with wireless remote handheld computer *and* PDA devices." *Id.* at Col. 3:21-26. One skilled in the art would interpret this disclosure to mean that the "wireless handheld computing device," while not a standard PC, is something between a standard PC and a smart phone. In fact, the doctrine of claim differentiation compels this conclusion. Claim 6,

depending from claim 1, recites the additional limitation that "the wireless handheld computing device is a smart phone." *Id.* at Col. 17:16-18. The doctrine of claim differentiation therefore counsels against limiting the term "handheld computing device" to devices the size of smart phones. *See, e.g., Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (Where a particular construction of an independent claim would nullify claims that depend from it, the doctrine of claim differentiation creates a presumption that such a construction is improper).

Ameranth's proposed construction is problematic in that it fails to delineate the boundaries of what is "sized to be held in one's hand." For example, both a deck of cards and a suitcase are "sized" such that one can hold either of them in one hand. ACW Ex. 3 at 18. Moreover, to establish infringement, this proposed definition requires one skilled in the art—and competitors in the marketplace—to speculate as to whether a design is "sized" to be held with one hand, in essence necessitating proving the intent of the manufacturer. *See, e.g., id.* Ameranth's proposed construction therefore unnecessarily introduces indefiniteness and ambiguity into the claims and should not be adopted. *See, e.g., Apple Computer v. Burst.com, Inc.*, C 06-00019, 2007 WL 1342504, at *14 (N.D. Cal. May 8, 2007) (rejecting proposed construction that "injects further ambiguity into the claim").

Ameranth's position also directly contradicts previous arguments it made in the Eastern District of Texas regarding its related patents. Specifically, Ameranth argued that "wireless handheld computing device" should be construed as "a mobile computing device which is *suitable for in-hand use* and is capable of wirelessly communicating with other computing devices." *See Menusoft*, 2010 WL 1610079, at *14 (emphasis added). Clearly, Ameranth at one time believed its specification defined this term broader than it now proffers, and the Court should not disregard Ameranth's prior claim construction position based on essentially the same patent specification.

F. "Synchronized"/"Synchronous" (Claims 1, 9 and 13)

The meaning of the term "synchronous" to one skilled in the art at the time of the invention—outside the context of the '077 patent—would necessarily preclude internet applications, as the internet is an *asynchronous* system. In this case, considering the invention necessarily relies on internet communications to function, the inventors of the '077 patent acted as their own lexicographers, creating a new definition for this commonly-understood technical claim term. *Schoenhaus v. Genesco, Inc.*, 440 F.3d 1354, 1358 (Fed. Cir. 2006) ("The patentee is free to act as his own lexicographer, and may set forth any special definitions of the claim terms in the patent specification or file history, either expressly or impliedly."). Indeed, if the commonly understood meaning of this term applies here, no online ordering system using the internet would infringe a single claim recited in the '077 patent.

With this backdrop, it is apparent that the inventors of the '077 patent meant this term to be construed very broadly to simply mean "made, or configured to make, consistent."[3] For example, the specification of the '077 patent discloses that an "object of the present invention is to provide" a "synchronous communications system" using "a standard hardwired connection, the internet or a wireless link." ACW Ex. 1, Col. 3:1-7. Another feature includes "fast and automatic synchronization between a central database and multiple handheld devices [including] synchronization and communications between a World Wide Web ('Web') server and multiple handheld devices." *Id.* at Col. 2:19-23; *see also id.* at Col. 13:54. Thus, given that communication is over the internet, which is asynchronous, it is clear that the inventors did not define "synchronous" in accordance with its standard technical definition. Moreover, the specification also

[3]Based on positions taken by Ameranth, it is apparent that Ameranth's understanding of the definition of this claim term is at odds with IPDEV's understanding. IPDEV therefore reserves its right to challenge the meaning of this claim term during the patent interference when addressing support in the specification of the '449 patent for this claim term.

teaches one skilled in the art that the invention implements "fast synchronization between a central database and multiple handheld devices," informing one skilled in the art that while "fast," the "synchronization" is not instantaneous. *Id.* at Col. 5:3-16; Col.12:28-38.

