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19 **UNITED STATES DISTRICT COURT**  
20 **SOUTHERN DISTRICT OF CALIFORNIA**

21  
22  
23 IN RE: AMERANTH PATENT  
LITIGATION CASES

Civil Action No. 3:11-CV-1810 DMS-  
WVG

24 **DEFENDANTS’ OPENING CLAIM**  
25 **CONSTRUCTION BRIEF**

26 Judge: Hon. Dana M. Sabraw  
Hearing: December 11, 2017

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1 **Rules and Statutes**

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| 13             | Excerpts from Wilbert O. Galitz, "The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques" (1997)      |
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| 17             | Excerpts from Andy Rathbone, "Windows 3.1 for Dummies" (2d ed. 1994)   |
| 18             | Plaintiff Ameranth's Opening Claim Construction Brief, <i>Ameranth Inc. v. Par Tech. Corp.</i> , 2:10-CV-294 (E.D. Tex. Apr. 19, 2012), Dkt. No. 155 |
| 19             | Memorandum Opinion and Order, <i>Ameranth Inc. v. Menusoft Sys. Corp.</i> , 2:07-CV-271 (E.D. Tex. Apr. 21, 2010), Dkt. No. 106                      |
| 20             | Memorandum Opinion and Order, <i>Ameranth Inc. v. Par Tech. Corp.</i> , 2:10-CV-294 (E.D. Tex. Aug. 10, 2012), Dkt. No. 169                          |

1 **I. INTRODUCTION**

2 Defendants’ constructions—unlike Ameranth’s and IPDEV’s—reflect the  
3 clear-cut meaning of the claim language in view of the specification and  
4 Ameranth’s unequivocal statements during prosecution and post-grant proceedings  
5 defining the scope of the claims. Ameranth’s claim construction strategy in this  
6 case is clear: aside from a few terms that may help in its priority dispute with  
7 IPDEV, Ameranth hopes to avoid construction of the claim language so that it is  
8 free to apply the claims broadly against Defendants. Ameranth thus seeks to avoid  
9 the way in which it expressly defined the scope of its claims during prosecution and  
10 post-grant proceedings. In doing so, Ameranth essentially asks the Court to ignore  
11 one of the bedrock principles of patent law—that claims cannot be interpreted one  
12 way during prosecution and a different way against accused infringers. Ameranth  
13 also hopes to avoid means-plus-function treatment of the generic software  
14 limitations in the claims. But Ameranth’s purely functional interpretations of these  
15 elements do not pass muster in the wake of the Federal Circuit’s en banc decision in  
16 *Williamson*.

17 **II. OVERVIEW OF THE ASSERTED PATENT**

18 U.S. Patent No. 8,146,077 (“the ’077 Patent”) describes and claims a  
19 “synchronous communication system” for generating restaurant menus suitable for  
20 use on remote handheld computers and PDA devices and synchronizing those  
21 menus across a network of connected devices, web pages, and servers. ’077 Patent  
22 at Abstract, 3:20-41. With respect to menu generation, the patent describes (and the  
23 claims recite) generating menu configurations suitable for use on a handheld  
24 computing device using a “menu configuration application” on a back-office server.  
25 *See, e.g., id.* at 7:44-50. The menu configurations are then downloaded to the  
26 handheld computing device, web page, etc. *Id.* at 3:20-41, 8:28-36, 9:66-10:13.

27 The patent purports to solve “the problem of converting paper-based menus  
28 or Windows® PC-based menu screens to small PDA-sized displays and Web

1 pages.” *Id.* at 3:42-46. To this end, the claims recite generating a menu  
2 configuration that is displayable as “cascaded sets of graphical user interface  
3 screens appropriate for the customized display layout of the wireless handheld  
4 computing device,” which is “configured differently” from the graphical user  
5 interface screens displayed on the back-office server. *Id.* at 16:20-40. The claims  
6 further recite that the graphical user interface screens for a particular “wireless  
7 handheld computing device” must include “a different number of user interface  
8 screens from at least one other wireless handheld computing device,” further  
9 reinforcing the requirement that each menu configuration is customized for a  
10 particular device. *Id.* at 16:57-62.

11 With respect to synchronization, the patent discloses a “synchronous  
12 communication control module” that serves as a “single point of entry . . . to keep  
13 all wireless handheld devices and linked Web sites in synch with the backoffice  
14 server (central database) so that the different components are in equilibrium *at any*  
15 *given time* and an overall consistency is achieved.” ’077 Patent at 12:39-51<sup>1</sup>  
16 Importantly, the patent does not purport to claim all methods of synchronizing  
17 menus, nor could it in light of the prior art. Instead, the patent claims a specific type  
18 of synchronization—“real time” synchronization—in which changes made on one  
19 component of the system are *automatically* and *instantaneously* reflected on the  
20 other system components. The patent explains:

21 For example, a reservation made online is *automatically*  
22 communicated to the backoffice server which then synchronizes with  
23 all the wireless handheld devices wirelessly. Similarly, changes made  
24 on any of the wireless handheld devices will be reflected  
*instantaneously* on the backoffice server and the other handheld  
25 devices.

26 *Id.* at 12:51-56. Ameranth repeatedly emphasized during prosecution that this type  
27 of synchronization distinguishes the claims of the ’077 Patent from prior art

28 <sup>1</sup> Unless otherwise indicated, all emphases added.



1 systems. The benefits of “real time” synchronization, Ameranth explained, are that:  
2 (1) updates are pushed to the client devices instantaneously without the need for the  
3 client to perform periodic “pulls”; and (2) client devices therefore know ahead of  
4 time whether an item is available to be ordered, rather than being informed  
5 “immediately *after* sending the order.” *See, e.g.*, Ex. 2 at 17, 25-26.

6 Further, although the specification and the claims disclose that certain  
7 software modules (*e.g.*, “menu configuration software” and “communication  
8 control software”) perform the claimed generation and synchronization, the patent  
9 does not disclose any meaningful technical details regarding those software  
10 modules, instead explaining that “[t]he discrete programming steps are commonly  
11 known and thus programming details are not necessary to a full description of the  
12 invention.” ’077 Patent at 12:57-61.

### 13 **III. LEVEL OF ORDINARY SKILL IN THE ART**

14 A person of ordinary skill in the art of the ’077 patent would have had a  
15 Bachelor’s degree in computer science, computer engineering, or electrical  
16 engineering and two years of experience developing software, including  
17 client/server applications and software for wireless devices, and would have been  
18 familiar with graphical user interfaces, handheld computing devices, databases, web  
19 technologies, and network communications. Additional programming experience  
20 could make up for less education and vice versa. *See* Franz Decl., ¶ 24.

### 21 **IV. DISPUTED TERMS REQUIRING CONSTRUCTION<sup>2</sup>**

22 Each of the disputed terms and the parties’ constructions are set forth in full  
23 in the Appendix to Defendants’ Brief.  
24  
25

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26 <sup>2</sup> Pursuant to the Court’s CMC Order (Dkt. No. 623), the Parties have  
27 collectively identified ten terms believed to be most significant to the resolution of  
28 the case. Certain Defendants contend that additional terms require construction  
and/or are indefinite. Those terms are set forth in Dkt. No. 781, Exhibit A to the  
Joint Claim Construction Hearing Statement.

1           **A. The “Software” Elements (Appx. at A2-A5, A9-A12, A16-A19)<sup>3</sup>**

2           Claims 1 and 9 recite “menu configuration software enabled to” perform  
3 specific functions relating to the generation of menu configurations, and claim 13  
4 recites “communications control software enabled to” perform specific functions  
5 relating to generating handheld configurations of and synchronizing hospitality  
6 application information. As explained below, the “menu configuration software ...”  
7 and “communications control software ...” elements are means-plus-function  
8 elements that are indefinite because the patent fails to disclose corresponding  
9 structure. Thus, all asserted claims are invalid.

10                   **1. The “Software” Elements are Means-Plus-Function  
11 Elements.**

12           The “menu configuration software” and “communications control software”  
13 elements are means-plus-function elements because they admittedly set out multiple  
14 functions to be performed by “software”—a court-recognized nonce word—without  
15 reciting sufficient structure for performing those functions. These limitations must  
16 therefore be construed in accordance with 35 U.S.C. § 112, ¶ 6, which “restrict[s]  
17 the scope of coverage to only the structure, materials, or acts described in the  
18 specification as corresponding to the claimed function and equivalents thereof.”  
*Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347 (Fed. Cir. 2015).

19           Until recently, and prior to the issuance of the ’077 Patent, patent prosecutors  
20 tried to dodge § 112, ¶ 6 by simply not using the term “means,” because the  
21 absence of that term triggered a strong presumption that the statute did not apply.  
22 *Id.* at 1348-49. That practice “resulted in a proliferation of functional claiming  
23 untethered to § 112, para. 6 and free of the strictures set forth in that statute.” *Id.* at  
24 1349. In *Williamson*, the Federal Circuit, sitting en banc, closed this loophole by  
25 rejecting the “strong” presumption and restoring a “balanced analytical scale”:

26           The standard is whether the words of the claim are understood by  
27 persons of ordinary skill in the art to have a sufficiently definite

28           <sup>3</sup> Defendant QuikOrder, Inc. does not join in this portion of Defendants’ brief.

1 meaning as the name for structure. When a claim term lacks the word  
2 “means,” the presumption can be overcome and § 112, para. 6 will  
3 apply 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.”

4 *Id.* (citations omitted). Applying this standard, the *Williamson* court found that the  
5 claim term “distributed learning control module” was a means-plus-function  
6 element because the claim did not recite adequate structure for performing the  
7 claimed functions associated with the module. *Id.* at 1349-51.

8 Here, there is no dispute that the “menu configuration software” and  
9 “communications control software” limitations recite functions performed by  
10 “software.” In post-grant proceedings, Ameranth emphasized that the claims of the  
11 ’077 Patent recite “functional limitations” rather than method steps, explaining that  
12 “the claimed functionality is explicitly provided by the menu configuration or  
13 communications control software,” and “[t]he examiners certainly understood that  
14 ***these are functional limitations.***”<sup>4</sup> Ex. 5 at 51-52. The PTAB agreed, noting for  
15 example that “claim 13 is directed to a system comprising communications control  
16 software that is capable of ***performing the recited functions.***” Ex. 6 at 22; *see also*  
17 *id.* at 23 (discussing “functions recited in clause ‘e’” (menu configuration software)  
18 of claims 1 and 9). In another CBM, Ameranth went one step further and  
19 specifically identified five “enumerated MCS [*i.e.*, menu configuration software]  
20 functions” in claims 1 and 9. Ex. 9 at 77-78.<sup>5</sup> IPDEV’s constructions likewise  
21 explicitly reference “the functions recited” in the claims. *See* Appx. at A2, A9-10,  
22 A16-17.

