

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UBER TECHNOLOGIES, INC. and
CHOICE HOTELS INTERNATIONAL, INC.

Petitioners

v.

FALL LINE PATENTS, LLC.

Patent Owner

Case: IPR2018-00535

Patent 9,454,748

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,454,748**

TABLE OF CONTENTS

I. INTRODUCTION AND STATEMENT OF RELIEF REQUESTED (37 C.F.R. § 42.22(A))	1
II. MANDATORY NOTICES	1
A. Real Parties-in-Interest	1
B. Related Matters	1
C. Lead and back-up counsel	3
D. Service Information	4
III. CERTIFICATION OF GROUNDS FOR STANDING	4
IV. OVERVIEW OF CHALLENGE AND RELIEF REQUESTED	4
A. GROUND 1: Claims 1, 9, 11, 13, and 15-22 are obvious under § 103(a) over U.S. Patent No. 6,961,586 to Barbosa et al. (“Barbosa”) (Ex. 1002) alone in view of the knowledge of a person of ordinary skill in the art.	4
B. GROUND 2: Claims 1, 9, 11, 13, and 15-22 are obvious under § 103(a) over Barbosa (Ex. 1002) in view of U.S. Patent No. 6,332,127 to Bandera et al. (“Bandera”) (Ex. 1004).	5
C. GROUND 3: Claims 1, 2, 5, 9, 11, 13, and 15-22 are obvious under § 103(a) over U.S. Patent No. 6,202,023 to Hancock et al. (“Hancock”) (Ex. 1003) alone in view of the knowledge of a person of ordinary skill in the art.	5
D. GROUND 4: Claims 1, 2, 5, 9, 11, 13, and 15-22 are obvious under § 103(a) over Hancock (Ex. 1003) in view of Bandera (Ex. 1004).	5
V. OVERVIEW	5
A. The Board Should Not Exercise Its Discretion to Deny Institution	5
B. The ’748 Patent	8
(i) Summary of Alleged Invention of the ’748 Patent	8
(ii) ’748 Prosecution History	10
(iii) Effective Filing Date Of The Challenged Claims	11
C. The Primary Prior Art References	11
(i) Barbosa	11
(ii) Hancock	12
(iii) Bandera	12
VI. RELEVANT INFORMATION CONCERNING THE ’748 PATENT	12

A. Person of Ordinary Skill in the Art	12
B. Construction of Terms Used in the Claims	13
(i) “GPS integral thereto”	13
(ii) “token”	14
(iii) “questionnaire”	17
(iv) “originating computer” / “recipient computer” / “central computer”	17
VII. SPECIFIC GROUNDS FOR PETITION	18
A. Barbosa Renders Obvious Claims 1, 9, 11, 13, and 15-22	18
(i) Independent Claim 19	18
(A) “A method for managing data comprising the steps of:”	18
(B) “(a) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto”	19
(C) “(b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer,”	21
(D) “said tokenized questionnaire including at least one question requesting location identifying information,”	24
(E) “said tokenized questionnaire comprising a plurality of device independent tokens;”	24
(F) “(c) ending said communications between said handheld computing device and said originating computer;”	27
(G) “(d) after said communications has been ended, (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,”	27
(H) (d2) storing within said computing device said at least one response from the first user;	28
(I) “(d3) using said GPS to automatically obtain said location identifying information in response to said at least one question that requests location identifying information;”	29

(J) “(e) establishing communications between said handheld computing device and a recipient computer;”	29
(K) “(f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer; and,”	30
(L) “(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.”	30
(ii) Claim 20	32
(iii) Independent Claim 21	32
(A) “A method for managing data comprising the steps of:”	32
(B) “(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:”	32
(C) “(1) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto;”	33
(D) “(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;”	33
(E) “(3) ending said communications between said handheld computing device and said originating computer;”	34
(F) “(4) after said communications has been ended, (i) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device,”	34
(G) “(ii) automatically entering the GPS coordinates into said questionnaire:”	34
(H) “(iii) presenting said at least one additional question to a user; (iv) receiving at least one response from the user to each of said presented at least one additional question,”	34