Consistent with IPDEV's construction, the PTAB, in its decision denying institution of CBM review of the '077 patent, previously construed "synchronized" to mean "made or configured to make consistent." *Apple, Inc. v. Ameranth, Inc.*, CBM2015-00081 & CBM2015-00095, 2015 WL 5029255, at *8 (PTAB Aug. 20, 2015). Likewise, the Eastern District of Texas has construed "synchronized" in Ameranth's related patents to mean "made to be the same." *Ameranth, Inc. v. PAR Tech. Corp.*, 2:10-cv-294-JRG-RSP, 2012 WL 3283357, at *9 (E.D. Tex. Aug. 10, 2012).

Extrinsic evidence in the form of testimony from one skilled in the art reinforces the propriety of IPDEV's claim construction. Particularly, to one skilled in the art, the concept of "synchronous" disclosed in the '077 patent simply reflects the idea that two largely independent systems are in some way kept the same. ACW Ex. 3 at 19. For example, in the context of the '077 patent, one skilled in the art would understand that what is being made the "same" is the menu information on the various devices that make up the system. If menu information is updated in the master menu, menu configurations sent to the wireless handheld computing devices would reflect the updated menu information. In other words, the menu configuration is "made, or configured to make, consistent." *Id.*

The JDG asserts that, if the Court concludes that a construction is required, "synchronous" should be construed as "made to be the same such that a change to data made on one device is reflected on another device." The Court, however, should not adopt a definition of "synchronous" to incorporate the additional elements of changes to "data" or the concept that these changes are "reflected on another device." These additional elements are simply not part of the term

"synchronous" and are an improper attempt to import additional limitations into the claim term. *See, e.g., Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir. 1999) ("[I]f we once begin to include elements not mentioned in the claim in order to limit such claim ..., we should never know where to stop.").

G. "Customized Display Layout" (Claims 1 and 9)

IPDEV's proposed construction of the term "customized display layout" as "a display layout that is customized based on the user's device and appropriate for display and use on said device" comports with the claim language itself, the disclosure in the specification of the '077 patent, and with how one skilled in the art at the time of the invention would construe it.

Claim 1 of the '077 patent recites "menu configuration software" that is "enabled to generate the programmed handheld menu configuration in conformity with a customized display layout unique to the wireless handheld computing device to facilitate user operations with and display of the programmed handheld menu configuration on the display screen." '077 Patent, Col. 16:20-26. The word "customized" here has a plain and ordinary meaning and indicates that something (in this case the display layout) is modified to suit a particular task (in this case to facilitate user operations associated with the programmed handheld menu configuration). In other words, in the context of the '077 patent claims, the "customized display layout" simply means to appropriately display the menu information on the particular device to facilitate user operation.

While the precise term "customized display layout" does not appear in the specification of the '077 patent, the inventors explained that "PDAs have not been quickly assimilated into the restaurant and hospitality industries [because] their small display sizes are not readily amenable to display of menus as they are commonly printed on paper or displayed on, e.g., large, color desktop computer screens." ACW Ex. 1, Col. 2:12-17. The specification further explains that "[a] PDA or Web page format could appear like FIG. 7 or the display could be

configured for particular requirements since fully customizable menu generation and display are contemplated." *Id.* at Col. 11:41-44. This broad description addressing the "display of menus" and "customizable" menu display evidences what the inventors of the '077 patent contemplated by the phrase "customized display layout" and supports IPDEV's claim construction. Moreover, one skilled in the art would understand that "display layout" is simply a description as to how various visible display elements, *e.g.*, text, graphics, pictures, *etc.*, are arranged on a display system. *See* ACW Ex. 3 at 16.