23 The question is thus whether the claims set forth adequate structure to  
24 perform the functions recited in the claims. *See Williamson*, 792 F.3d at 1349. The

25 \_\_\_\_\_  
26 <sup>4</sup> Similarly, in the *Par* case, Ameranth characterized the “communications  
27 control module” as a “***software function***/application.” Ex. 18 at 27. The *Par* court  
28 agreed, holding that “a communication control module” is “a software layer that sits  
on top of a communication protocol and acts as an interface between hospitality  
applications and the communications protocol.” Ex. 20 at 12-13.

<sup>5</sup> Ameranth suggested claim 13 was similar in this regard. *Id.* at 79 n.28.

1 term “software” does not recite structure. Like “module” in *Williamson*, “software”  
 2 is a nonce word—a “verbal construct” Ameranth used to draft claims describing  
 3 what the software *does* rather than what it *is*. See *Williamson*, 792 F.3d at 1350.<sup>6</sup> As  
 4 another district court found, “[t]he term ‘software’ standing alone connotes no more  
 5 structure than the term ‘means.’” *Advanced Ground Info. Sys., Inc. v. Life360, Inc.*,  
 6 9:14-cv-80651-DMM, 2014 WL 12652322, at \*7 (S.D. Fla. Nov. 21, 2014).<sup>7</sup> By the  
 7 same token, the Federal Circuit has held that “software” is too generic to suffice as  
 8 disclosure of corresponding structure. *Finisar Corp. v. DirectTV Group, Inc.*, 523  
 9 F.3d 1323, 1340-41 (Fed. Cir. 2008) (“Simply reciting ‘software’ without providing  
 10 some detail about the means to accomplish the function is not enough.”).

11 The “menu configuration” and “communications control” prefixes do not add  
 12 sufficient structure to avoid § 112, ¶ 6. See *Williamson*, 792 F.3d at 1351  
 13 (discussing “distributed learning control” prefix); see also, e.g., *Media Rights*  
 14 *Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366 1373-74 (Fed. Cir. 2015)  
 15 (merely adding the modifier “compliance” to a nonce word does not connote an  
 16 identifiable structure); *Mass. Inst. of Tech. & Elecs. for Imaging, Inc. v. Abacus*  
 17 *Software*, 462 F.3d 1344, 1353-54 (Fed. Cir. 2006) (“colorant selection” prefix did  
 18 not add sufficient structure because it did not have generally understood meaning in  
 19 the art and specification provided no structural definition). Neither “menu  
 20 configuration software” nor “communications control software” would have been  
 21 understood by a person of ordinary skill in the art (“POSITA”) to have a  
 22 sufficiently definite meaning as the name for structure. Franz Decl., ¶¶ 29-31, 38-

23 \_\_\_\_\_  
 24 <sup>6</sup> See also *Advanced Ground Info. Sys. v. Life360, Inc.*, 830 F.3d 1341, 1347-  
 25 48 (Fed. Cir. 2016) (“The term ‘symbol generator’ invokes the application of § 112,  
 26 ¶ 6 because it fails to describe a sufficient structure”—the term “is simply an  
 27 abstraction that describes the function being performed (i.e., the generation of  
 28 symbols)”).

<sup>7</sup> Similarly, other generic terms like “program,” “code,” and “computer  
 application” have been recognized as equivalent to “means.” *Zeroclick, LLC v.*  
*Apple Inc.*, No. 15-cv-04417-JST, 2016 WL 5477115, \*4-6 (N.D. Cal. Aug. 16,  
 2016) (“program” and “code”); *Verint Sys. v. Red Box Recorders Ltd.*, 166 F. Supp.  
 3d 364, 379-80 (S.D.N.Y. 2016) (“computer application”).

1 39. Nor does the specification establish any “structural significance” for the terms.  
2 *See Williamson*, 792 F.3d at 1351. The specification offers only a high-level  
3 description of the software, which is functional rather than structural. *See, e.g.*, ’077  
4 Patent at 7:31-10:13 (discussing “menu configuration application”); 10:42-60 and  
5 12:39-56 (discussing “communication control [program / module]”); *see also* Franz  
6 Decl., ¶¶ 31, 39. Far from “hav[ing] a sufficiently definite meaning as the name for  
7 structure,” *Williamson*, 792 F.3d at 1349, “menu configuration software” and  
8 “communications control software” are generic terms for *any* software that  
9 performs the claimed functions. *See* Franz Decl., ¶¶ 29, 35, 38, 43. These terms  
10 “set[ ] forth the same black box recitation of structure for providing the same  
11 specified function[s] as if the term ‘means’ had been used.” *Williamson*, 792 F.3d at  
12 1350.

13 Because the claims do not recite structure by which the menu configuration  
14 software and communications control software perform the claimed functions,  
15 Ameranth may argue that other claim elements such as the “central processing  
16 unit,” the “data storage device,” the “master menu” or “master database” constitute  
17 the required structure. Such an argument fails, however, as the claims state that that  
18 it is the menu configuration software and communications control software, and not  
19 these other elements, that perform the claimed functions. Moreover, just as in  
20 *Williamson*, “the claim[s] do[ ] not describe how the [‘software’ elements]  
21 interact[] with these other components . . . in a way that might inform the structural  
22 character of the limitation[s]-in-question or otherwise impart structure to the  
23 [‘software’ elements].” 792 F.3d at 1351.

## 24 **2. The Specification Fails to Describe Corresponding Structure** 25 **for Performing the Claimed Functions.**

26 Where a specification fails to describe corresponding structure for a means-  
27 plus-function element, the claim is rendered indefinite. *Biomedino, LLC v. Waters*  
28 *Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007); *Finisar*, 523 F.3d at 1341

1 (“Without any corresponding structure, one of skill simply cannot perceive the  
2 bounds of the invention.”). For software-implemented means-plus-function  
3 limitations, the specification must “disclose the algorithm for performing the  
4 function.” *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir.  
5 2013). The algorithm in the specification must support each and every recited  
6 function. *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1318-19 (Fed. Cir. 2012)  
7 (“[W]here a disclosed algorithm supports some, but not all, of the functions  
8 associated with a means-plus-function limitation, we treat the specification as if no  
9 algorithm has been disclosed at all.”); *see also Media Rights Techs.*, 800 F.3d at  
10 1374 (“The question is whether the specification discloses adequate structure to  
11 achieve *all* four of the claimed functions.”).

12 The ’077 Patent fails to describe algorithms for performing each function  
13 recited for the “menu configuration software” and the “communications control  
14 software.” Indeed, the specification acknowledges that it does not bother with  
15 discussion of the “programming steps” for performing the recited functions because  
16 “the discrete programming steps are commonly known and thus programming  
17 details are not necessary to a full description of the invention.” ’077 Patent at  
18 12:57-61.<sup>8</sup> Instead, the ’077 Patent provides a high-level description of software  
19 that allows a user to build a menu and download it to a handheld device, which  
20 focuses on steps performed by the user, rather than steps performed by the software.  
21 *See generally id.* at 7:31-10:13, Figs. 1-5. Similar disclosures were rejected in  
22 *Williamson*. 792 F.3d at 1353-54 (“description of a presenter display interface” with  
23 fields, links, and buttons did not disclose algorithm).

24  
25 <sup>8</sup> Whether a POSITA *could* devise suitable algorithms, as the ’077 Patent  
26 suggests, is irrelevant to the issue of definiteness. *See Blackboard, Inc. v.*  
27 *Desire2Learn, Inc.*, 574 F.3d 1371, 1385 (Fed. Cir. 2009) (“A patentee cannot  
28 avoid providing specificity as to structure simply because someone of ordinary skill  
in the art would be able to devise a means to perform the claimed function. To  
allow that form of claiming under section 112, paragraph 6, would allow the  
patentee to claim all possible means of achieving a function.”).

1 The '077 Patent discloses no algorithm for how the menu configuration  
2 software generates programmed handheld menu configurations with cascaded sets  
3 of linked graphical user interface (GUI) screens as required by elements 1-F and 1-  
4 G in claim 1 and elements 9-G and 9-H in claim 9. *See App.* at A3-A5, A12-A14.  
5 As Prof. Franz discusses, the specification does not include a flow chart or anything  
6 else describing a step-by-step procedure by which any software (1) generates  
7 programmed handheld menu configurations, (2) makes them conform to a unique  
8 layout of a handheld device, or (3) configures them for display as cascaded sets of  
9 linked GUI screens. Franz Decl., ¶¶ 47-49; *see also Ergo Licensing, LLC v.*  
10 *CareFusion 303, Inc.*, 673 F.3d 1361 1365 (Fed. Cir. 2012) (“Even described ‘in  
11 prose,’ an algorithm is still a step-by-step procedure for accomplishing a given  
12 result.”). Although Ameranth has repeatedly stressed that the programmed handheld  
13 menu configurations include links between GUI screens,<sup>9</sup> the specification does not  
14 discuss how the software determines the appropriate number of GUI screens for a  
15 given handheld device or how it creates linkages between screens. Franz Decl.,  
16 ¶¶ 47-48.

17 Similarly, the '077 Patent fails to disclose algorithms for automatically and  
18 simultaneously configuring information for display on handheld devices and web  
19 pages having customized display layouts as recited in element 13-H, and formatting  
20 a programmed handheld configuration for display via linked user interface screens  
21 as recited in element 13-I. *See Appx.* at A19-A20; Franz Decl., ¶¶ 50-52. Further,  
22 as noted above, the specification does not describe how any software determines an  
23

---

24 <sup>9</sup> *See, e.g., Ex. 4* at 36 (“cascading and linked menu screens unique for the  
25 handheld device are generated including the creation and linking of additional  
26 screens vis-a-vis the master menu file structure to provide a coherent menu flow for  
27 the particular display device”); *id.* at 46 (“additional user screens are created and  
28 linked appropriately to provide a coherent, user friendly flow for the particular  
display device”); *see also Ex. 10* at ¶111 (“the generation of the [programed  
handheld menu configuration] must be from the “master menu” and must include  
the programmed linkages between menu screens.”); *id.* (“the claim requires that  
GUI screens are ***linked to each other***, by programming”) (emphasis in original).

