

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.

Petitioner

- vs. -

FALL LINE PATENTS, LLC

Patent Owner

IPR2018-00043

U.S. Patent 9,454,748

PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT 9,454,748
CHALLENGING CLAIMS 16–19 AND 21–22
UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104

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PETITIONER’S EXHIBIT LIST

October 6, 2017

EX1001	U.S. Patent 9,454,748 to J. David Payne
EX1002	Prosecution File History of U.S. Patent 9,454,748 (“’748 PH”)
EX1003	Prosecution File History of U.S. Patent 7,822,816 (“’816 PH”)
EX1004	U.S. Patent 7,822,816 to J. David Payne
EX1005	Declaration of A.L. Narasimha Reddy
EX1006	U.S. Patent 6,154,745 to Kari et al. (“ <i>Kari</i> ”)
EX1007	HTML 4 Unleashed by Darnell et al. (“ <i>Darnell</i> ”)
EX1008	Declaration of David Bader
EX1009	U.S. Patent 6,380,928 to Todd (“ <i>Todd</i> ”)
EX1010	U.S. Patent 6,381,603 to Chan et al. (“ <i>Chan</i> ”)
EX1011	Memorandum Opinion and Order, <i>Macrosolve, Inc. v. Antenna Software, Inc et al.</i> , 6:11-cv-287 MHS-KNM (E.D. Tex. Jan. 21, 2014) (“’816 Markman Order”)
EX1012	Institution Decision, IPR2014-00140 (“’816 Institution”)
EX1013	Microsoft Computer Dictionary, 5 th ed. (excerpt)
EX1014	U.S. Patent 6,222,483 to Twitchell et al. (“ <i>Twitchell</i> ”)
EX1015	U.S. Patent 5,043,736 to Darnell et al. (“ <i>Darnell</i> ’736”)

EX1016	Dictionary of Computer Science (excerpt)
EX1017	Dictionary of Scientific and Technical Terms, 4 th ed. (excerpt)
EX1018	Goran M. Djuknic & Robert E. Richton, <i>Geolocation and Assisted GPS</i> , IEEE Computer, Vol. 34 no. 2, 123-125 (Feb. 2001)
EX1019	Robert S. Anthony, <i>The Ultimate Personal Peripheral</i> , PC Magazine, Vol. 17 no. 5, 100-124 (Mar. 10, 1998)
EX1020	Johan Hjelm, <i>Creating Location Services for the Wireless Web: Professional Developer's Guide</i> (2001).

I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

A. Real Party-in-Interest

Pursuant to 37 C.F.R. § 42.8(b)(1), Unified Patents Inc. (“Unified” or “Petitioner”) certifies that Unified is the real party-in-interest, and further certifies that no other party exercised control or could exercise control over Unified’s participation in this proceeding, the filing of this petition, or the conduct of any ensuing trial.

B. Related Matters

According to assignment records, U.S. Patent 9,454,748 (“the ’748 Patent” (EX1001)) is owned by Fall Line Patents, LLC (“Fall Line” or “Patent Owner”).

As of the filing date of this Petition, and to the best knowledge of Petitioner, the ’748 Patent is or has been involved in the following matters, all in the United States District Court for the Eastern District of Texas:

Case Caption	Number
<i>Fall Line Patents, LLC v. Choice Hotels Int’l, Inc.</i>	6:17-cv-00407
<i>Fall Line Patents, LLC v. Uber Technologies, Inc.</i>	6:17-cv-00408
<i>Fall Line Patents, LLC v. American Airlines Group, Inc. et al.</i>	6:17-cv-00202
<i>Fall Line Patents, LLC v. Cinemark Holdings, Inc. et al.</i>	6:17-cv-00203
<i>Fall Line Patents, LLC v. Grubhub Holdings, Inc. et al.</i> (terminated)	6:17-cv-00204

The ’748 Patent is a continuation of U.S. Application No. 10/643,516, filed August 19, 2003, which issued as U.S. Patent 7,822,816 (“the ’816 Patent”). Claims 1-14 of the ’816 Patent (all claims) were the subject of an *ex parte*

reexamination proceeding (U.S. Serial No. 90/012,829), which resulted in a reexamination certificate cancelling those claims. ('816 Patent at 18 (EX1004)). Additionally, claims 1-14 of the '816 Patent were the subject of an *inter partes* review petition (IPR2014-00140), which was instituted (EX1012), and thereafter terminated upon cancellation of those claims in the aforementioned *ex parte* reexamination. ('816 PH at 479–480 (EX1003)).

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II. CERTIFICATION OF GROUNDS FOR STANDING

Petitioner certifies pursuant to Rule 42.104(a) that the patent for which review is sought is available for *inter partes* review and that Petitioner is not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in this Petition.

III. OVERVIEW OF CHALLENGE AND RELIEF REQUESTED

Pursuant to Rules 42.22(a)(1) and 42.104(b)(1)–(2), Petitioner challenges

claims 16–19 and 21–22 of the ’748 Patent.

A. Prior Art Patents and Printed Publications

The following references are pertinent to the grounds of unpatentability explained below:

1. US Patent 6,154,745 (issued on November 28, 2000) (“*Kari*” (EX1006)), which is prior art under at least 35 U.S.C. § 102(b).¹
2. US Patent 6,381,603 (filed February 22, 1999, issued April 30, 2002) (“*Chan*” (EX1010)), which is prior art under at least 35 U.S.C. § 102(a, e).
3. “HTML 4 Unleashed” by Darnell et al. (published August 15, 1997) (“*Darnell*” (EX1007)), which is prior art under at least 35 U.S.C. § 102(b). *Darnell* is a printed publication that was published in book form bearing ISBN 1-57521-380-X and a 1998 copyright notice and, as evidenced by its Library of Congress catalog entry, was published on August 15, 1997. (See Bader Declaration, ¶ 2 (EX1008)).
4. US Patent 6,380,928 (filed May 23, 2000, issued April 30, 2002) (“*Todd*” (EX1009)), which is prior art under at least 35 U.S.C. § 102(a, e).

¹ The ’748 Patent issued from an application filed prior to the enactment of the America Invents Act (“AIA”). Thus, the pre-AIA statutory framework applies.

B. Statutory Grounds for Challenges

This Petition, supported by the declaration of Dr. A.L. Narasimha Reddy (“Reddy Declaration” or “Reddy” (EX1005)), requests cancellation of claims 16–19 and 21–22 under the Challenge listed below:

Challenge #1: Claims 16–19 and 21–22 of the ’748 Patent are obvious under 35 U.S.C. § 103(a) over *Kari* in view of *Darnell, Todd*, and *Chan*.

IV. US PATENT 9,454,748

A. Summary

The ’748 Patent is directed to collecting data from a remote computing device, such as a handheld computing device, by delivering a questionnaire to the remote computing device, executing the questionnaire on the remote computing device, and transmitting responses to a server via a network. (’748 Patent at Abstract (EX1001)). The ’748 Patent alleges that, with handheld computing devices, a data link may not always be available, and therefore, data cannot be entered at all times, or data is not delivered in real time. (*Id.* at 4:1–18 (EX1001)). The ’748 Patent also alleges that typical data-gathering applications suffer from drawbacks, such as the requirement that “custom program[s]” must be developed in which “the same program must be tested and compiled for each type of device.” (*Id.* at 3:1–10 (EX1001)). As demonstrated below, however, data collection systems that addressed these issues were well-known prior to the ’748 Patent’s

priority date.

B. Level of Ordinary Skill in the Art

A person of ordinary skill in the art at and before the priority date for the '748 Patent ("POSITA") would have a bachelor's degree in computer science, computer engineering, electrical engineering, or a related subject, or equivalent industry or trade school experience in programming software applications. (Reddy, ¶¶ 36–40 (EX1005)).

C. Prosecution History

The '748 Patent issued from U.S. Patent Application Number 12/910,706 ("the '706 Application"), which was filed October 22, 2010. As previously mentioned, the '706 Application claimed priority as a continuation of U.S. Patent Application Number 10/643,516 ("the '516 Application"), filed August 19, 2003. The '516 Application claimed priority to U.S. Provisional Application Number 60/404,491 ("the '491 Provisional"), filed August 19, 2002.

The prosecution history of the '748 Patent includes multiple Office Actions which included double-patenting rejections over the '816 Patent and claim rejections under §§ 102 and 103 over various references. To overcome some rejections, Patent Owner alleged conception of the claims "prior to January 1, 2002" and diligent reduction to practice from the alleged conception to the filing of the '491 Provisional. ('748 PH at 80–108 (EX1002)).