Hyatt's proposed construction of "unique display of information on the target handheld that does not require having to scroll left/right or up/down to view the information" is not supported by the claims, specification or the prosecution history. Hyatt is improperly attempting to import limitations into the claim by adding functionality that appears nowhere in the claim language. For this reason alone, Hyatt's interpretation should be disregarded. *See, e.g., Hoganas,* 9 F.3d at 950. Moreover, the specification of the '077 patent does not include any disclosure limiting this claim element in the fashion requested by Hyatt. *See* '077 Patent *generally*. Finally, nothing in the prosecution history of the '077 patent dictates that the inventors narrowed their definition of this claim term. Specifically, Ameranth expressly noted that the elimination of scrolling was but "one embodiment of the presently claimed invention" and that "it should be appreciated that any combination of the inventive system as claimed, even with some degree of scrolling, falls within the scope of the present claims." ACW Ex. 4 at 46; *see also* ACW Ex. 5 (Jan. 23, 2009 Reply & Amendment) at 18-19.

H. "Real Time Synchronous Communications To And From The Wireless Handheld Computing Device"/"Synchronize The Hospitality Application Information In Real Time" (Claims 1, 9 and 13)

To the extent the Court deems construction of this claim term necessary, IPDEV maintains that the following construction is the proper one: "real time

synchronous communications between the wireless handheld computing device and the system using the programmed handheld menu configuration." Apart from construction of the term "synchronous," the remainder of these terms have their plain and ordinary meaning and would be readily understood by one of skill in the art. *See, e.g.*, ACW Ex. 3 at 27. IPDEV's definition merely clarifies that the communications to and from the handheld computing device are between devices connected to the overall system and the central server. Indeed, claim 1 recites that "the system is enabled" for such communications. '077 Patent, Col. 16:41-44. Moreover, the specification of the '077 patent clearly discloses that these two types of devices are communicating using the programmed handheld menu configuration. *See, e.g.*, *id.* at Col. 10:42-49; Col. 12:12-38.

The JDG asserts that this phrase should be construed to mean "changes made to the master menu or the programmed handheld menu configuration and selections made from the programmed handheld menu configuration are reflected instantaneously on an entire network of connected devices without a request for an update." There is nothing in the claim language being construed that indicates that some sort of change in one device is "instantaneously" changed on all devices without a "request for an update." The only claimed function pertains to how information is going to be communicated, *i.e.*, by utilizing the programmed handheld menu configuration, and how the communication will occur, *i.e.*, through real time synchronous communication. The JDG attempts to import the description of the preferred embodiment of the "synchronous communications control module" into the claims, but this aspect of the invention is not claimed. *Compare* '077 Patent, Col. 12:39-56 *with* Col. 16:41-49. *See also, e.g.*, *Hoganas*, 9 F.3d at 950. The JDG's attempt to import the idea that this happens instantaneously when any change occurs is inconsistent with how one skilled in the art at the time of the invention would construe this term. *See, e.g.*, ACW Ex. 3 at 28.

Moreover, the specification of the '077 patent defines "real time" in a manner that does not require "instantaneous" transmission. For example, the inventors explained that "the menu generation approach of the present invention uses Windows CE® as the operating system for the handheld devices." '077 Patent, Col. 12:12-13. The inventors note that Windows CE® provides "built-in synchronization between handheld devices." *Id.* at Col. 12:14-16. They then disclose that this operating system can be enhanced by including features such as "fast synchronization between a central database and multiple handheld devices" and "real-time communication over the internet with direct connections or regular modem dialup connections and support for batch processing that can be done periodically throughout the day to keep multiple sites in synch with the central database." *Id.* at Col. 12:28-38; *see also id.* at Col. 2:27-31. Accordingly, while a preferred embodiment discloses that "changes made on any of the wireless handheld devices will be reflected instantaneously on the backoffice server and the other handheld devices," this is not a requirement for every embodiment or the claims.

I. "Web Page" (Claim 13)

One skilled in the art at the time of the invention would construe this claim term according to its common ordinary meaning, namely "a document, with associated files for graphics, scripts, and other resources, accessible over the internet and viewable in a Web browser." This construction is the proper one because it captures the important and relevant characteristics that one skilled in the art would understand a web page to incorporate in the context of the '077 patent. *See, e.g.*, ACW 3 at 22. IPDEV's construction is also consistent with the previous constructions of "web page" in the both PTAB, *see Apple, Inc.*, 2015 WL 5029255, at *9, and the Eastern District of Texas, *see PAR*, 2012 WL 3283357, at *5; ACW Ex. 6, *MenuSoft*, 2:07-cv-00721-CE, Dkt. No. 245.