1 appropriate number of GUI screens or how it creates links between such screens.  
2 Franz Decl., ¶¶ 51-52

3 The algorithm requirement exists to prevent precisely the kind of “purely  
4 functional” software claims that Ameranth is asserting in this case. *Noah Sys.*, 675  
5 F.3d at 1318 (“[T]he algorithm requirement [is meant] to prevent purely functional  
6 claiming when a patentee employs a special purpose computer-implemented means-  
7 plus-function limitation.”).<sup>10</sup> The lack of corresponding structure, *i.e.*, algorithms,  
8 in the specification renders the claims indefinite. The dependent claims inherit these  
9 limitations and are therefore indefinite for the same reasons.

10 **B. Real Time Synchronization Terms (Appx. at A8-A9, A13, A19)**

11 The primary dispute with respect to these claim phrases is whether to give  
12 effect to the “real time” aspect of the synchronization process recited by the  
13 asserted claims. Put simply, Ameranth seeks to read out of the claims the key  
14 requirement that synchronization occur in “real time.” Ameranth added the “real  
15 time” synchronization claim phrases during prosecution and repeatedly relied on  
16 this specific type of synchronization to distinguish its claims from the prior art. In  
17 doing so, Ameranth defined “real time” synchronization as synchronization that  
18 occurs “instantaneously” and “automatically” (*i.e.*, by “pushing” updates to  
19 synchronized components of the claimed system),<sup>11</sup> in contrast to the non-  
20 instantaneous and “pull” types of synchronization performed by prior art systems.  
21 As Ameranth explained to the examiner, the effect of the invention’s  
22 “instantaneous” and “automatic” synchronization is that “all linked devices are

23 <sup>10</sup> See also *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d  
24 1328, 1333 (Fed. Cir. 2008) (“Because general purpose computers can be  
25 programmed to perform very different tasks in very different ways, simply  
disclosing a computer as the structure designated to perform a particular function  
does not limit the scope of the claim to ‘the corresponding structure, material, or  
acts’ that perform the function, as required by section 112, paragraph 6.”).

26 <sup>11</sup> Claims 1 and 9 recite “real time synchronous” communication among  
27 “wireless handheld computing device[s],” while claim 13 recites synchronizing “in  
28 real time” among “the master database, at least one wireless handheld computing  
device, at least one web server, and at least one web page.” Appx. at A8-9, A13,  
A19. Collectively, these are referenced herein as “synchronized components.”



1 always synchronize[d] with each other,” without having to send an update request.  
 2 Ex. 2 at 25-26. This specific mode of synchronization is emphasized in the patent  
 3 itself, which states that synchronization is “*automatic*. . . when a change or input  
 4 occurs in *any of the other system elements*.” ’077 Patent at 3:33-35.

5 Ameranth now attempts to avoid its own statements by separating the  
 6 construction of “real time” from “synchronous” and “synchronized.” And it does so  
 7 in an effort to support its infringement claims against the very types of systems it  
 8 distinguished during prosecution. Because Defendants’ proposed constructions  
 9 properly capture the key feature upon which the Ameranth repeatedly relied to  
 10 distinguish the prior art, they should be adopted.

11 **1. Ameranth Defined Real Time Synchronization to Exclude  
 12 Non-Instantaneous and Pull Types of Synchronization.**

13 Ameranth repeatedly distinguished its claims from the prior art, arguing that  
 14 “real time” synchronization requires: (1) “instantaneously” updating synchronized  
 15 components, and (2) “automatically” updating (or “pushing” updates to)  
 16 synchronized components. In making these statements, Ameranth clearly and  
 17 unequivocally defined its claim scope to exclude non-instantaneous and “pull”  
 18 types of synchronization. *See Omega Engineering, Inc. v. Raytak Corp.*, 334 F.3d  
 19 1314, 1325-26 (Fed. Cir. 2003) (“[W]here the patentee has unequivocally  
 20 disavowed a certain meaning to obtain his patent, [he thereby] narrows the ordinary  
 21 meaning of the claim congruent with the scope of the surrender.”).<sup>12</sup>

22 In response to prior art rejections, Ameranth amended the claims to add the  
 23 disputed claim phrases, which recite synchronizing menu and hospitality  
 24 application information in “real time.” *See* Ex. 1 at 2, 6, 8; Ex. 4 at 4, 8. Relying on  
 25 these amendments, Ameranth argued that prior art U.S. Patent No. 6,973,437  
 26 (“Olewicz”) fails to “teach or suggest a real time, synchronous menu/ordering

27 <sup>12</sup> *See also Aylus Networks, Inc., v. Apple Inc.*, 856 F.3d 1353, 1359 (Fed. Cir.  
 28 2017) (Disclaimer may arise via any “express representations made by or on behalf  
 of the applicant to the examiner to induce a patent grant . . . includ[ing]  
 amendments to the claims and arguments made to convince the examiner.”).

1 system.” Ex. 2 at 17. Ameranth distinguished Olewicz on the ground that the  
2 Olewicz mobile devices receive an update regarding item availability “immediately  
3 *after* sending the order,” with “[t]he salient word [being] ‘*after*’.” *Id.* at 17-18.  
4 Ameranth thus argued that Olewicz fails to disclose real time synchronization  
5 because its mobile devices “do not ‘know’ whether the items sought to be ordered  
6 from the menu are available when the order is entered.” *Id.* In doing so, Ameranth  
7 defined its claim scope to exclude systems in which the synchronization is not  
8 instantaneous, contending that such synchronization is not performed in “real time.”

9 In addition, Ameranth argued that prior art U.S. Patent No. 5,912,743  
10 (“Kinebuchi”) fails to disclose “a ‘synchronized system’ as presently claimed,”  
11 because the transfer of data is delayed until “a time band in which the terminal is  
12 not usually in use,” and thus “‘teaches away’ from the *real time synchronization* of  
13 the invention as presently claimed.” Ex. 1 at 19-20. In other words, Ameranth  
14 argued that Kinebuchi failed to disclose “real time” synchronization because it did  
15 not disclose *instantaneously* updating multiple system components.

16 Ameranth also distinguished the claimed “real time” synchronization from  
17 systems in which connected components must “pull” or request updates. For  
18 example, Ameranth argued that prior art U.S. Patent Publication 2002/0059405  
19 (“Angwin”) “teach[es] away from the claimed real time synchronized system”  
20 because “remote device users must periodically send out a so-called ‘request  
21 services menu’ message.” Ex. 2 at 25-26. Ameranth distinguished “the presently-  
22 claimed synchronous real time system” on the grounds that “no such ‘request  
23 services menu’ message ever needs to be sent, since all linked devices are always  
24 synchronize with each other.” *Id.* Ameranth thus defined its claim scope to exclude  
25 systems in which components must “pull” the latest data, contending that they are  
26 not “real time synchronized system[s].”

27 Ameranth’s and IPDEV’s constructions should be rejected because they  
28 renege on Ameranth’s prosecution statements which make clear that

1 synchronization must occur instantaneously and automatically upon a change made  
2 elsewhere within the system. Ameranth cannot now recapture through claim  
3 construction the very type of synchronization it said was excluded from the scope  
4 of the claims during prosecution. *See Omega*, 334 F.3d at 1323 (Prosecution  
5 disclaimer “preclud[es] patentees from recapturing through claim interpretation  
6 specific meanings disclaimed during prosecution.”); *Southwall Techs., Inc. v.*  
7 *Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995) (claims may not be  
8 “construed one way in order to obtain their allowance and in a different way against  
9 accused infringers”).

10 **2. The Specification Defines Real Time Synchronization as an**  
11 **Instantaneous Process Accomplished Without a Request for**  
12 **an Update.**

12 Ameranth’s narrow interpretation of its claims during prosecution is  
13 consistent with both the ordinary meaning of “real time”—which denotes  
14 immediacy—and the specification of the ’077 Patent. The specification  
15 characterizes the “present invention” as “an information management and  
16 synchronous communication system.” ’077 Patent at Abstract. As described in the  
17 Summary of the Invention section of the patent, synchronization among the system  
18 components is both “instantaneous” and “automatic.” For example, “changes made  
19 on any of the wireless handheld devices are reflected *instantaneously* on the  
20 backoffice server, Web pages, and the other handheld devices.” *Id.* at 5:37-40.  
21 Likewise, the patent describes the “present invention” as providing a system in  
22 which changes made to a menu configuration are “*instantly* download[ed] . . . onto,  
23 e.g., a handheld device or Web page . . . to enable automatic database updates and  
24 communication exchanges when a change or input occurs in any of the other system  
25 elements.” *Id.* at 3:27-35; *see also id.* at 12:51-56 (changes “will be reflected  
26 instantaneously on the backoffice server and the other handheld devices”).<sup>13</sup>

27 <sup>13</sup> The Federal Circuit repeatedly has held such statements concerning “the  
28 present invention” to be clear and unmistakable statements constituting disavowal  
or disclaimer.” *Unwired Planet, LLC v. Apple Inc.*, 829 F.3d 1353, 1358 (Fed. Cir.

1           The patent further explains that synchronization is “*automatic*. . . when a  
 2 change or input occurs in *any of the other system elements*.” *Id.* at 3:33-35. In  
 3 other words, the patent describes “the invention as a whole” as a system in which a  
 4 change made on one system component is transmitted to other system components  
 5 without those components having to “pull” or request the update. *See, e.g., Am.*  
 6 *Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1334 (Fed. Cir. 2011) (“a  
 7 statement in a specification that describes the invention as a whole can support a  
 8 limiting construction of a claim term”); *C.R. Bard, Inc. v. United States Surgical*  
 9 *Corp.*, 388 F.3d 858, 864 (Fed. Cir. 2004) (“Statements that describe the invention  
 10 as a whole are more likely to be found in certain sections of the specification, such  
 11 as the Summary of the Invention.”).

12           Defendants’ constructions—unlike Ameranth’s and IPDEV’s—are consistent  
 13 with the intrinsic record, including Ameranth’s unequivocal prosecution statements  
 14 defining the claims to require that changes are “reflected instantaneously” on  
 15 synchronized devices “without a request for an update.” For this reason,  
 16 Defendants’ constructions should be adopted.