Although the Examiner considered Patent Owner's prior conception arguments persuasive (*Id.* at 2291 (EX1002)), the Examiner continued to reject the claims under § 103. (*Id.* at 2273–2293 (EX1002)). In an attempt to overcome the § 103 rejections, Patent Owner amended the claims to recite, *inter alia*, that the questionnaire recited in the claims comprised “device independent tokens.” (*Id.* at 2350–2384 (EX1002)). Additionally, Patent Owner proposed amendments in an Interview Agenda to require that at least one question requested “location identifying information” and that the remote computing device of the claims had a “GPS integral thereto.” (*Id.* at 2495–2499 (EX1002)). Patent Owner incorporated its suggested amendments in its next response. (*Id.* at 2504–2539 (EX1002)).

The Examiner then issued a Notice of Allowance with an Examiner's Amendment, deleting some instances of “location identifying information” and replacing the deleted text with “GPS coordinates.” (*Id.* at 2543–2555 (EX1002)). In the Reasons for Allowance, the Examiner noted that “the prior art singly or in combination does not teach the totality of the independent claims” and the claims “recite[] the use of a GPS integral thereto.” (*Id.* at 2552–2553 (EX1002)).

However, the grounds and references on which Petitioner seeks review, which were not before the Examiner, teach or suggest a device with a GPS integral thereto that obtains GPS coordinates as recited, together with the other features of claims 16–19 and 21–22. Petitioner's grounds and references render the

challenged claims obvious.

D. Priority Date

For purposes of this proceeding, Petitioner assumes a priority date of August 19, 2002, the filing of the '491 Provisional.

For completeness, Petitioner notes that, during prosecution, the applicant alleged “conception of the instant invention...at least as early as January 1, 2002.” ('748 PH at 98 (EX1002)). However, Applicant’s prosecution arguments did not address whether the later-added elements “location identifying information,” “GPS coordinates,” or “device independent tokens,” were found in the alleged evidence of conception, as those elements were not yet part of the claims. (*Id.* at 99–100 (EX1002)). As a result, there is no indication or evidence in the prosecution record to show the challenged claims are entitled to any priority date before the filing of the '491 Provisional.

Regardless, all grounds of challenge herein rely on references that pre-date even the alleged conception “prior to January 1, 2002.”

V. CLAIM CONSTRUCTION

Here, the claim language is “given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016). Terms not specifically construed below have their plain and ordinary meaning under the

broadest reasonable interpretation. *See id.*

A. “GPS integral thereto”

This claim phrase is recited in independent claims 19 and 21 in the context of a handheld computing device that “has a GPS integral thereto.” The ’748 Patent Specification does not use the claim phrase “GPS integral thereto” or define the acronym “GPS” as used in the claims. A POSITA would have understood the term “GPS” to be the acronym for Global Positioning System. (Microsoft Computer Dictionary at 3–4 (EX1013)).

However, a POSITA would not have understood that the entire Global Positioning System, including multiple satellites, to all be ***integral to*** a handheld computing device: as the Microsoft Computer Dictionary indicates, the GPS system uses “24 earth satellites” and “ground-based control stations.” (Reddy, ¶ 45 (EX1005)). Rather, a POSITA would have understood the claim language “GPS integral thereto” to reasonably refer to, for example, GPS equipment integral to the handheld computing device, such as a GPS receiver, as indicated by the ’748 Patent Specification. (’748 Patent at 5:47–48, 10:56–57 (EX1001)). Thus, a POSITA would have understood the broadest reasonable interpretation of “GPS integral thereto” to mean “GPS equipment integral thereto.” (Reddy, ¶¶ 44–47 (EX1005)).

B. “token”

The '748 Patent does not provide an explicit definition for this term. During prosecution, the Examiner asserted that the term token had “a special meaning (i.e. logical, mathematical or branching operation),” citing paragraph 54 of the as-filed Specification (column 8, lines 56–59 of the '748 Patent). ('748 PH at 2554 (EX1002)). While this portion of the Specification is important context in which to understand the term, Petitioner submits that the Examiner’s reference is not determinative of the broadest reasonable interpretation, as the Specification explicitly states that description is merely an example or a preferred embodiment: “Each token *preferably corresponds to* a logical, mathematical, or branching operation...” ('748 Patent at 8:56–59 (EX1001)).

Indeed, in IPR2014-00140, concerning the parent '816 Patent, a petitioner proposed a construction of the term “token” as “‘a distinguishable unit of a program, such as an index, an instruction, or a command’ that ‘can represent something else such as a question, answer, or operation.” This proposed construction was adopted by the Board for purposes of institution. ('816 Institution at 10 (EX1011)). Dr. Reddy adopted this construction in his previous analysis of the '816 Patent, and maintains that a token is appropriately construed according to this definition. (Reddy, ¶ 50 (EX1005)).

Petitioner also notes that, in previous litigation concerning the '816 Patent,

Patent Owner's predecessor-in-title proposed a construction of "token" as "any non-reducible textual element in data that is being parsed." The Court ultimately construed the term as "any non-reducible element of the computer code that is being parsed." ('816 Markman Order at 13–14 (EX1011)). District courts use a different standard than the PTAB when construing claim terms, but ultimately, the differences between the Board's previous construction in IPR2014-00140 and the Court's construction in the litigation do not materially affect the unpatentability analysis here. For example, a POSITA would have understood a "program" to be comprised of "computer code" which may include "an index, an instruction, or a command" and, likewise, a "distinguishable unit" thereof to be a "non-reducible element." (Reddy, ¶ 52 (EX1005)). Regardless, under either interpretation, the claims are rendered obvious by the grounds of challenge herein.

Accordingly, for purposes of construction, Petitioner proposes that the broadest reasonable interpretation of the claim term "token" should be "a distinguishable unit of a program, such as an index, an instruction, or a command." (Reddy, ¶¶ 49–54 (EX1005)).

C. "originating computer" / "recipient computer" / "central computer"

The '748 Patent Specification does not use these claim terms. Rather, the terms only appear in the claims. A POSITA would have understood, based on the context provided by embodiments disclosed in the Specification and by dependent

claims, that one computing device can perform the functions of the “originating computer,” “recipient computer,” and “central computer” within the scope of claims 16, 19, and 21. (Reddy, ¶¶ 55–60 (EX1005)).

Claims 16 and 19

Claims 16 and 19 include the terms “originating computer” and “recipient computer.” Claims 16 and 19 recite “establishing communications between a handheld computing device and an originating computer.” In one example, the ’748 Patent states, with reference to FIG. 1, that “server 24 is shown preferably...loosely networked to handheld computers 28–32 through connections 34–38.” (’748 Patent at 7:24–26 (EX1001)). Because server 24 and handheld computers 28–32 establish communications, the ’748 Patent appears to teach that “server 24” would be understood as one example of a computing device that performs the functions of the recited “originating computer.” (Reddy, ¶ 57 (EX1005)).

Claims 16 and 19 also recite “establishing communications between said handheld computing device and a recipient computer” and “transmitting...to said recipient computer.” The ’748 Patent states that “several options are available for the transmission of responses from handheld 28 to server 24.” (’748 Patent at 9:58–59 (EX1001)). Thus, “server 24” would also have been understood as one example of a computing device that performs the functions of the recited “recipient

computer.” (Reddy, ¶ 58 (EX1005)).

Accordingly, with reference to claims 16 and 19, a POSITA would have understood that the functions of the “originating computer” and “recipient computer” may be performed by the same computing device. This conclusion is further supported by claim 18, which depends from claim 16 and recites “said originating computer and said recipient computer are a same computer.” (Reddy, ¶¶ 57–59 (EX1005)).

Claim 21

Claim 21 also recites a “central computer” in addition to an “originating computer” and “recipient computer.” The “originating computer” and “recipient computer” perform steps of “establishing communications” and “transmitting...to said recipient computer” as described above with respect to claims 16 and 19. Furthermore, claim 22, which depends from claim 21, states that “said central computer and said recipient computer are a same computer.” Accordingly, with reference to claim 21, a POSITA would have understood that the functions of the “originating computer,” “recipient computer,” and “central computer” may be performed by the same computing device. (Reddy, ¶ 60 (EX1005)).