J. "Communications Control Software Enabled To" (Claim 13)

IPDEV maintains that no construction is required for this claim term and its common ordinary meaning should govern. If, however, the Court construes this claim term, the following construction is the proper one: "software capable of controlling communication of data between all devices connected to the system and performing the functions recited in the remainder of the claim."

The specification of the '077 patent discloses the "communication control software" by explaining that a "communications control program monitors and routes all communications to the appropriate devices [and] continuously monitors the wireless network access point and all other devices connected to the network such as pagers, remote devices, internet Web links and POS software." '077 Patent, Col. 10:42-46. The inventors further explained that "[t]he synchronous communications control module discussed above provides a single point of entry for all hospitality applications to communicate with one another wirelessly or over the Web [and] is a layer that sits on top of any communication protocol and acts as an interface between hospitality applications and the communication protocol." *Id.* at Col. 12:39-45. Finally, the inventors teach one skilled in the art that "[t]he software applications for performing the functions falling within the described invention can be written in any commonly used computer language [and] [t]he discrete programming steps are commonly known and thus programming details are not necessary to a full description of the invention." *Id.* at Col. 12:57-61. This disclosure compels adoption of IPDEV's proposed construction.

The JDG maintains that the phrase "communications control software enabled to" is drafted in means-plus-function format pursuant to 35 U.S.C. § 112, ¶ 6. As articulated above, courts routinely hold that 35 U.S.C. § 112, 6 does not apply to "software" or similar terms, as the term "software" connotes sufficient structure to one skilled in the art. *See supra* at 9-13.

Additionally, the specific claim language provides a more than adequate description as to how the "communications control software" functions and one skilled in the art would neither need nor expect specific algorithms to be disclosed in the specification of the '077 patent to carry out these functions. Specifically, claim 13 recites that "a master database," "at least one wireless handheld computing device," "at least one web server," and "at least one web page" are all connected to the system. '077 Patent, Col. 19:1-8. The "communications control software" links and synchronizes "hospitality application information simultaneously between the master database, wireless handheld computing device, web server and web page." *Id.* at Col. 19:11-15. It accomplishes this task by utilizing "parameters from the master database file structure to synchronize the hospitality application information" between the elements connected to the system so that "substantially the same information" is synchronized and displayed on all connected devices. *Id.* at Col. 19:16-27. Claim 13 also recites that the "communications control software" serves as "a real time interface between the elements of the system and any applicable communications protocol" and "is enabled to automatically and simultaneously configure the hospitality application information for display on both the wireless handheld computing device and the web page." *Id.* at Col. 19:31-38. Finally, the claimed "communications control software" is also "enabled to automatically format a programmed handheld configuration for display as cascaded sets of linked graphical user interface screens." *Id.* at Col. 19:39-Col. 20:4. Because the claim language recited in claim 13 provides a description as to how the software operates and does not simply describe broadly phrased high-level functions, the Court should not apply 35 U.S.C. § 112, ¶ 6. *See, e.g., Collaborative Agmts*, 2015 WL 7753293 at *5.

Extrinsic evidence also reinforces IPDEV's proposed construction. In addition to the dictionary definitions discussed above, one skilled in the art would understand that the term "communication control software" denotes structure since

communication between devices is performed using dedicated and separate hardware from the controller that is running the software. *See* ACW Ex. 3 at 24-25. Additionally, the terms indicate that the software that is executed on the CPU is necessarily coupled to the separate communication hardware in order to control that hardware. Accordingly, the term "communications control software" discloses specific structure to one skilled in the art and should not be considered a means-plus-function limitation. *Id.* at 26-27. ("The defendants appear to ignore the fact that the term requires specific hardware structure beyond just the software and processor running the software. In order for the software to control the communications to separate devices, it is necessary that the processor hardware and communication hardware is in some way coupled.").

IV. CONCLUSION

For the foregoing reasons, IPDEV respectfully requests the Court to adopt its proposed claim constructions, as they comport with the specification, the prosecution history, and with how one skilled in the art at the time of the invention would construe them.

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