17           **C. Synchronized / Synchronous (Appx. at A6-A7, A13, A20-A21)<sup>14</sup>**

18           Ameranth and IPDEV seek to construe the terms “synchronized” and  
 19 “synchronous” in isolation—devoid of the surrounding claim language that defines  
 20 the specific type of synchronization required by the claims and which Ameranth  
 21 expressly relied on during prosecution to distinguish the prior art. In Ameranth’s  
 22 case, this is an attempt to avoid the consequences of its own statements defining the  
 23 scope of the claims, and thus, should be rejected.

24           The terms “synchronized” and “synchronous” are not recited in isolation.

25           2016); *see also Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343,  
 26 1353 (Fed. Cir. 2016); *David Netzer Consulting Eng’r LLC v. Shell Oil Co.*, 824  
 27 F.3d 989, 994 (Fed. Cir. 2016), *cert. denied*, 137 S. Ct. 695 (2017) (“We have  
 found disavowal or disclaimer based on clear and unmistakable statement[s], such  
 as ‘the present invention includes . . .’”).

28           <sup>14</sup> GrubHub Holdings has filed a separate brief on this issue pursuant to Dkt.  
 No. 775.

1 The surrounding claim language provides important context that must be  
2 considered when construing these terms. *See Medrad, Inc. v. MRI Devices Corp.*,  
3 401 F.3d 1313, 1319 (Fed. Cir. 2005) (explaining that it is improper to “look at the  
4 words of the claim” apart from the “context” in which they are used in the patent);  
5 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313-14 (Fed. Cir. 2005) (“the context of  
6 the surrounding words of the claim also must be considered in determining the  
7 ordinary and customary meaning of those terms”). The surrounding claim language  
8 makes clear, for example, that the claims recite a specific type of synchronization—  
9 “real time” synchronization. ’077 Patent. at 16:41-44 (reciting “real time  
10 synchronous communications”), 18:25-28 (same), 19:17-20 (reciting “synchronize  
11 the hospitality application information in real time”). As explained above,  
12 Ameranth repeatedly relied on “real time” synchronization to distinguish its claims  
13 from non-instantaneous and “pull” types of synchronization. *See supra* § IV.B.1. A  
14 proper construction of these terms must reflect that distinction. For that reason,  
15 “synchronized” and “synchronous” must be construed in the context of the “real  
16 time” synchronization terms discussed above.

17 To the extent the Court does construe “synchronized” and “synchronous” as  
18 stand-alone terms, Ameranth’s construction (with which IPDEV agrees) should be  
19 rejected because it is abstract. Ameranth’s construction—requiring only “made, or  
20 configured to make, consistent”—fails to make clear what must be synchronized.  
21 Defendants’ construction, on the other hand, makes clear synchronization requires  
22 that “a change to data made on one device is reflected on another device.”  
23 Additionally, as explained above, Ameranth’s construction ignores Ameranth’s  
24 repeated statements during prosecution regarding the specific type of  
25 synchronization required by the claims (*i.e.*, “real time” synchronization). *See supra*  
26 § IV.B.1. For these reasons, Defendants’ construction should be adopted if the  
27 Court elects to construe “synchronous” and “synchronized” as stand-alone terms.

28

1           **D. [Generate/Format] A Programmed Handheld [Menu]**  
 2           **Configuration (Appx. at A5-A6, A12, A21-A22)**

3           Defendants’ constructions clarify the claim language in two respects. First,  
 4 consistent with the plain language of the claims, the specification, and Ameranth’s  
 5 disavowals of claim scope during prosecution and post-grant proceedings,  
 6 Defendants’ constructions require that the generating/formatting of the handheld  
 7 configurations occur solely at a central server, not on a handheld device.  
 8 Ameranth’s own expert agrees with Defendants on this point. Second, Defendants’  
 9 constructions incorporate the definition that Ameranth gave to these terms during  
 10 prosecution when it relied on the “optimization” of the claimed handheld  
 11 configurations to distinguish prior art. Clarification of these issues is important  
 12 because the accused systems neither generate/format “handheld configurations”  
 13 solely at a server, nor send menu configurations that are optimized for display on a  
 14 particular handheld device.

15           **1. The Generating/Formatting of the Handheld Configurations**  
 16           **Occurs at a Central Server, Not A Handheld Device.**

17           The claim language itself requires the programmed handheld configuration to  
 18 be generated / formatted *before* it is transmitted to the wireless handheld devices.  
 19 Claim 1, for example, requires the claimed system to “generate a programmed  
 20 handheld menu configuration . . . *for wireless transmission to* ... a wireless  
 21 handheld computing device.” ‘077 Patent at 16:5-8. Claim 1 further recites “real  
 22 time synchronous *transmission of* the programmed handheld menu configuration *to*  
 23 the wireless handheld computing device.” *Id.* at 16:41-43. Claims 9 and 13 include  
 24 similar limitations. *Id.* at 18:28-32, 20:10-12. In order for the programmed  
 25 handheld configuration to be *transmitted to* a wireless handheld device, it must  
 26 have been generated *before* transmission by something other than the wireless  
 27 handheld device itself. Consistent with the plain language of the claims, the  
 28 specification describes the menu configurations being generated and previewed to  
 ensure they will display on the handheld device in an acceptable manner before

1 being transmitted to the handheld devices. *Id.* at 8:28-36, 9:66-10:13.<sup>15</sup>

2 The prosecution history further compels the requirement that menus be  
3 generated/formatted at the server. Ameranth repeatedly and unequivocally  
4 distinguished its “invention” from prior art in which menus were configured on  
5 handheld devices. *See Aylus*, 856 F.3d at 1359 (“Thus, when the patentee  
6 unequivocally and unambiguously disavows a certain meaning to obtain a patent,  
7 the doctrine of prosecution history disclaimer narrows the meaning of the claim  
8 consistent with the scope of the claim surrendered.”). To overcome a rejection in  
9 light of a Micros prior art system including a hand held tablet (“HHT”), Ameranth  
10 amended the claims to introduce the “programmed handheld menu configuration”  
11 limitation. Ex. 4 at 2-4, 7-9. Ameranth then argued that the amended claims require  
12 that “the ‘programmed’ handheld menu configuration is *transmitted from the back*  
13 *office to the handheld device*,” and that “the claimed menu *configuration occurs*  
14 *prior to transmission to the handheld device*.” *Id.* at 21, 24. Ameranth  
15 distinguished the Micros system from the claims on the ground that the “display  
16 configuration of the items [in the Micros system] is determined by software code  
17 resident on the HHT itself” and “the HHT screen definitions and linkages are  
18 ‘programmed’ via application software *directly on the HHT device*, not previous to  
19 transmission to the device as occurs by operation of the presently claimed menu  
20 configuration software.” *Id.* at 24. Ameranth further emphasized this point, arguing  
21 that “the Micros HHT does not teach or suggest the configuration of a  
22 ‘programmed’ handheld menu from a master menu and *subsequent transmission of*  
23 *the handheld menu configuration to the wireless device*.” *Id.* at 22 (underline in  
24

25 \_\_\_\_\_  
26 <sup>15</sup> *See also id.* at 3:27-35 (“The menu generation approach of the present  
27 invention” enables “building of a menu and provides means to instantly download  
28 the menu configuration onto, e.g. a handheld device...”); 4:60-63 (“building a  
menu... and transferring the menu onto handheld devices...”); 7:44-47 (describing  
first “configuring a menu” on a desktop PC and “then downloading the menu  
configuration” onto handheld devices).

1 original).<sup>16</sup> Ameranth’s statements during prosecution of the ‘077 Patent are clear,  
 2 unambiguous disavowals of systems where the handheld configuration <sup>17</sup> is  
 3 generated on the handheld device itself rather than at a central server in the back  
 4 office and subsequently transmitted to a handheld device.

5 When the Micros prior art came up again during post-grant proceedings  
 6 before the PTAB, Ameranth doubled down on its prior statements, arguing that the  
 7 Micros system is distinguishable from the claims because it does not disclose a  
 8 “server providing the recited programmed handheld [menu] configurations to any  
 9 handheld device.” Ex. 8 at 43. Ameranth further explained that “the HHT document  
 10 discusses assembly of a screen display configuration on the HHT device itself, and  
 11 is thus inconsistent with and teaches away from the actual claimed invention, as  
 12 discussed above.” *Id.* at 46 (emphasis in original). Ameranth’s arguments to the  
 13 PTAB, like those during prosecution, effect a disclaimer. *See Aylus*, 856 F.3d at  
 14 1361. Indeed, this is precisely the type of clear, unambiguous disavowal of claim  
 15 scope to which the disclaimer applies in order to “promote the public notice  
 16 function of the intrinsic evidence and protect the public’s reliance on definitive  
 17 statements made during” post-grant proceedings at the USPTO. *Id.* at 1359.

18 In his expert report in the *IPDEV* case, Ameranth’s expert Dr. Shamos agreed  
 19 with Defendants that the claimed menu configurations are generated / formatted  
 20 before being sent to the handheld devices. Dr. Shamos stated:

21 Claims 1 and 9 require a “programmed” handheld [menu]  
 22 configuration, *i.e.*, a “predetermined” configuration which is “for  
 23 wireless transmission to and programmed for display on a wireless

24 \_\_\_\_\_  
 25 <sup>16</sup> These arguments echoed Ameranth’s prior statements during an examiner  
 26 interview, in which Ameranth emphasized that “a difference between the present  
 27 invention and the art of record” is that menu “configuration is *not* done at the  
 28 handheld.” *Id.* at 14.

<sup>17</sup> Ameranth’s prosecution disclaimers referring to a “menu” configuration are  
 equally applicable to the “programmed handheld configuration” recited in claim 13,  
 as Ameranth has admitted that this limitation in claim 13 “clearly has the same  
 meaning as in claims 1 and 9.” Ex. 7 at 23, n.34; *see also id.* at 23, 46 n.51.



1 handheld computing device.” The PHMC/PHC <sup>18</sup> are thus  
 2 “preconfigured” *prior to transmission* to a wireless handheld  
 3 computing device.” The Federal Circuit recently decided that the plain  
 4 meaning of “predetermined” in a claim meant “to determine  
 5 beforehand.” . . . “Beforehand” in the context of the present claims  
 6 clearly means before transmission to the handheld device. There can  
 7 thus be no dispute that the claimed PHMC/PHC is generated prior to  
 8 transmission to a handheld device.”

9 Ex. 10 at ¶ 114 (underline and brackets in original). Dr. Shamos further attempted  
 10 to distinguish IPDEV’s patent, arguing that it “disclosed the direct opposite of the  
 11 claimed ‘programmed’ handheld [menu] configuration *which is generated and*  
 12 *maintained by the server.*” *Id.* at ¶ 117.