VI. CLAIMS 16–19 AND 21–22 ARE UNPATENTABLE²

A. Challenge 1: Claims 16–19 and 21–22 are obvious under 35 U.S.C. § 103 in view of *Kari*, further in view of *Darnell, Todd, and Chan*

1. Overview of *Kari*

Kari describes a system in which a search terminal (such as a PDA) “is used for sending an information query” formulated using a “blank form...to be used for entering the information.” (*Kari* at Abstract, 6:40–45 (EX1006)). The “blank form is advantageously loaded or stored in the search terminal” and “can be designed as an Internet-type WWW page” that is displayed in a “WWW browser.” (*Id.* at 6:43–49; 63–66 (EX1006)). The “user can freely fill in the text fields and mark the option boxes desired” and “select possible additional alternatives.” (*Id.* at 7:9–11 (EX1006)). Once the data is filled in, “the user selects data transmission” and submits the query. (*Id.* at 7:18–22 (EX1006)). The browser may also “read[] automatically the information on the location” of the device “e.g., by using GPS equipment.” (*Id.* at 7:60–65 (EX1006)). Once a query message including all of the user’s information is formed, the “query message sent from the search terminal 1 is processed in the connection server 3” which may then “transmit[] the

² Unless otherwise specified, all ***bold italics*** emphasis below has been added. Text in *italics* is used to signify claim language, while reference names are also *italicized*.

information of the query message to the remote server...” (*Id.* at 8:20–27 (EX1006)).

Kari is not of record in the ’748 Patent.

2. Overview of *Chan*

Chan describes a system for accessing local information in a database. *Chan* describes a “computer system” that “comprises a...Global Position System receiver 37” and further describes a form that includes a box that “accepts input for a position” that is “in the position coordinates of the Global Position System.” (*Chan* at 5:21–27; 6:6–9 (EX1010)).

Chan is not of record in the ’748 Patent.

3. Overview of *Darnell*

Darnell is titled “HTML 4 Unleashed” and describes itself as a “complete reference” to Hypertext Markup Language (HTML) 4.0. (*Darnell* at Cover (EX1007)). HTML, as *Darnell* describes, “is the language that puts the face on the Web” and “consists of a variety of elements called *tags*.” (*Id.* at xxxvii (EX1007)). In particular, *Darnell* dedicates an entire chapter to “Building and Using HTML Forms.” (*Id.* at 231 (EX1007)). *Darnell* teaches that forms “are used for a variety of purposes” and “allow visitors to your site to give you input.” (*Id.* at 232 (EX1007)).

Darnell is not of record in the ’748 Patent.

4. Overview of *Todd*

Todd describes a “questionnaire device” that “electronically presents a series of questions, records the answers, and stores and/or transmits all or a portion of the survey response.” (*Todd* at Abstract (EX1009)).

Todd is not of record in the '748 Patent.

5. Analysis

Challenged claims 16, 19, and 21 are independent claims. For the Board's convenience, the analysis below addresses claim 19 first, as claim 16 recites a subset of the limitations found in claim 19.

Claim 19

[19.0] A method for managing data comprising the steps of:

To the extent the preamble is limiting, *Kari* describes a “method and system for transmitting information,” which discloses *a method of managing data*. (*Kari* at Abstract; 1:61–2:1 (EX1006); Reddy, ¶¶ 78–80 (EX1005)).

[19.1] (a) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto;

Kari and *Chan* teach this claim limitation. *Kari* describes communication between the search terminal 1 and the connection server 3, which corresponds to *establishing communications between a handheld computing device and an originating computer*: “[t]he user starts connection set-up to the connection server

3 in block 302...” (*Kari* at 6:66–7:2; *see also* 6:49–51 (EX1006)). *Kari* also describes that “the user can load the WWW page from the connection server 3 and store it locally for example in the storing means of the search terminal 1.” (*Id.* at 15:45–52 (EX1006)).

Kari’s search terminal 1 is described as “a mobile station,” which corresponds to a *handheld computing device*. (*Id.* at 2:56–59 (EX1006)). *Kari*’s connection server 3 can be, in one example, an “Internet server,” which corresponds to an *originating computer*. (*Id.* at 4:59–67 (EX1006)).

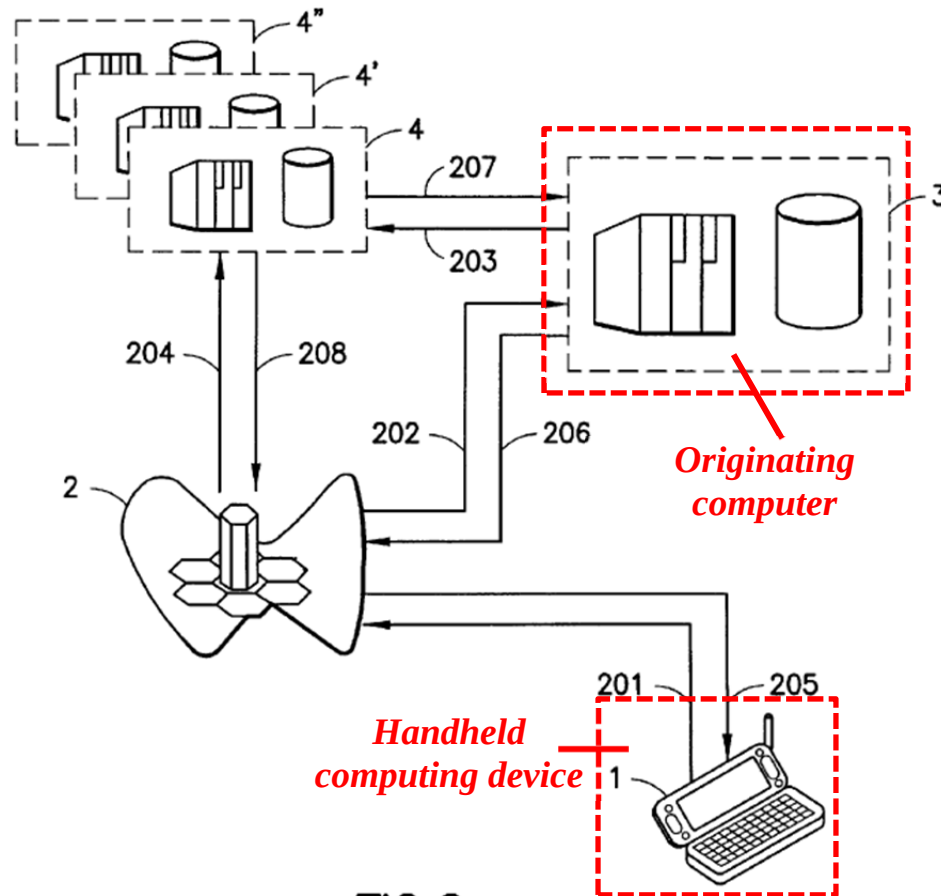


FIG.2

***Kari* at FIG. 2 (annotated) (EX1006)**

Additionally, *Kari*'s search terminal 1 *has a GPS*: “the search terminal 1 can use satellite location means (GPS).” (*Kari* at 3:11–16 (EX1006)). A POSITA would have understood that, to use satellite location means (GPS), the search terminal would have to include GPS equipment. (Reddy, ¶ 85 (EX1005)).

Patent Owner may argue that *Kari* does not explicitly teach that the GPS equipment is *integral* to the search terminal. But a POSITA would have understood that a finite number of predictable choices exist for the physical

arrangement of *Kari*'s GPS equipment with respect to the search terminal: either the GPS equipment is *integral* to the search terminal, or the GPS equipment is connected in some way to the search terminal (e.g., using a serial connection or the like). (Reddy, ¶ 86 (EX1005)). A POSITA would have found it obvious to incorporate the GPS equipment to be *integral* to the search terminal at least because it would have been efficient for components used by the search terminal to be within the search terminal itself, and would have also expected that incorporating GPS equipment into a search terminal (such as a mobile telephone) would have been successful, at least because it was well-known at the time of *Kari* and prior to the '748 Patent for GPS equipment to be incorporated into, or *integral* to, a mobile telephone. (See, e.g., *Twitchell* at FIG. 3. (EX1014); *Darnell* '736 at FIGs. 4–5 (EX1015); Reddy, ¶ 86 (EX1005)).

Regardless, *Chan* explicitly teaches a computing device with a *GPS integral thereto*, describing a “hand held computer or...portable computer” as an “end-user computer system” that “comprises...a Global Position System receiver 37.” (*Chan* at 3:11–15, 5:21–27 (EX1010)).

A POSITA would have found it obvious to combine *Kari* with the teachings of *Chan*. First, *Kari* and *Chan* are analogous art and in the same field of endeavor. Both *Kari* and *Chan* are directed to systems and methods for receiving and fulfilling location-based queries. (*Kari* at 2:20–23 (EX1006); *Chan* at 1:7–9

(EX1010)).