13 Ameranth cannot be permitted to interpret the claims one way when  
 14 addressing validity before the USPTO and attacking IPDEV’s patent and a different  
 15 way when trying to prove infringement. *See Aylus*, 856 F.3d at 1360.

## 16 2. The Handheld Configurations Must Be Optimized For 17 Display On A Particular Handheld Device.

18 Although the term “programmed handheld menu configuration” does not  
 19 appear in the specification, Ameranth defined it during prosecution and  
 20 distinguished it from mere menu data or menu data updates:

21 “The claimed programmed handheld menu configuration is not merely  
 22 a ‘database’ nor a database update, it is a ‘programmed’ menu  
 23 configuration *optimized and suitable for display on and operations*  
 24 *from a handheld device.*”

25 Ex. 4 at 18. Additionally, Ameranth relied on the “optimization” aspect to  
 26 distinguish prior art, arguing the prior art failed to disclose “software for generating  
 27 a programmed handheld menu configuration *optimized for the display*  
 28 *characteristics of the target wireless device* . . . as claimed.” *Id.* at 32. Where, as  
 here, the terms do not appear in the specification and do not have an established

<sup>18</sup> Dr. Shamos uses the acronyms PHMC and PHC as shorthand for “programmed handheld menu configuration” and “programmed handheld configuration,” respectively.

1 meaning in the art, the definition provided by Ameranth during prosecution is  
2 especially relevant. *See, e.g., Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782  
3 F.3d 671, 677-681 (Fed. Cir. 2015); *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d  
4 973, 977-78 (Fed. Cir. 2014); *Sunovion Pharma, Inc. v. Teva Pharma USA, Inc.*,  
5 731 F.3d 1271 at 1276-77 (Fed. Cir. 2013).<sup>19</sup>

6 The “optimization” emphasized by Ameranth during prosecution is reflected  
7 in other claim language requiring that the handheld configurations be  
8 generated/formatted based on characteristics “*unique* to the wireless handheld  
9 computing device.” ’077 Patent at claims 1, 9; *see also id.* at claim 13 (requiring  
10 that the handheld configuration be formatted in a manner “appropriate for a  
11 customized display layout of at least two different wireless handheld device display  
12 sizes”). Additionally, twice in post-grant proceedings on the ’077 Patent, Ameranth  
13 proposed constructions requiring the handheld configurations to “provide the  
14 customized display layout *distinctive to* . . . the wireless handheld computing  
15 device(s).” Ex. 9 at 32-33; Ex. 7 at 23, 26.

16 Defendants’ construction must be adopted because it is the only proposed  
17 construction that incorporates the two requirements mandated by the intrinsic  
18 record: (1) that the programmed handheld configurations be generated/formatted on  
19 a central server and not on a handheld device, and (2) that the configurations be  
20 optimized for display on a particular handheld device.

21 **E. Cascaded Sets of Linked Graphical User Interface Screens (Appx.  
22 at A1-A2, A9, A21)**

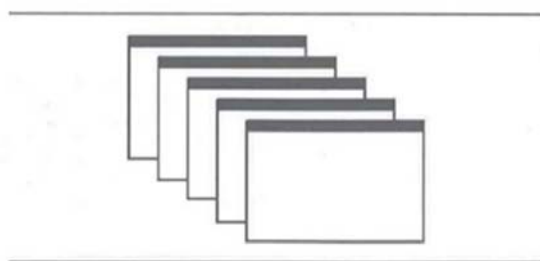
23 The parties’ primary dispute regarding “cascaded sets of linked graphical  
24 user interface screens” is whether to give effect to the term “cascaded.” Defendants  
25 construction gives meaning to this term, while Ameranth and IPDEV seek to  
26 eliminate the requirement that the claimed “graphical user interface screens” be

27 <sup>19</sup> *See also Phillips*, 415 F.3d at 1317 (“[P]rosecution history can inform the  
28 meaning of the claim language by demonstrating how the inventor understood the  
invention.”).

1 displayed in “cascaded sets.” Construction of this term is important because the  
 2 accused systems do not generate overlapping and offset user interface screens and  
 3 thus do not satisfy the “cascaded sets” limitation of the asserted claims.

4 At the time of the alleged invention of the '077 Patent, “cascaded” was a  
 5 term of art signaling two well-known visual arrangements between windows,  
 6 screens or menus: overlapping and offset. Persons of ordinary skill in the art were  
 7 well aware of the distinctive visual arrangement of “cascaded” items, including its  
 8 use in “the most common GUI operating systems” for personal computers—  
 9 according to the '077 Patent—Windows operating systems. '077 Patent at 6:26-30.  
 10 For example, the Microsoft Computer Dictionary defines “cascading windows” as  
 11 “a sequence of successive, *overlapping* windows in a graphical user interface,  
 12 displayed so that the title bar of *each is visible*.” Ex. 11 at 87; *see also* Ex. 12 at 87  
 13 (defining “cascade” as a “term for overlap, or stack”). Graphical user interface  
 14 guides from the time of the claimed invention similarly defined “cascaded” and  
 15 explained that cascading items ensures at least part of each item in the stack is  
 16 visible at all times. Ex. 13 at 223 (describing “cascading windows” as “a special  
 17 type of overlapping window,” in which “each window is slightly offset from others,  
 18 as illustrated in Figure 4.7” (reproduced on the left below)).

19 The distinctive overlapping and offset visual arrangement of “cascaded”  
 20 windows and menus was also a prominent feature of the Windows operating  
 21 system, as depicted below:



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 Figure 4.7 Cascading windows.

FIGURE 1.22  
 Cascading  
 Menu



Ex. 13 at 223; Ex. 14 at 67 (reproduced on the right above); *see also* Ex. 15 at 160-

1 61 (depicting overlapping and offset “cascading windows”); Ex. 16 at 58 (same);  
2 Ex. 17 at 119 (same). Indeed, the Windows operating system featured a “cascade”  
3 command that stacked currently open windows in the well-known cascaded  
4 arrangement. Ex. 16 at 621; Ex. 14 at 38; Ex. 17 at 119. Defendants’ construction  
5 therefore correctly reflects that persons of ordinary skill in the art at that time would  
6 have understood “cascaded” to mean “displayed in an overlapping fashion such that  
7 at least a portion of each selected screen remains visible.” *See Multiform*  
8 *Desiccants, Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). (“It is the  
9 person of ordinary skill in the field of the invention through whose eyes the claims  
10 are construed. Such person is deemed to read the words used in the patent  
11 documents with an understanding of the meaning in the field...”).

12 Defendants’ construction also reflects the manner in which the term is used  
13 in the specification. The term “cascading” appears only once in the specification in  
14 a passage describing the Microsoft Windows file menu structure:

15 For example, in a typical desktop or interactive application, selection  
16 of a “file” from a menu bar may cause display of a context menu  
17 which provides “file” options. File options can have additional  
18 subordinate or child options associated with them. If a file option  
19 having subordinate options is selected, the child options are displayed  
20 in context in a child menu or submenu proximate to the selected  
parent option. One or more of the child options provided in the child  
menu may have further subordinate options. 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.

21 ’077 Patent at 6:40-51. As illustrated above, the Windows cascading file menu  
22 structure included the distinctive overlapping and offset visual arrangement. It is no  
23 surprise the specification provides no further description or explanation of  
24 “cascaded” given that “cascaded” was a widely recognized term of art, well known  
25 to those of ordinary skill. *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524,  
26 1534 (Fed. Cir. 1987) (“[A] patent need not teach, and preferably omits, what is  
27 well known in the prior art.”).

28 Ameranth and IPDEV’s constructions should be rejected because they

1 effectively eliminate “cascaded” from the claims. Ameranth proposes replacing  
 2 “cascaded” with “arranged in succession,” while IPDEV attempts to replace the  
 3 term with “hierarchically.” While cascaded screens may be “arranged in  
 4 succession” or “hierarchically,” these definitions fail to capture the two  
 5 distinguishing characteristics of “cascaded screens”—overlapping and offset. Both  
 6 Ameranth’s and IPDEV’s constructions are therefore inappropriate because they  
 7 effectively eliminate the “cascaded” requirement in the claims. *Innova/Pure Water,*  
 8 *Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1119 (Fed. Cir. 2004)  
 9 (“all claim terms are presumed to have meaning in a claim”).<sup>20</sup> The Court should  
 10 therefore reject Ameranth’s and IPDEV’s constructions, and adopt Defendants’  
 11 construction, which correctly reflects the meaning of the term “cascaded.”

12 **F. Wireless Handheld Computing Device (Appx. at A6, A12, A16)<sup>21</sup>**

13 The term “wireless handheld computing device” has a straightforward plain  
 14 meaning, and nothing in the intrinsic record purports to specially define that term or  
 15 disavow scope. For that reason, its plain and ordinary meaning controls, and neither  
 16 Defendants nor IPDEV believe that the term requires construction. *See Thorner v.*  
 17 *Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (holding  
 18 that the specification and prosecution history only compel departure from the plain  
 19 meaning in two instances: (1) lexicography and (2) disavowal).

20 In an apparent effort to help its priority case against IPDEV, however,  
 21 Ameranth seeks to limit this term to only those wireless computing devices that are  
 22 “sized to be held” in a *single* hand.<sup>22</sup> Neither the patent nor the prosecution history

23 <sup>20</sup> See also *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed.  
 24 Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is  
 25 preferred over one that does not do so.”); *Elekta Instrument v. O.U.R Scientific*  
 26 *Int’l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000) (construing claim to avoid  
 rendering the 30 degree claim limitation superfluous); *Gen. Am. Transp. Corp. v.*  
*Cryo-Trans, Inc.*, 93 F.3d 766, 770 (Fed. Cir. 1996) (rejecting the district court’s  
 claim construction because it rendered superfluous the claim requirement for  
 openings adjacent to the end walls).

27 <sup>21</sup> Defendant Apple Inc. does not join in this portion of Defendants’ brief.

28 <sup>22</sup> Moreover, in the *Menusoft* case, Ameranth argued that a “wireless handheld  
 computing device” is any wireless computing device “suitable for in-hand use” and

1 references one-handed computing device use.<sup>23</sup> Instead, the '077 Patent is more  
 2 generally directed to devices with smaller (but not necessarily palm-sized) “non-  
 3 standard” displays—which the patent contrasts with “fixed computer solutions, *i.e.*,  
 4 a desktop or mainframe.” ’077 Patent at 2:48-52; *see also id.* at 2:61-67 (stating that  
 5 “a principal object of the present invention is to provide an improved information  
 6 management system” for “restaurants and other applications that utilize non-PC-  
 7 standard graphical formats, display sizes and/or applications”). As the patent  
 8 explains, an object of the purported invention was to address the “unavailability of  
 9 any simple technique for creating restaurant menus and the like” for use with  
 10 devices having “a limited display area”—irrespective of whether such devices fit in  
 11 just one hand or are held in both hands. *Id.* at 2:52-57. And, the patent specifically  
 12 references PDA devices with a “smaller . . . keyboard”—an input device that  
 13 typically involves two-handed operation. *Id.* at 1:60-67. In short, because the  
 14 purported invention is broadly directed to devices having non-standard displays,  
 15 and nothing in the patent limits the claimed “handheld computing devices” to  
 16 devices sized to be held in a single hand, Ameranth’s construction must be rejected.  
 17 *See Thorner*, 669 F.3d at 1365. Thus, if the Court is inclined to construe the term at  
 18 all, it should adopt Defendants’ and IPDEV’s construction, which encompasses  
 19 handheld devices that may be held in both of the users’ hands.

### 20 **G. Graphical User Interface (Appx. at A1, A9)**

21 The parties’ constructions for “graphical user interface” (GUI) differ in only  
 22 two respects:<sup>24</sup> (1) Ameranth’s construction adds the phrase “provided by an  
 23 operating system”; and (2) Ameranth uses the phrase “computer display screen”  
 24 instead of “computer screen.” Ameranth’s additions are largely redundant of other

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25 is *not* limited to “palm sized” devices (*i.e.*, devices sized to be held in a single  
 26 hand). *See Ex. 18* at 27. The *Menusoft* court agreed with Ameranth, explaining that  
 “a hand-held device does not necessarily need to be palm-sized.” *Ex. 19* at 24.

27 <sup>23</sup> Indeed, not one of Ameranth’s intrinsic record citations references single-  
 hand use. *See Dkt. No. 781-1* (JCCS) at 10-11.

28 <sup>24</sup> While these differences appear minor, Ameranth and IPDEV have contended  
 that they may impact the merits of IPDEV’s interference claim.

1 claim elements. For example, claim 1 of the ‘077 Patent, at element 1(c), already  
2 requires “an operating system *including* a first graphical user interface.” Thus,  
3 “provided by an operating system” adds no meaning to the term “GUI” because the  
4 claimed operating system includes the GUI. Similarly, the term “display” adds no  
5 helpful distinction to the phrase “computer screen” because a computer screen is  
6 necessarily a “display.” To avoid introducing unnecessary redundancies,  
7 Defendants request that the Court adopt Defendants’ construction.

#### 8 **H. Web Page (Appx. at A16)**

9 The term “web page” is commonly known and needs no construction. The  
10 jury will understand the meaning of a web page, and no further definition is  
11 required—surely not a 20-plus word definition calling for a “document” with files  
12 for “other resources.” Notably, both Ameranth and IPDEV state that this term may  
13 impact their priority action, but then oddly propose the *same* wordy construction.  
14 While similar constructions were used in prior cases and in the PTAB, the Court  
15 should simplify the information given to the jury and use the ordinary meaning.

#### 16 **I. Customized Display Layout<sup>25</sup> (Appx. at A8, A13, A21)**

17 The phrase “a customized display layout unique to the wireless handheld  
18 computing device” uses simple words with commonly understood meanings,  
19 defining the recited “display layout” as one that is “customized” and “unique to the  
20 wireless handheld computing device.” Accordingly, Defendants submit that no  
21 construction is necessary. IPDEV’s construction appears to simply re-arrange the  
22 words of the phrase, and is therefore both duplicative and unhelpful.

#### 23 **V. CONCLUSION**

24 For the reasons set forth above, Defendants request that the Court adopt  
25 Defendants’ constructions for the disputed claim terms and phrases.  
26

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27 <sup>25</sup> Defendant Hyatt Corporation proposes a specific construction for this term  
28 and will submit briefing on that construction rather than joining in this portion of  
Defendants’ brief.

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**CERTIFICATE OF SERVICE**

I hereby certify that on October 20, 2017, I electronically transmitted the attached document to the Clerk’s Office using the CM/ECF System for filing and transmittal of a Notice of Electronic Filing to the CM/ECF registrants.

By: /s/ Dan D. Davison

**SIGNATURE CERTIFICATION**

Pursuant to Section 2(f)(4) of the Electronic Case Filing Administrative Policies and Procedures Manual, I hereby certify that the content of this document is acceptable to counsel of each Defendant signing the document, and that I have obtained each Defendant’s authorization to affix its electronic signature to this document.

By: /s/ Dan D Davison

**APPENDIX: CLAIM TERMS AND PROPOSED CONSTRUCTIONS**

| Claims   | Disputed Terms/Phrases/Clauses  | Ameranth’s Proposed Construction  | Defendants’ Proposed Construction   | IPDEV’s Proposed Construction  |
|--|---|---|---|--|
| <p>1. An information management and real time synchronous communications system for configuring and transmitting hospitality menus comprising:</p> <p>[1-A] a. a central processing unit,</p> <p>[1-B] b. a data storage device connected to said central processing unit,</p> <p>[1-C] c. an operating system including a first <b>graphical user interface</b>,</p> <p>[1-D] d. a master menu including at least menu categories, menu items and modifiers, wherein said master menu is capable of being stored on said data storage device pursuant to a master menu file structure and said master menu is capable</p> | <p>“graphical user interface”</p> <p>“cascaded sets of linked graphical user interface screens”</p> | <p>“computer environment provided by an operating system 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”</p> <p>No construction is needed.</p> <p>If construed: “sets of graphical user interface screens whose members are linked and arranged in succession.”</p> | <p>“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”</p> <p>“two or more linked graphical user interface screens that are displayed in an overlapping fashion such that at least a portion of each selected</p> | <p>IPDEV believes that this claim term has a common ordinary meaning and does not believe that construction of this claim term is necessary. 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”</p> <p>“graphical user interface screens that are organized hierarchically”</p> |

| Claims   | Disputed Terms/Phrases/Clauses       | Ameranth’s Proposed Construction  | Defendants’ Proposed Construction  | IPDEV’s Proposed Construction  |
|--|--------------------------------------|---|--|--|
| <p>of being configured for display to facilitate user operations in at least one window of said first graphical user interface as <b>cascaded sets of linked graphical user interface screens</b>, and [1-E] e. <b>menu configuration software enabled to generate a programmed handheld menu configuration</b> from said master menu for wireless transmission to and programmed for display on a <b>wireless handheld computing device</b>, said programmed handheld menu configuration comprising at least menu categories, menu items and modifiers and wherein the menu configuration software is enabled to generate</p> | <p>“menu configuration software”</p> | <p>Defendants do not actually propose a construction as is required. Further, the correct term for construction is “menu configuration software” as proposed by IPDEV, not the larger phrase as incorrectly asserted by Defendants.</p> <p>No construction is needed.</p> | <p>screen remains visible”</p> <p>The phrase “menu configuration software enabled to . . .” is drafted in means-plus-function format under § 112, ¶ 6.</p> <p>The functions recited in Claim 1 are: (a) “generate a programmed handheld menu configuration from said master menu for wireless transmission to and programmed for display on a wireless handheld computing device, said programmed handheld menu configuration comprising at least menu categories, menu items and modifiers;” (b) “generate said programmed handheld menu configuration by utilizing parameters from the master menu file structure defining at least the menu</p> | <p>“menu configuration software” – “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”</p> <p>IPDEV does not believe that this term is drafted in means-plus-function format or that it is indefinite. Instead, the terms should be construed as stated above.</p> |



| Claims  | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction   | IPDEV’s Proposed Construction |
|---|--------------------------------|----------------------------------|---|-------------------------------|
| <p>said programmed handheld menu configuration by utilizing parameters from the master menu file structure defining at least the menu categories, menu items and modifiers of the master menu such that at least the menu categories, menu items and modifiers comprising the programmed handheld menu configuration are <b>synchronized</b> in real time with analogous information comprising the master menu,</p> <p>[1-F] wherein the menu configuration software is further enabled to generate the programmed handheld menu configuration in conformity with a <b>customized display layout</b> unique to the</p> |                                |                                  | <p>categories, menu items and modifiers of the master menu;” (c) “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 of a handheld graphical user interface integral with the wireless handheld computing device, wherein said customized display layout is compatible with the displayable size of the handheld graphical user interface;” and (d) “[configure] the programmed handheld menu configuration . . .</p> |                               |

| Claims   | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction  | IPDEV’s Proposed Construction |
|--|--------------------------------|----------------------------------|--|-------------------------------|
| <p>wireless handheld computing device to facilitate user operations with and display of the programmed handheld menu configuration on the display screen of a handheld graphical user interface integral with the wireless handheld computing device, wherein said customized display layout is compatible with the displayable size of the handheld graphical user interface [1-G] wherein 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</p> |                                |                                  | <p>for display as programmed cascaded sets of linked graphical user interface screens appropriate for the customized display layout of the wireless handheld computing device, wherein said programmed cascaded sets of linked graphical user interface screens for display of the handheld menu configuration are configured differently from the cascaded sets of linked graphical user interface screens for display of the master menu on said first graphical user interface.”</p> <p>The ‘077 Patent fails to identify or disclose corresponding structure for the recited functions. Because no algorithm is disclosed for performing the</p> |                               |

| Claims  | Disputed Terms/Phrases/Clauses                             | Ameranth’s Proposed Construction  | Defendants’ Proposed Construction  | IPDEV’s Proposed Construction  |
|---|--|---|--|--|
| <p>handheld computing device, wherein said programmed cascaded sets of linked graphical user interface screens for display of the handheld menu configuration are configured differently from the cascaded sets of linked graphical user interface screens for display of the master menu on said first graphical user interface, and [1-H] wherein the system is enabled for <b>real time synchronous communications to and from the wireless handheld computing device utilizing the programmed handheld menu configuration</b> including the</p> | <p>“generate a programmed handheld menu configuration”</p> | <p>No construction is needed.<br/>Defendants improperly parsed out “enabled to” which precedes this phrase in the full element in an attempt to misrepresent what the element requires.</p> | <p>recited functions, the claim term is indefinite.<sup>1</sup></p> <p>“on a central server in the back office, and not on a handheld device, generate a menu that has been optimized for display on a particular handheld device”</p> | <p>IPDEV believes that this claim term has a common ordinary meaning and does not believe that construction of this claim term is necessary. To the extent the Court deems construction of this claim term necessary, IPDEV applies the common ordinary meaning of this claim term to mean “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</p> |