Second, a POSITA reading *Kari* would have been motivated to consider the advantages of the teachings of *Chan* of a hand-held computer that included a GPS receiver. As detailed above, integrating a GPS receiver with a mobile telephone or similar hand held device was well-known at the time of the '748 Patent, and although *Kari* teaches the use of satellite location means, including GPS, a POSITA would have recognized that integration of a GPS receiver into the search terminal of *Kari* would have provided benefits, as taught by *Chan*, such as the ability to “continuously update the current position coordinates with the reading from Global Positioning System receiver 37.” (*Chan* at 6:19–23 (EX1010)). Accordingly, a POSITA would have been motivated to combine the teachings of a hand-held or portable computer that included a GPS receiver into the systems and methods of *Kari* to teach a *handheld computing device with a GPS integral thereto*. (Reddy, ¶¶ 88–89 (EX1005)).

Thus, *Kari*’s description of the connection set-up to the connection server from the search terminal, which uses satellite location means, along with *Chan*’s explicit teaching of a GPS receiver incorporated into a hand held computing device, teaches *establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto*. (Reddy, ¶¶ 81–90 (EX1005)).

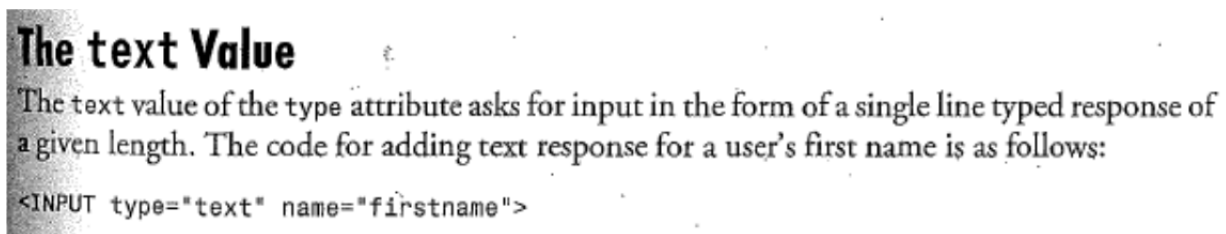
[19.2.1] (b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer,

Kari and *Darnell* teach this claim limitation. *Kari* describes that, “after the connection is set up...the user selects the desired service” and then “connection server 3 displays the query form corresponding to the selected service...the query form is loaded on the display of the search terminal 1...” (*Kari* at 6:66–7:6 (EX1006)). As described above with respect to limitation [19.1], *Kari* also describes “load[ing] the WWW page” and “stor[ing] it locally.” (*Id.* at 15:45–52 (EX1006)). Thus, *Kari*’s description of the query form from the connection server being loaded and stored on the search terminal teaches *receiving within said handheld computing device a transmission of a...questionnaire from said originating computer*. (Reddy, ¶¶ 92–93 (EX1005)).

Kari does not describe its query form as *tokenized*, but does note that the query form, or *questionnaire*, is “an Internet-type WWW page,” and that the user uses the search terminal to start “a terminal application...which in this example is a WWW browser.” (*Kari* at 6:47–49, 64–66 (EX1006)). A POSITA would have understood that a WWW page displayed in a WWW browser would have been written in HTML, because as *Darnell* states, “HTML...is the language that puts the face on the Web.” (*Darnell* at xxxvii (EX1007); Reddy, ¶ 94 (EX1005)).

An HTML document is composed of HTML tags: “tags...are used for everything from defining type styles and headings to inserting specialized

content...” (*Darnell* at xxxvii (EX1007)). HTML tags also are used to create forms, like the query form described by *Kari* and depicted in FIG. 7: “Forms, which allow visitors to your site to give you input, are used for a variety of purposes.” (*Darnell* at 232 (EX1007); Reddy, ¶ 95 (EX1005)). An example of an HTML tag used to create a form is provided in chapter 15 of *Darnell* for a text input box, which uses the HTML INPUT tag. (*Darnell* at 234, 241 (EX1007)).



***Darnell* at 241 (EX1007)**

A POSITA would have understood such an HTML tag to correspond to or include a *token* as recited and as construed by both the Board and the court previously. Such a tag is a distinguishable unit of a program (an HTML page), as one HTML tag can be distinguished from another HTML tag and from attributes that are encoded within elements of an HTML page. Additionally, HTML tags represent instructions (e.g., an instruction to a browser to render an input text box). (Reddy, ¶¶ 96–97 (EX1005)). Under the alternative district court construction, a POSITA would have also understood an HTML tag to include a non-reducible textual element of computer code which is being parsed, as taught by *Darnell*: “[a] Web browser is a special type of parsing engine that evaluates the tags and content

of an HTML file and displays it...” (*Darnell* at 24 (EX1007)). A POSITA would have recognized that HTML tags are “non-reducible,” as an HTML tag is a “distinctive component of a document’s structure” that cannot be reduced further. (Reddy, ¶ 98 (EX1005)).

Thus, because HTML tags are *tokens* as construed, *Kari*’s query form (as illustrated in FIG. 7), or *questionnaire*, being a WWW page, would have been understood to be composed of multiple HTML tags, or multiple *tokens*, in light of the teachings of *Darnell*. Thus, *Kari*’s query form corresponds to a *tokenized questionnaire* as recited, and *Kari* and *Darnell* teach *receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer*. (Reddy, ¶¶ 91–99 (EX1005)). Reasons to combine *Kari* and *Darnell* are provided below in the analysis of limitation [19.2.3].

International Service, Inc.		
Fill'er up query form		
Resolved parameters		
Name	George McLaren	
Level	Normal	
Age	45	
Sex	m	
Cellular phone number	+358-50-123123	
Class	Business	
Car	BMW	
Gas type	99	
Other info, search words	service, cafe	

Locate nearest:

- ☐ Fill'er up no service station
- ☐ Fill'er up 24H service station
- ☐ Fill'er up 24H service station with cafe
- ☐ Fill'er up Five Star Station
- ☐ Fill'er up Super Service Market

Send query Clear form

FIG. 7

Kari at FIG. 7 (EX1006)

[19.2.2] said tokenized questionnaire including at least one question requesting location identifying information,

Kari further teaches that the query form, which corresponds to the recited tokenized questionnaire, includes at least one question requesting location identifying information: “[t]he user can enter the information on the location...manually” or alternatively, “the application program reads automatically the information on the location.” (Kari at 7:11–14, 60–65 (EX1006)). Thus, because Kari describes that the user can manually enter in location information, Kari teaches that its query form includes at least one question requesting location identifying information. (Reddy, ¶¶ 100–102 (EX1005)).

[19.2.3] said tokenized questionnaire comprising a plurality of device independent tokens;

A POSITA would have further understood that *Darnell*'s description of HTML tags teaches that the questionnaire is composed of *device independent tokens* as well. *Darnell* describes the evolution of HTML, and notes that "HTML offered a platform-independent means of marking data for interchange."³ (*Darnell* at 16 (EX1007)). Thus, *Kari*'s description of a query form as a WWW page combined with *Darnell*'s description of HTML tags teaches *device independent tokens* as recited. (Reddy, ¶ 104 (EX1005))

A POSITA would have found it obvious to look to the teachings of *Darnell* when reading *Kari*. First, *Kari* and *Darnell* are analogous prior art and in the same field of endeavor. Both *Kari* and *Darnell* (and in particular, *Darnell*'s teachings of HTML forms) teach methods and systems for receiving input from users. (*Kari* at Abstract (EX1006); *Darnell* at 232 (EX1007)).

Second, a POSITA reading *Kari* would have been motivated to consider the teachings of *Darnell* at least because *Darnell* is a reference book that would have been obvious to use and consider when implementing *Kari*'s teachings. *Kari* mentions the use of a "web browser developed for the use of the Internet data network, wherein the user can search for information in the Internet data network,

³ During prosecution, the Examiner alleged (with reference to other claims) that "HTML...as well known in the art is device independent." ('748 PH at 2433 (EX1002)). The Patent Owner did not challenge this assertion.

such as home pages (WWW pages) of companies...” (*Kari* at 3:37–41 (EX1006)).