<sup>1</sup> Defendant QuikOrder, Inc. does not join in this proposed construction.

| Claims  | Disputed Terms/Phrases/Clauses       | Ameranth's Proposed Construction   | Defendants' Proposed Construction   | IPDEV's Proposed Construction  |
|---|--------------------------------------|--|---|--|
| <p>capability of real time synchronous transmission of the programmed handheld menu configuration to the wireless handheld computing device and real time synchronous transmissions of selections made from the handheld menu configuration on the wireless handheld computing device, and [1-I] wherein the system is further enabled to automatically format the programmed handheld menu configuration for display as cascaded sets of linked graphical user interface screens appropriate for a customized display layout of at least two different wireless handheld computing device display sizes in</p> |                                      |  |   | transmitted to the wireless handheld devices connected to the system”  |
|   | “wireless handheld computing device” | “wireless handheld computing device” - “a computing device that is capable of wireless communications and is sized to be held in one’s hand” | <p>Defendants do not believe that a construction is required for the term “wireless handheld computing device.”</p> <p>If the Court concludes that a construction is required, Defendants agree with IPDEV’s proposed construction.</p> | <p>IPDEV believes that this claim term has a common ordinary meaning and does not believe that construction of this claim term is necessary. To the extent the Court deems construction of this claim term necessary, IPDEV proposes the following construction: “wireless handheld computing device” - “a computing device that is capable of wireless communications and can be held in one’s hands”</p> |
|   | “synchronized”                       | “synchronized” – “made, or configured to make, consistent”   | <p>Defendants do not believe that a construction is required for the term “synchronized” other than construction of the</p>   | <p>IPDEV agrees with Ameranth’s proposed construction of “synchronized”</p>  |

| Claims   | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction  | IPDEV’s Proposed Construction |
|--|--------------------------------|----------------------------------|--|-------------------------------|
| <p>the same connected system, and [1-J] wherein a cascaded set of linked graphical user interface screens for a wireless handheld computing device in the system includes a different number of user interface screens from at least one other wireless handheld computing device in the system.</p> |                                |                                  | <p>below listed term (for which Defendants separately proposed a construction):</p> <ul style="list-style-type: none"> <li>• “real time synchronous communications to and from the wireless handheld computing device utilizing the programmed handheld menu configuration”</li> </ul> <p>If the Court concludes that a construction is required, the term should be construed as: “made to be the same such that a change to data made on one device is reflected on another device.”<sup>2</sup></p> |                               |

<sup>2</sup> As to GrubHub Holdings, see footnote 8.

| <b>Claims</b> | <b>Disputed Terms/Phrases/Clauses</b>  | <b>Ameranth's Proposed Construction</b>   | <b>Defendants' Proposed Construction</b>   | <b>IPDEV's Proposed Construction</b>   |
|---------------|--|---|--|--|
|               | “customized display layout”  | No construction is needed.<br><br>If construed, Ameranth agrees with IPDEV's proposed construction if it is construed as part of the overall elements in each of the four usage instances in claims 1-12 and three instances in claims 13-18. | No construction necessary. <sup>3</sup>  | “a display layout that is customized based on the user's device and appropriate for display and use on said device”  |
|               | “real time synchronous communications to and from the wireless handheld computing device utilizing the programmed handheld menu configuration” | No construction is needed beyond “synchronous” as indicated above (“synchronized”) and “real time” (see immediately below) which should be construed individually and as part of this phrase.<br><br>If construed: “real time”                | “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 | IPDEV believes that this claim term has a common ordinary meaning and does not believe that construction of this claim term is necessary. To the extent the Court deems construction of this claim term necessary, IPDEV applies the |

<sup>3</sup> Defendant Hyatt Corporation does not join in Defendants' proposed construction. Hyatt proposes that the phrase should be construed as “information adapted to the handheld display so that scrolling is not required to view all available information.” Hyatt is filing a supplemental brief on this issue pursuant to Dkt. No. 775.

| Claims   | Disputed Terms/Phrases/Clauses                             | Ameranth's Proposed Construction  | Defendants' Proposed Construction   | IPDEV's Proposed Construction  |
|--|--|---|---|--|
|  |  | - "1. Having to do with the actual time during which physical events take place. 2. The performance of a computation during the actual time that the related physical process transpires in order that results of the computations are useful in guiding the physical process." | without a request for an update" <sup>4</sup>   | common ordinary meaning of this claim term to mean "real time synchronous communications between the wireless handheld computing device and the system using the programmed handheld menu configuration" |
| 9. An information management and real time synchronous communications system for configuring and transmitting hospitality menus comprising:<br>[9-A] a) a central processing unit;<br>[9-B] b) a data storage device connected to said central processing unit;<br>[9-C] c) an operating | "graphical user interface"                                 | See claim 1 above   | See claim 1 above   | See claim 1 above  |
|  | "cascaded sets of linked graphical user interface screens" | See claim 1 above.  | See claim 1 above   | See claim 1 above  |
|  | "menu configuration software"                              | See claim 1 above. However, there are differences in the limitations and thus the overall construction between claims 1,9.  | The phrase "menu configuration software enabled to . . ." is drafted in means-plus-function format under § 112, ¶ 6.<br><br>The functions recited in Claim 9 are: (a) | See claim 1 above.<br><br>IPDEV does not believe that this term is drafted in means-plus-function format or that it is indefinite.<br><br>Instead, the terms should be construed as                      |

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As to GrubHub Holdings, see footnote 7.

| Claims  | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction   | IPDEV’s Proposed Construction |
|---|--------------------------------|----------------------------------|---|-------------------------------|
| <p>system including a first <b>graphical user interface</b>, said operating system configured to interoperate with the central processing unit, the data storage device and application software;</p> <p>[9-D] d) a master menu including menu categories and menu items, wherein said master menu is capable of being stored on said data storage device pursuant to a master menu file structure and said master menu is capable of being configured for display to facilitate user operations in at least one window of said first graphical user interface as <b>cascaded sets of linked graphical user interface screens</b>; and</p> <p>[9-E] e) a modifier menu capable of being</p> |                                |                                  | <p>“automatically generate a programmed handheld menu configuration from said master menu for display on a wireless handheld computing device, said programmed handheld menu configuration comprising at least menu categories, menu items and modifiers;”</p> <p>(b) “generate said programmed handheld menu configuration by utilizing parameters from the master menu file structure defining at least the categories and items of the master menu and modifiers from the modifier menu;”</p> <p>(c) “generate the programmed handheld menu configuration in conformity with a customized display layout unique to the wireless handheld</p> | <p>stated above.</p>          |



| Claims  | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction  | IPDEV’s Proposed Construction |
|---|--------------------------------|----------------------------------|--|-------------------------------|
| <p>stored on said data storage device, and</p> <p>[9-F] <b>menu configuration software enabled to automatically generate a programmed handheld menu configuration</b> from said master menu for display on a <b>wireless handheld computing device</b>, said programmed handheld menu configuration comprising at least menu categories, menu items and modifiers and wherein the menu configuration software is enabled to generate said programmed handheld menu configuration by utilizing parameters from the master menu file structure defining at least the categories and items of the master menu and modifiers from the modifier menu</p> |                                |                                  | <p>computing device to facilitate user operations with and display of the programmed handheld menu configuration on the display screen of a handheld graphical user interface integral with the wireless handheld computing device, wherein said customized display layout is compatible with the displayable size of the handheld graphical user interface;” and (d) “[configure] the programmed handheld menu configuration . . . for display as cascaded sets of linked graphical user interface screens appropriate for the customized display layout of the wireless handheld computing device, wherein said cascaded sets of linked graphical user interface</p> |                               |

| Claims   | Disputed Terms/Phrases/Clauses                      | Ameranth's Proposed Construction | Defendants' Proposed Construction  | IPDEV's Proposed Construction |
|--|---|----------------------------------|--|-------------------------------|
| <p>at least the menu categories, menu items and modifiers comprising the programmed handheld menu configuration are <b>synchronized</b> in real time with analogous information comprising the master and modifier menus</p> <p>[9-G] wherein the menu configuration software is further enabled to generate the programmed handheld menu configuration in conformity with a <b>customized display layout</b> unique to the wireless handheld computing device to facilitate user operations with and display of the programmed handheld menu configuration on the display screen of a handheld graphical user</p> |   |                                  | <p>screens for display of the programmed handheld menu configuration are configured differently from the cascaded sets of related graphical user interface screens for display of the master menu on said first graphical user interface.”</p> <p>The ‘077 Patent fails to identify or disclose corresponding structure for the recited functions. Because no algorithm is disclosed for performing the recited functions, the claim term is indefinite.<sup>5</sup></p> |                               |
| with and display of the programmed handheld menu configuration on the display screen of a handheld graphical user  | “generate a programmed handheld menu configuration” | See claim 1 above.               | See claim 1 above  | See claim 1 above             |
| handheld graphical user  | “wireless handheld computing device”                | See claim 1 above.               | See claim 1 above  | See claim 1 above             |

<sup>5</sup> Defendant QuikOrder, Inc. does not join in this proposed construction.