A POSITA would have readily recognized that WWW pages are written in HTML. (Reddy, ¶ 106 (EX1005); *Darnell* at pxxxvii (EX1007) (“HTML...puts the face on the Web.”)). *Darnell*’s front cover notes that it is an HTML 4 Reference with “Every element and attribute listed with a description, syntax, notes, examples, and more.” (*Darnell* at Cover (EX1007)). *Darnell* states that it “has been planned and designed to meet a wide variety of needs, depending on your level of experience and knowledge with HTML” and was intended as “the most comprehensive HTML book available.” (*Id.* at xlii (EX1007)). Accordingly, a POSITA would have found it obvious to look to and incorporate *Darnell*’s teachings when implementing the query form of *Kari*. Combining the teachings of *Darnell* with those of *Kari* would have been no more than the combination of prior art elements according to known methods (e.g., composing a WWW page in the standard language of the Internet, HTML), and would have been obvious to a POSITA at the time of the ’748 Patent. Such a combination would have produced predictable and operable results (e.g., an HTML page that could be properly parsed by a web browser), and a POSITA would have expected success from such a combination. (Reddy, ¶ 108 (EX1005)). Thus, a POSITA would have been motivated to combine the teachings of *Kari* and *Darnell*. (Reddy, ¶¶ 104–108 (EX1005)).

Therefore, the combination of *Kari* and *Darnell* teaches *receiving within*

said handheld computing device a transmission of a tokenized questionnaire from said originating computer, said tokenized questionnaire including at least one question requesting location identifying information, said tokenized questionnaire comprising a plurality of device independent tokens. (Reddy, ¶¶ 91–109 (EX1005)).

[19.3] (c) ending said communications between said handheld computing device and said originating computer;

Kari describes that “the connection to the connection server 3 can be cut” once “the query form is loaded on the display of the search terminal 1.” (*Kari* at 7:14–17 (EX1006)). Further, as detailed previously, *Kari* describes that “the connection server 3 has a predefined WWW page” and that the user “can load the WWW page from the connection server 3 and store it locally.” (*Id.* at 13:45–52 (EX1006)). A POSITA would have recognized that after the WWW page was stored, the search terminal of *Kari* would be disconnected from the connection server, as *Kari* later states that when “the user wants to make a query,” “[i]f the questionnaire used was a form stored in the storing means of the search terminal 1, connection set-up is started to the connection server 3 after the form is correctly filled in.” (*Id.* at 13:59–61, 14:25–28 (EX1006); Reddy, ¶ 112 (EX1005)). A connection set-up would not be necessary if the search terminal and connection server were still in communication, and thus, a POSITA would have understood that the connection between the search terminal and connection server ends after

storing of the query form. (Reddy, ¶ 113 (EX1005)). Thus, *Kari* teaches *ending said communications between said handheld computing device and said originating computer*. (Reddy, ¶¶ 110–114 (EX1005)).

[19.4] (d) after said communications has been ended,

Kari teaches steps that occur “[a]fter the query form is loaded” (as described with respect to block 304) being performed once “the connection to the connection server 3 [is] cut.” (*Kari* at 7:14–17 (EX1006); Reddy, ¶¶ 115–117 (EX1005)).

[19.5] (d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a first user, and,

Kari teaches this limitation, stating: “[a]t the stage when the user wants to make a query, the WWW page is loaded for example with an Internet browser...” (*Kari* at 15:59–61 (EX1006)). *Kari*’s disclosure of loading a WWW page with an Internet browser corresponds to *executing at least a portion of said plurality of tokens on said handheld computing device*, because when the WWW page is loaded, the HTML page having HTML tags (the *plurality of tokens*) would be rendered, or *executed*, by the web browser to display the form fields. (Reddy, ¶ 120 (EX1005)). For example, as described by *Darnell*, a “browser...evaluates the tags and content of an HTML file and displays it...” (*Darnell* at p. 24 (EX1007); Reddy, ¶ 120 (EX1005)). *Kari* further teaches that the executing is performed *to collect at least one response from a first user*, as it describes that “the WWW page

is loaded...and the questionnaire is filled in for the relevant parts.” (*Kari* at 15:59–61 (EX1006)). As detailed with respect to limitations [19.3]–[19.4], in the example in which *Kari*’s search terminal stores the query form, a POSITA would have understood that the page is loaded in the WWW browser after it has been “store[d] locally...in the storing means of the search terminal,” i.e., after the connection to the connection server was cut. (Reddy, ¶ 121 (EX1005)).

Thus, *Kari*’s description of the WWW page being loaded with an Internet browser and the user filling in the questionnaire teaches *executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a first user* as recited. (Reddy, ¶¶ 118–122 (EX1005)).

[19.6] (d2) storing within said computing device⁴ said at least one response from the first user;

Kari and *Todd* teach this claim limitation. *Kari* suggests storing the response from the user, as it states that “the application program forms a query message on the basis of the information to be transmitted to the connection server...” (*Kari* at 8:1–5 (EX1006)). A POSITA would have understood that,

⁴ Petitioner interprets the recitation of *computing device* in limitation [19.6] to refer to the earlier-recited *handheld computing device*, as supported by the ’748 Patent. (’748 Patent at 6:2–4 (EX1001)).

upon forming the query message, that message (and its constituent information, i.e., the *response[s] from the first user*) is stored (at least temporarily) in random access memory of the search terminal, at least because temporary storage of data to be transmitted was a common operation of computing devices at the time of the '748 Patent. (Reddy, ¶ 124 (EX1005)). Furthermore, *Kari* teaches that “the application program combines the entered information and forms a query message for example according to the hyper text mark-up language (HTML) and HTTP definitions to be transmitted to the connection server 3.” (*Kari* at 14:15–21 (EX1006)). Forming such a query message by combining entered information (*response[s]*) would have been understood to include at least temporarily storing the result of the formation before transmission, for example, in the situation in which *Kari*’s connection is not yet established. (Reddy, ¶ 125 (EX1005)).

Regardless, *Todd* explicitly teaches storing survey responses in a portable survey device, which corresponds to *storing within said computing device said at least one response from the first user*. *Todd* describes a device which “electronically presents a series of questions, records the answers, and stores...all or a portion of the survey response.” (*Todd* at Abstract (EX1009)). In further detail, *Todd* states: “[t]he instant device presents a series of questions, or prompts, to the user and records the answers. The on-board storage is sufficiently large to allow the device to store all of the responses internally...” (*Id.* at 5:35–40

(EX1009)).

A POSITA would have found it obvious to combine the teachings of *Todd* of storing survey responses into the system of *Kari*. First, *Kari* and *Todd* are analogous art. Both references are related to surveys or questionnaires on handheld computing devices: like *Todd*, *Kari* electronically presents a series of questions. (*Kari* at Abstract (EX1006); *Todd* at Abstract (EX1009), Reddy, ¶ 127 (EX1005)).

Second, a POSITA would have incorporated the teachings of *Todd* of storing survey responses at least because *Todd* suggests that storing responses may be performed, for example, when conditions for transmission are not met. For example, *Todd* describes that “the answer(s) is stored in EEPROM...and the device determines whether to transmit the answer(s)...” and that transmitting occurs “if set to do so and the conditions for transmission are met.” (*Todd* at 10:15–18, 9:67–10:1 (EX1009)). *Kari* describes situations in which conditions for transmission are not met. For example, *Kari* describes with reference to blocks 312 and 313 that the “application program starts to re-establish connection in block 312. In block 313, it is checked if the connection is set up...[i]f a response has not yet been received, it is examined in block 315 if the time limit has been passed or if there is still time to wait, in which case the procedure is continued in block 312.” (*Kari* at 8:6–15 (EX1006)). A POSITA would have understood that storing the

information in the query message (which is analogous to *Todd's* survey responses) in the device would have been desirable during this connection re-establishment and waiting process to maintain the answers until the connection is established; without such storing, the user in *Kari* would have to re-enter his or her information, which is not an optimal user experience. (Reddy, ¶¶ 128–129 (EX1005)). Thus, a POSITA would have found it obvious to incorporate the storing of survey responses as taught by *Todd* into the system of *Kari* to remove the need for the user to re-enter query message information while a connection is being set up. (Reddy, ¶ 129 (EX1005)).

Further, the '748 Patent itself indicates that storing, in a computing device, data entered by a user was well-known at the time of the '748 Patent. In particular, the '748 Patent's Background of the Invention section states that “[p]resently there are two methods for dealing with the problem of data link availability...entered data can be stored locally on the handheld and transmitted in a batch process when a link is established.” ('748 Patent at 4:1–12 (EX1001)). Thus, a POSITA would have recognized that storing responses entered into a questionnaire, as taught by *Todd*, was a known solution in questionnaire or survey systems like *Kari*. (Reddy, ¶ 130 (EX1005)).

Accordingly, a POSITA would have found it obvious to combine *Todd's* explicit teachings of storing responses to a questionnaire into the system of *Kari* at

least to store the information of the query message in the case of an unavailable connection. Combining the teachings of *Kari* and *Todd* would have been no more than the combination of known elements according to known methods (e.g., incorporating software functionality of one computing device into a similar computing device) to achieve the storing of responses taught by *Todd* for the reasons suggested by *Todd*, in a system which would benefit from such storing (*Kari*). (Reddy, ¶ 131 (EX1005)). The operation of *Kari* would essentially be unchanged, except for the explicit addition of storing the query message information after receipt from the user, and *Kari* teaches that its search terminal includes “storage means” and “random access memory” which would have been obvious choices to implement such storing of responses. (*Kari* at 7:49–55 (EX1006)). Such a combination would have produced predictable and operable results, and a POSITA would have expected success from such a combination. Thus, a POSITA would have been motivated to combine the teachings of *Kari* and *Todd*. (Reddy, ¶ 132 (EX1005)).

Accordingly, the combination of *Kari*’s forming of a query message and *Todd*’s explicit teaching of storing all or a portion of survey responses, teaches *storing within said computing device said at least one response from the first user* as recited. (Reddy, ¶¶ 123–133 (EX1005)).

[19.7] (d3) using said GPS to automatically obtain said location identifying

information in response to said at least one question that requests location identifying information

Kari teaches this limitation. First, *Kari* teaches *using said GPS to automatically obtain said location identifying information*: “the application program reads automatically the information on the location...the information on the location can be determined e.g. by using GPS equipment...” (*Kari* at 7:60–67 (EX1006)).

Kari further teaches that this is performed *in response to said at least one question that requests location identifying information*, as *Kari* states the “user can enter the information on the location...manually...” but if the user has not done so, “the application program reads automatically the information on the location...by using GPS...” (*Kari* at 7:11–14, 60–67 (EX1006)). That is, *Kari* teaches that the user can enter the location manually in the query form in response to a question, but if no answer is received by the user, the GPS location is used instead. Thus, the entry of the location information is *in response to said at least one question that requests location identifying information*. (Reddy, ¶¶ 136–137 (EX1005)).

Thus, *Kari*’s description of the automatic reading of the location information if the user has not manually entered in the location information teaches *using said GPS to automatically obtain said location identifying information in response to said at least one question that requests location identifying information* as recited. (Reddy, ¶¶ 134–139 (EX1005)).

[19.8] (e) establishing communications between said handheld computing device and a recipient computer;

Kari teaches this limitation, stating: “[t]he application program starts to re-establish connection in block 312. In block 313, it is checked if the connection is set up...After the search terminal 1 has received a response from the connection server 3, i.e. the connection is established, the search terminal 1 starts transmission...” (*Kari* at 8:6–19 (EX1006)). As detailed above in § V.C, *supra*, the *recipient computer* and earlier-recited *originating computer* may be the same computing device, in *Kari*, the “connection server.” (Reddy, ¶ 141 (EX1005)).

Thus, *Kari*’s description of re-establishing a connection between the search terminal and connection server teaches *establishing communications between said handheld computing device and a recipient computer*. (Reddy, ¶¶ 140–142 (EX1005)).

[19.9] (f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer; and

Kari teaches transmitting a value representative of each of said at least one response stored within said handheld computing device, stating “the search terminal 1 starts transmission of the query message to the connection server 3” and “the search terminal 1 advantageously sends the information contained in the query form to the connection server 3.” (*Kari* at 8:16–19 (EX1006)). As described with reference to limitation [19.6], *supra*, the information of the query message is

stored, as taught by the *Kari* and *Todd* combination. *Kari* further describes the content of the query message as including the information from the query form, such as data entered in, for example, Car, GasType, and SearchWords fields. (*Id.* at 10:20–43 (EX1006)). This data corresponds to values representative of responses, and thus, the query message includes a *value representative of each of said at least one response*. *Kari* describes the information being sent to the “connection server 3,” that is, *Kari* teaches *transmitting....to said recipient computer*. (See § V.C; Reddy, ¶ 145 (EX1005)).

Thus, *Kari*’s description of sending information contained in the query form to the connection server teaches *transmitting a value representative of at least one response stored within said handheld computing device to said recipient computer* as recited. (Reddy, ¶¶ 143–146 (EX1005)).

[19.10] (g) after receipt of said transmission of step (f), transmitting a notice of said received value representative of each of said at least one response to a second user.

Kari describes that “the query message sent from the search terminal 1 is processed in the connection server 3...Next, the connection server 3 transmits the information of the query message to the remote server 4, 4’, 4” selected...” (*Kari* at 8:20–27 (EX1006)).

The ’748 Patent and the prior art teach that electronic information is communicated between users using computing devices. For example, the ’748

Patent describes a computing device as a potential recipient of notices of received values, such as in its description of an insurance provider 140 downloading encrypted data 132 from an application service provider 130. (See '748 Patent at 12:10–46 (EX1001)). Similarly, the '748 Patent shows “electronic devices” in FIG. 5 receiving data from another computing device. (*Id.* at FIG. 5 (EX1001)). Consistent with the '748 Patent, therefore, a POSITA would have understood that sending information to a computing device as described corresponds to sending information to a user, without needing to explicitly state that a user is using a computing device. For example, the '748 Patent does not explicitly state that an employee at the insurance provider 140 reviews the downloaded encrypted data, but a POSITA would have understood that a computing device of the insurance provider (e.g., a server) would be accessed by a user to review the information downloaded by the insurance provider. (See *Id.* at 12:35-46 (EX1001); Reddy, ¶ 149 (EX1005)). Likewise, with respect to *Kari*’s remote servers, a POSITA would have understood *Kari*’s teaching of sending the information of the query message to the remote server to be for the benefit of a user of the remote server, so as to review the information of the query message. (Reddy, ¶ 149 (EX1005); *see also Todd* at 15:45-46 (describing a manager reviewing survey results within a computer) (EX1009)). Accordingly, a POSITA would have understood *Kari* to teach *transmitting a notice of said received value representative of each of said at*

least one response to a second user as recited, consistent with the teachings of the '748 Patent.

Thus, *Kari* sending the information of the query message to the remote server teaches *transmitting a notice of said received value of each of said at least one response to a second user as recited.* (Reddy, ¶¶ 147–151(EX1005)).

Accordingly, the combination of *Kari, Chan, Darnell, and Todd* teaches each and every limitation of claim 19, and renders the claim obvious.

Claim 16

[16.0] A method for manacling data comprising the steps of:

See above analysis of limitation [19.0].

[16.1] (a) establishing communications between a handheld computing device and an originating computer, said handheld device having at least a capability to determine a current location thereof;

See above analysis of limitation [19.1]. Further, Kari's disclosure of a search terminal using "satellite location means (GPS)" teaches that the search terminal has the capability to determine a current location thereof as recited in limitation [16.1]. Accordingly, establishing communication between Kari's search terminal (having a satellite location means such as GPS) and connection server teaches establishing communications between a handheld computing device and an originating computer, said handheld device having at least a capability to determine a current location thereof as recited. (Reddy, ¶¶ 153–155 (EX1005)).

[16.2.1] (b) receiving within said handheld computing device a transmission of a tokenized questionnaire

See above analysis of limitation [19.2.1].

[16.2.2] including at least one question requesting GPS coordinates

As described above in the analysis of limitation [19.2.2], *Kari* teaches a questionnaire *including at least one question requesting location identifying information*. With respect to *requesting GPS coordinates* as recited, the location information in *Kari* is provided from a GPS system, but *Kari* does not explicitly disclose *requesting GPS coordinates* as recited. *Chan*, however, describes and depicts a form with *at least one question requesting GPS coordinates* as recited: “Box 52 accepts input for a position. The position is a location in an area where the user would like to search for merchandise. The position is the position coordinates of the Global Position System.” (*Chan* at 6:6–9 (EX1010)).