| Claims   | Disputed Terms/Phrases/Clauses  | Ameranth’s Proposed Construction | Defendants’ Proposed Construction | IPDEV’s Proposed Construction |
|--|---|----------------------------------|-----------------------------------|-------------------------------|
| interface integral with the wireless handheld computing device, wherein said customized display layout is compatible with the displayable size of the handheld graphical user interface,   | “synchronized”  | See claim 1 above.               | See claim 1 above                 | See claim 1 above             |
|  | “customized display layout”   | See claim 1 above.               | See claim 1 above                 | See claim 1 above             |
|  | “real time synchronous communications to and from the wireless handheld computing device” | See claim 1 above.               | See claim 1 above                 | See claim 1 above             |
| [9-H] wherein the programmed handheld menu configuration is configured by the menu configuration software for display as cascaded sets of linked graphical user interface screens appropriate for the customized display layout of the wireless handheld computing device, wherein said cascaded sets of linked graphical user interface screens for display of the programmed handheld menu configuration are configured differently from the cascaded sets |   |                                  |                                   |                               |

| Claims  | Disputed Terms/Phrases/Clauses | Ameranth's Proposed Construction | Defendants' Proposed Construction | IPDEV's Proposed Construction |
|---|--------------------------------|----------------------------------|-----------------------------------|-------------------------------|
| <p>of related graphical user interface screens for display of the master menu on said first graphical user interface, and</p> <p>[9-I] wherein the system is enabled for <b>real time synchronous communications to and from the wireless handheld computing device</b> utilizing the programmed handheld menu configuration including the capability of real time synchronous transmission of at least the menu categories, menu items and modifiers comprising the programmed handheld menu configuration to the wireless handheld computing device and real time synchronous transmissions of selections made from the handheld menu</p> |                                |                                  |                                   |                               |

| Claims   | Disputed Terms/Phrases/Clauses | Ameranth's Proposed Construction | Defendants' Proposed Construction | IPDEV's Proposed Construction |
|--|--------------------------------|----------------------------------|-----------------------------------|-------------------------------|
| <p>configuration on the wireless handheld computing device, and</p> <p>[9-J] wherein the system is further enabled to automatically format the programmed handheld menu configuration for display as cascaded sets of linked graphical user interface screens appropriate for a customized display layout of at least two different wireless handheld computing device display sizes in the same connected system, and</p> <p>[9-K] wherein a cascaded set of linked graphical user interface screens for a wireless handheld computing device in the system includes a different number of user interface screens from at least one other wireless handheld computing device in the</p> |                                |                                  |                                   |                               |

| Claims  | Disputed Terms/Phrases/Clauses               | Ameranth's Proposed Construction  | Defendants' Proposed Construction   | IPDEV's Proposed Construction  |
|---|--|---|---|--|
| system.   |  |   |   |  |
| 13. An information management and real time synchronous communications system for use with wireless handheld computing devices and the internet comprising:<br>[13-A] a) a master database connected in said system and configured to store hospitality application information pursuant to a master database file structure;<br>[13-B] b) at least one <b>wireless handheld computing device</b> connected in said system and configured to display said hospitality application information;<br>[13-C] c) at least one web server connected in said system; | "wireless handheld computing device"         | See claim 1 above.  | See claim 1 above   | See claim 1 above  |
|   | "web page"                                   | "Web page" - "a document, with associated files for graphics, scripts, and other resources, accessible over the internet and viewable in a Web browser" | Defendants contend that this term should be given its plain and ordinary meaning.   | IPDEV agrees with Ameranth's proposed construction of "web page"   |
|   | "communications control software enabled to" | No construction is needed.<br><br>Ameranth agrees with IPDEV and QuikOrder that this term is not governed by 35 U.S.C. §112, ¶6 and is not indefinite.  | The phrase "communication control software enabled to . . ." is drafted in means-plus-function format under § 112, ¶ 6.<br><br>The functions recited in Claim 13 are: (a) "link and synchronize hospitality application information simultaneously between the master database, wireless handheld computing device, web server and web page;" | IPDEV does not believe that construction is required for this claim term and its common ordinary meaning should govern. If the Court construes this claim term, IPDEV proposes the following construction: "software capable of controlling communication of data between all devices connected to the system and performing |

| Claims   | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction   | IPDEV’s Proposed Construction  |
|--|--------------------------------|----------------------------------|---|--|
| <p>[13-D] d) at least one <b>web page</b> connected in said system and configured to display said hospitality application information; and</p> <p>[13-E] e) real time <b>communications control software enabled to</b> link and synchronize hospitality application information simultaneously between the master database, wireless handheld computing device, web server and web page,</p> <p>[13-F] wherein the communications control software is enabled to utilize parameters from the master database file structure to <b>synchronize the hospitality application information in real time between the master database, at least one wireless</b></p> |                                |                                  | <p>(b) “utilize parameters from the master database file structure to synchronize the hospitality application information in real time between the master database, at least one wireless handheld computing device, at least one web server and at least one web page;” (c) “act as a real time interface between the elements of the system and any applicable communications protocol;” (d) “automatically and simultaneously configure the hospitality application information for display on both the wireless handheld computing device and the web page in conformity with a customized display layout unique to the wireless handheld</p> | <p>the functions recited in the remainder of the claim”</p> <p>IPDEV does not believe that this term is drafted in means-plus-function format or that it is indefinite. Instead, the term should be construed as stated above.</p> |

| Claims   | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction | Defendants’ Proposed Construction  | IPDEV’s Proposed Construction |
|--|--------------------------------|----------------------------------|--|-------------------------------|
| <p><b>handheld computing device, at least one web server and at least one web page</b> such that substantially the same information comprising the hospitality application information is capable of being displayed on the wireless handheld computing device, at least one web page and other display screens of the <b>synchronized</b> system, such that the hospitality application information is synchronized between any connected users, [13-G] wherein the communications control software is enabled to act as a real time interface between the elements of the system and any applicable communications protocol,</p> |                                |                                  | <p>computing device or the web page, wherein said customized display layout is compatible with the displayable size of the handheld computing device display screen or the web page;” and (e) “automatically format a programmed handheld configuration for display as cascaded sets of linked graphical user interface screens appropriate for a customized display layout of at least two different wireless handheld computing device display sizes in the same connected system.”</p> <p>The ‘077 Patent fails to identify or disclose corresponding structure for the recited functions. Because no algorithm is disclosed for performing the</p> |                               |



| Claims   | Disputed Terms/Phrases/Clauses  | Ameranth’s Proposed Construction   | Defendants’ Proposed Construction   | IPDEV’s Proposed Construction  |
|--|---|--|---|--|
| <p>[13-H] wherein the communications control software is enabled to automatically and simultaneously configure the hospitality application information for display on both the wireless handheld computing device and the web page in conformity with a customized display layout unique to the wireless handheld computing device or the web page, wherein said customized display layout is compatible with the displayable size of the handheld computing device display screen or the web page, and</p> <p>[13-I] wherein the communications control</p> | <p>“synchronize the hospitality application information in real time between the master database, at least one wireless handheld computing device, at least one web server and at least one web page”</p> | <p>No construction is needed beyond “synchronize” as indicated below and “real time” which should be construed individually and as part of this phrase.</p> <p>“synchronize” – “made, or configured to make, consistent”</p> | <p>recited functions, the claim term is indefinite.<sup>6</sup></p> <p>“changes in the hospitality application information are reflected instantaneously on the master database, wireless handheld computing device, web server and web page without a request for updated hospitality application information”<sup>7</sup></p> | <p>IPDEV does not believe that construction is required for this claim term and its common ordinary meaning should govern. If the Court construes this claim term, IPDEV proposes the following construction: “changes in the hospitality application information occur in real time and these changes are reflected on the master database, wireless handheld computing device, web server and web page without a request for updated hospitality application</p> |

<sup>6</sup> Defendant QuikOrder, Inc. does not join in this proposed construction.

<sup>7</sup> GrubHub Holdings requests that the Court construe this term as “[Defendants’ construction], and linked devices in the real time synchronous menu/ordering system ‘know’ whether the items sought to be ordered are available when the order is entered, not immediately after.” GrubHub Holdings has filed a separate brief on this issue pursuant to Dkt. No. 775.

| Claims   | Disputed Terms/Phrases/Clauses | Ameranth’s Proposed Construction                                 | Defendants’ Proposed Construction   | IPDEV’s Proposed Construction  |
|--|--------------------------------|--|---|--|
| <p>software is further enabled to automatically <b>format a programmed handheld configuration</b> for display as <b>cascaded sets of linked graphical user interface screens</b> appropriate for a customized display layout of at least two different wireless handheld computing device display sizes in the same connected system, and</p> <p>[13-J] wherein a cascaded set of linked graphical user interface screens for a wireless handheld computing device in the system includes a different number of user interface screens from at least one other wireless handheld computing device in the system, and</p> <p>[13-K] wherein the</p> | <p>“synchronized”</p>          | <p>“synchronized” – “made, or configured to make, consistent</p> | <p>Defendants do not believe that a construction is required for the term “synchronized” other than construction of the below listed term (for which Defendants separately proposed a construction):</p> <ul style="list-style-type: none"> <li>• “synchronize the hospitality application information in real time between the master database, at least one wireless handheld computing device, at least one web server and at least one web page”</li> </ul> <p>If the Court concludes that a construction is required, the term should be construed as:</p> | <p>information.”</p> <p>IPDEV agrees with Ameranth’s proposed construction of “synchronized”</p> |

| <b>Claims</b>  | <b>Disputed Terms/Phrases/Clauses</b>                      | <b>Ameranth's Proposed Construction</b>                                     | <b>Defendants' Proposed Construction</b>   | <b>IPDEV's Proposed Construction</b>  |
|--|--|---|--|---|
| system is enabled for real time synchronous transmission of the configured hospitality application information to the wireless handheld computing device, the web server and the web page and real time synchronous transmissions of inputs responding to the configured hospitality application information from the wireless handheld computing device, or the web server or the web page. |  |   | “made to be the same such that a change to data made on one device is reflected on another device.” <sup>8</sup>   |   |
|  | “cascaded sets of linked graphical user interface screens” | See claim 1 above.  | See claim 1 above  | See claim 1 above   |
|  | “customized display layout”                                | See claim 1 above.  | See claim 1 above  | See claim 1 above   |
|  | “format a programmed handheld configuration”               | No construction is needed for “format a programmed handheld configuration.” | “at a central server in the back office, and not on a handheld device, format hospitality application information that has been optimized for display on a particular handheld device” | IPDEV does not believe that construction is required for this claim term and its common ordinary meaning should govern. If the Court construes this claim, IPDEV proposes the following construction: “the programmed handheld configuration is formatted from the master menu by the |

<sup>8</sup> If the Court does not construe the longer phrase Defendants have proposed, GrubHub Holdings requests that the Court construe “real time synchronous” / “synchronize ... in real time” / “synchronized in real time” / “real time ... synchronize” as: “changes to the data being synchronized are reflected instantaneously on all linked devices without a request for an update from the devices.” GrubHub Holdings has filed a separate brief on this issue pursuant to Dkt. No. 775.

| <b>Claims</b> | <b>Disputed Terms/Phrases/Clauses</b> | <b>Ameranth's Proposed Construction</b> | <b>Defendants' Proposed Construction</b> | <b>IPDEV's Proposed Construction</b>   |
|---------------|---------------------------------------|---|--|--|
|               |                                       |   |  | menu configuration software using parameters from the master menu file structure and is subsequently transmitted to the wireless handheld devices connected to the system” |