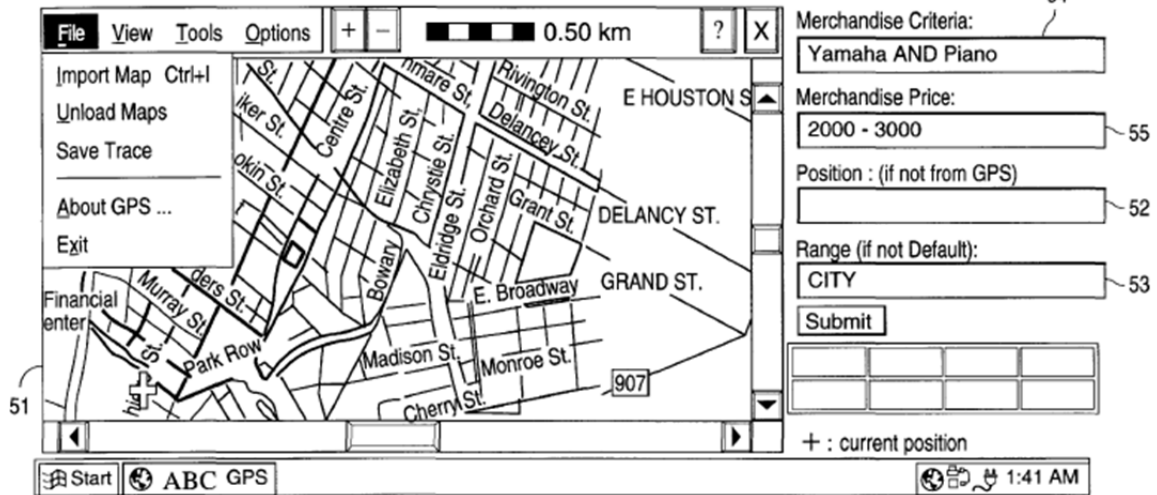


FIG. 5

Chan at FIG. 5 (EX1010)

A POSITA would have found it obvious to combine the teachings of *Kari* with these teachings of *Chan*. First, as analyzed above, *Kari* and *Chan* are analogous art and in the same field of endeavor. Both *Kari* and *Chan* are directed to systems and methods for receiving and fulfilling location-based queries. (*Kari* at 2:20–23 (EX1006); *Chan* at 1:7–9 (EX1010)).

Second, a POSITA reading *Kari* would have been motivated to consider the teachings of *Chan* of explicitly requesting GPS coordinates. Although *Kari* requests location information, a POSITA would have recognized that requesting location information represented by GPS coordinates, as taught by *Chan*, would have provided a more “accurate search,” and thus, a POSITA would have been motivated to request GPS coordinates instead of another representation of the user’s location. (*Chan* at 3:21–24 (EX1010)). *Chan* also teaches that GPS

coordinates as requested can be used “with navigation and routing applications” such as “real time navigation.” (*Id.* at 3:25–29 (EX1010)). A POSITA would have recognized these capabilities as benefits that may not have been possible if other forms of location were requested in *Kari*’s questionnaire, and therefore would have been motivated to use *Chan*’s teachings of requesting GPS coordinates. (Reddy, ¶ 159 (EX1005)).

Combining the teachings of *Chan* with those of *Kari* would have been no more than the combination of prior art elements according to known methods (e.g., modifying the *Kari* query form to specifically request GPS coordinates instead of more generalized location information), and would have been obvious to a POSITA at the time of the ’748 Patent. Such a combination would have produced predictable and operable results (e.g., a query form that requested GPS coordinates), and a POSITA would have expected success from such a combination. Thus, a POSITA would have been motivated to combine the teachings of requesting GPS coordinates in *Chan* into the systems and methods of *Kari*. (Reddy, ¶¶ 157–160 (EX1005)). Accordingly, *Kari* and *Chan* teach a questionnaire *including at least one question requesting GPS coordinates as recited.* (*Id.*).

[16.2.3] said tokenized questionnaire comprising a plurality of device independent tokens;

See above analysis of limitation [19.2.3].

Therefore, the combination of *Kari*'s query form and *Chan*'s explicit requesting of GPS coordinates, along with *Darnell*'s HTML teachings (see [19.2.1] and [19.2.3], *supra*) teaches *receiving within said handheld computing device a transmission of a tokenized questionnaire including at least one question requesting GPS coordinates, said tokenized questionnaire comprising a plurality of device independent tokens.* (Reddy, ¶¶ 161–162 (EX1005)).

[16.3] (c) ending said communications between said handheld computing device and said originating computer;

See above analysis of limitation [19.3].

[16.4] (d) after said communications has been terminated, when said handheld computing device is at said particular location

See above analysis of limitation [19.4].

Although the claim recites *when said handheld computing device is at said particular location*, the claim does not earlier recite “a particular location.” Accordingly, for purposes of the unpatentability analysis, Petitioner interprets the claim phrase *at said particular location* to mean *at a particular location*. *Kari* teaches performing the below steps *when said handheld computing device is at [a] particular location*, as it describes that “[a]t the stage when the user wants to make a query, the WWW page is loaded...and the questionnaire is filled in...the query message is also provided with the location information, obtained e.g. from a GPS system.” (*Kari* at 13:59–14:30 (EX1006)). That is, *Kari* teaches performing steps

[16.5]-[16.7] *when said handheld computing device is at [a] particular location.*

(Reddy, ¶¶ 164–167 (EX1005)).

[16.5] (d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least said current location of said handheld computing device; and;

See above analysis of limitation [19.5]. Claim limitation [19.5] recites collecting *at least one response from a first user*, while claim limitation [16.5] recites collecting *at least said current location of said handheld computing device*. *Kari* teaches collecting the *current location*, stating: “the application program reads automatically the information on the location...” (*Kari* at 7:60–62 (EX1006)). Thus, *Kari*’s description of reading the information on the location teaches collecting *at least said current location of said handheld computing device* and in combination with the analysis of limitation [19.5] *supra*, teaches limitation [16.5]. (Reddy, ¶¶ 168–170 (EX1005)).

[16.6] (d2) storing within said handheld computing device said current location;

See above analysis of limitation [19.6]. Claim limitation [19.6] recites storing *at least one response from the first user*, while claim limitation [16.6] recites storing *said current location*. *Todd* describes a device which stores “all...of the survey response,” which, in combination with *Kari*, would include the *current location* as described above with reference to limitation [16.5]. (*Todd* at Abstract (EX1009); Reddy, ¶ 172 (EX1005)). Thus, *Todd*’s storing of all of the survey

response teaches *storing within said handheld computing device said current location*, in combination with the analysis of limitation [19.6] *supra*. (Reddy, ¶¶ 171–173 (EX1005)).

[16.7] (d3) automatically entering the GPS coordinates into said questionnaire;

See above analysis of limitation [19.7]. Further, *Kari* teaches *automatically entering the GPS coordinates into said questionnaire*, as it states “the application program reads automatically the information on the location...by using GPS equipment” (*Kari* at 7:60–65 (EX1006)) and further describes that the query message sent from the search terminal to the connection server includes, in one example, “Location= ‘N60°22’30’’E20°22’30’’” which is “from the GPS system.” (*Id.* at 10:7–25 (EX1006)), which a POSITA would have understood as *coordinates*. (Reddy, ¶ 175 (EX1005)). Thus, *Kari*’s description of the entering the location information using GPS equipment into the query form, which is in the format of coordinates, teaches *automatically entering the GPS coordinates into said questionnaire*. (Reddy, ¶¶ 174–176 (EX1005)).

[16.8] (e) establishing communications between said handheld computing device and a recipient computer; and,

See above analysis of limitation [19.8].

[16.9] (f) transmitting at least one value representative of said stored current location to said recipient computer.

See above analysis of limitation [19.9]. As detailed above with respect to

limitation [19.9], *Kari* describes “transmission of the query message to the connection server 3...” (*Kari* at 8:16–19 (EX1006)). As indicated in the table of column 10, the query message in *Kari* includes the location information. (*Id.* at 10:20–43 (EX1006)). Thus, *Kari* teaches *transmitting at least one value representative of said stored current location to said recipient computer* as recited. (Reddy, ¶¶ 178–180 (EX1005)).

Claim 17

[17.1] The method for managing data according to claim 16 wherein said current location of said handheld computing device is determined using GPS.

Kari teaches this limitation, as it teaches that the “information on the location can be determined e.g. by using GPS equipment...” (*Kari* at 7:60–67 (EX1006)). Thus, *Kari* teaches *said current location of said handheld computing device is determined using GPS* as recited, and renders the claim obvious. (Reddy, ¶¶ 181–183 (EX1005)).

Claim 18

[18.1] The method for managing data according to claim 16, wherein said originating computer and said recipient computer are a same computer.

Kari teaches this limitation. As described above with reference to limitation [19.1] (and [16.1]), above, the connection server corresponds to the recited *originating computer*. Additionally, as described above with reference to limitation [16.9], above, the connection server also corresponds to the recited

recipient computer which receives the current location. Thus, *Kari's* connection server teaches *said originating computer and said recipient computer are a same computer* as recited. (Reddy, ¶¶ 184-186 (EX1005)).

Claim 21

[21.0] A method for managing data comprising the steps of:

See above analysis of limitation [19.0].

[21.1] (a) within a central computer, accessing at least one user data item stored in a recipient computer, wherein said at least one data item is obtained via the steps of;

As a preliminary matter, as detailed above in § V.C., as the terms are properly construed, the functions of the recited “central computer,” “recipient computer,” and “originating computer” may be performed by the same computing device. (See § V.C.; Reddy, ¶¶ 55–60 (EX1005); see also claim 22 (“wherein said central computer and said recipient computer are a same computer”)).

Turning to the language of claim 21, *Kari* teaches *accessing at least one user data item* which is performed *within a central computer*, describing, for example, how the “connection server 3,” which corresponds to the *central computer*, transmits a query message, which corresponds to *accessing at least one user data item*: “[i]n the case that a connection from the connection server 3 to the selected remote server 4, 4', 4'' is successful, the operation is continued in block 411, in which the query message is transmitted further to the selected remote

server 4, 4', 4''." (*Kari* at 12:62–36 (EX1006); *see also* § V.C; Reddy, ¶ 189 (EX1005)).

Kari further teaches that the data item which is accessed is *stored in a recipient computer*, namely, the connection server: “[h]aving received the query message (block 401), the connection server 3 reads it into its memory (block 402) and store the message preferably for the time of its processing...” (*Kari* at 11:17–22 (EX1006); *see also* § V.C; Reddy, ¶ 190 (EX1005)).

Kari further teaches that the central computer *obtain[s]* the query message *via the steps of* limitations [21.2]–[21.13], as detailed below.

Thus, *Kari*’s description of the central computer transmitting a query message, which was previously read into memory and stored, teaches *within a central computer, accessing at least one user data item stored in a recipient computer, wherein said at least one data item is obtained via the steps of* limitations [21.2]–[21.13], as detailed below. (Reddy, ¶¶ 188–192 (EX1005)).

[21.2] (1) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto;

See above analysis of limitation [19.1].

[21.3.1] (2) receiving within said handheld computing device a transmission of a tokenized questionnaire, including at least one question requesting GPS coordinates and at least one additional question, said tokenized questionnaire comprising a plurality of device independent tokens;

See above analysis of limitation [19.2.1].

[21.3.2] including at least one question requesting GPS coordinates and at least one additional question

See above analysis of limitation [16.2.2] for the analysis of how *Kari* and *Chan* teach a questionnaire *including at least one question requesting GPS coordinates*. Further, as depicted in *Kari*'s FIG. 7, the *tokenized questionnaire* includes *at least one additional question* as recited (e.g., the user's desired search words). (*Kari* at FIG. 7 (EX1006); Reddy, ¶¶ 195–197 (EX1005)). Thus, *Kari* and *Chan* teach *including at least one question requesting GPS coordinates and at least one additional question*.

[21.3.3] said tokenized questionnaire comprising a plurality of device independent tokens;

See above analysis of limitation [19.2.3].

[21.4] (3) ending said communications between said handheld computing device and said originating computer;

See above analysis of limitation [19.3].

[21.5] (4) after said communications has been ended,

See above analysis of limitation [19.4].

[21.6] (i) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device,

See above analysis of limitation [19.5].

[21.7] (ii) automatically entering the GPS coordinates into said questionnaire:

See above analysis of limitation [16.7].

[21.8] (iii) presenting said at least one additional question to a user;

See above analysis of limitation [19.5]. Loading the WWW page with a browser, as described by *Kari*, teaches *presenting said at least one additional question to a user*, as the WWW page (e.g., FIG. 7 of *Kari*) includes all of the questions to which answers are solicited. (*Kari* at 15:59–61 (EX1006); Reddy, ¶ 204 (EX1005)).

[21.9] (iv) receiving at least one response from the user to each of said presented at least one additional question,

See above analysis of limitation [19.5]. As detailed in the analysis of limitation [19.5], *Kari* describes that “the questionnaire is filled in for the relevant parts,” which teaches *receiving at least one response from the user to each of said presented at least one additional question* as recited. (*Kari* at 15:59–61 (EX1006); Reddy, ¶ 206 (EX1005)).

[21.10] (v) storing at least one value representative of said GPS coordinates and said at least one response within said handheld computing device;

See above analysis of limitation [19.6].

[21.11] (5) establishing a communications link between said handheld computing device and a recipient computer;

See above analysis of limitation [19.8].

[21.12] (6) transmitting said stored at least one value representative of said GPS coordinates and said at least one response stored within said handheld computing device to said recipient computer; and,

See above analysis of limitation [19.9].

[21.13] (7) storing within said recipient computer any of said transmitted GPS coordinates and said at least one value representative of said at least one response, thereby creating said at least one user data item stored in said recipient computer; and,

Kari teaches this limitation, describing that the connection server, “[h]aving received the query message...reads it into its memory (block 402) and store the message preferably for the time of its processing.” (*Kari* at 11:17–22 (EX1006)). As the query message includes a user identification (*Id.* at 10:20 (EX1006)), the storing creates *at least one user data item*. (Reddy, ¶ 211 (EX1005)). Thus, *Kari*’s storage of the query message teaches *storing within said recipient computer any of said transmitted GPS coordinates and said at least one value representative of said at least one response, thereby creating said at least one user data item stored in said recipient computer* as recited. (Reddy, ¶¶ 210–212 (EX1005)).

[21.14] (b) forming a visually perceptible report from any of said at least one stored user data item.

Todd teaches this limitation. *Todd* describes that the “computer 32 is used to...store and analyze survey results uploaded from the survey device 11,” which is analogous to *Kari*’s stored query messages, “and to print reports summarizing the survey results.” (*Todd* at 12:51–55 (EX1009)). *Todd*’s printed reports correspond to a *visually perceptible report* as recited. (Reddy, ¶ 214 (EX1005)).

A POSITA would have found it obvious to combine these teachings of *Todd* of printing reports summarizing survey results into the system of *Kari*. First, as

detailed in the analysis of limitation [19.6], *Kari* and *Todd* are analogous art.

Second, a POSITA would have found it obvious to incorporate the teachings of *Todd* of printing reports into the system of *Kari* to achieve benefits described by *Todd*. For example, *Todd* describes the ability to provide “a picture of customer satisfaction and opinions over” a period of time, or the ability to “identify trends” and “measure the performance of particular employees” (*Todd* at 15:46–53, 16:3–4 (EX1009)). Thus, a POSITA would have been motivated to incorporate a printed report as taught by *Todd* into the system of *Kari*, for example, to identify trends in data in a collection of query messages over time. (Reddy, ¶ 217 (EX1005)). Combining a printed report, as taught by *Todd*, into the system of *Kari*, would have been no more than the combination of known elements according to known methods (e.g., attaching a printer to *Kari*’s connection server to add the ability to print reports), and would have been obvious at the time of the ’748 Patent. Such a combination would have produced predictable and operable results, and a POSITA would have expected success from such a combination. Thus, a POSITA would have been motivated to incorporate these teachings of *Todd* into *Kari*. (Reddy, ¶¶ 215–217 (EX1005)).

Accordingly, the description in *Todd* of printing reports summarizing survey results teaches *forming a visually perceptible report from any of said at least one stored user data item* as recited. (Reddy, ¶¶ 214–218 (EX1005)).

Claim 22

[22.1] The method according to claim 21, wherein said central computer and said recipient computer are a same computer.

As detailed above with respect to the analysis of limitations [21.1] and [21.13], *Kari's* connection server corresponds to both the recited *central computer* and the *recipient computer*. (See also § V.C). Accordingly, *Kari* teaches *said central computer and said recipient computer are a same computer* as recited, and in combination with *Darnell, Todd, and Chan* renders claim 22 obvious. (Reddy, ¶ 220 (EX1005)).

VII. CONCLUSION

For the reasons above, Petitioner asks that the Patent Office order an *inter partes* review trial for claims 16–19 and 21–22 and then cancel these claims as unpatentable.

Respectfully submitted,

October 6, 2017

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VIII. CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24, the undersigned attorney for the Petitioner, Unified Patents Inc., declares that the argument section of this Petition (Sections III-VII) has 10,285 words, according to the word count tool in Microsoft Word™.

/David W O'Brien/

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Unified Patents Inc. § Petition for *Inter Partes* Review
Petitioner §
 § U.S. Patent 9,454,748
 §
 §

CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. §§ 42.105 and 42.6,
that service was made on the Patent Owner as detailed below.

Date of service October 6, 2017

Manner of service FEDERAL EXPRESS

Documents served Petition for *Inter Partes* Review, including Exhibit List;
Exhibits 1001 through 1020

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