- (I) “(v) storing at least one value representative of said GPS coordinates and said at least one response within said handheld computing device;” 35
- (J) “(5) establishing a communications link between said handheld computing device and a recipient computer;” 35
- (K) “(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,” 35
- (L) “(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,” 36
- (M) “(b) forming a visually perceptible report from any of said at least one stored user data item.” 36
- (iv) Claim 22 37**
- (v) Independent Claim 1 37**
- (A) “A method for managing data including the steps of:” 37
- (B) “(a) creating a questionnaire comprising a series of questions customized for a location;” 37
- (C) “(b) said questionnaire including at least one question requesting GPS coordinates;” 38
- (D) “(c) tokenizing said questionnaire, thereby producing a plurality of device indifferent tokens representing said questionnaire;” 38
- (E) “(d) transmitting said plurality of tokens to a remote computing device;” 38
- (F) “(e) when said remote computing device is at said location, executing at least a portion of said plurality of tokens representing said questionnaire at within said remote computing device to collect a response from a user;” 38
- (G) “(f) automatically entering the GPS coordinates into said questionnaire;” 39
- (H) “(g) transmitting at least a portion of said response from the user to a server in real time via a network; and” 39

(I) “(h) storing said response at said server.”	39
(vi) Independent Claim 9	39
(A) “A method for managing data comprising the steps of:”	40
(B) “(a) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto;”	40
(C) “(b) using said GPS to automatically obtain location identifying information for said handheld computing device;”	40
(D) “(c) transmitting said location identifying information from said handheld computing device to said originating computer;”	40
(E) “(d) receiving within said handheld computing device a transmission of a tokenized questionnaire customized for a particular location from said originating computer, said tokenized questionnaire comprising a plurality of device indifferent tokens;”	40
(F) “(e) ending said communications between said handheld computing device and said originating computer;”	40
(G) “(f) after said communications has been ended, when said handheld computing device at said particular location: (f1) 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 user, and,”	41
(H) “(f2) storing within said computing device said at least one response from the user;”	41
(I) “(g) establishing communications between said handheld computing device and a recipient computer; and,”	41
(J) “(h) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer.”	41
(vii) Claim 11	41
(viii) Claim 13	41
(ix) Claim 15	42
(x) Independent Claim 16	42

(A) “A method for manacling[sic] data comprising the steps of:”	42
(B) “(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;”	42
(C) “(b) 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;”	42
(D) “(c) ending said communications between said handheld computing device and said originating computer;”	43
(E) “(d) after said communications has been terminated, when said handheld computing device is at said particular location (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;”	43
(F) “(d2) storing within said handheld computing device said current location;”	43
(G) “(d3) automatically entering the GPS coordinates into said questionnaire;”	43
(H) “(e) establishing communications between said handheld computing device and a recipient computer; and;”	43
(I) “(f) transmitting at least one value representative of said stored current location to said recipient computer.”	43
(xi) Claim 17	43
(xii) Claim 18	44
B. Barbosa In View of Bandera Renders Obvious Claims 1, 9, 11, 13, and 15-22	44
(i) A Person of Ordinary Skill Would Have Considered Barbosa In Conjunction With Bandera	44
(ii) Claims 1, 9, 11, 13, and 15-22	45
C. Hancock Renders Obvious Claims 1, 2, 5, 9, 11, 13, and 15-22	46
(i) Independent Claim 19	46

(A) “A method ...”	46
(B) “(a) establishing communications ...”	46
(C) “(b) receiving within said handheld computing device ...”	47
(D) “said tokenized questionnaire including at least one question requesting location identifying information,”	51
(E) “said tokenized questionnaire comprising a plurality of device independent tokens;”	51
(F) “(c) ending said communications ...”	52
(G) “(d) after said communications has been ended, (d1) executing ...”	54
(H) (d2) storing within said computing device ...”	54
(I) “(d3) using said GPS ...”	55
(J) “(e) establishing communications ...”	55
(K) “(f) transmitting a value ...”	56
(L) “(g) after receipt of said transmission of step (f), transmitting a notice of said received value ...”	56
(ii) Claim 20	57
(iii) Independent Claim 21	57
(A) “A method ...”	57
(B) “(a) within a central computer ...”	57
(C) “(1) establishing communications ...”	58
(D) “(2) receiving within said handheld computing device ...”	59
(E) “(3) ending said communications ...”	60
(F) “(4) after said communications has been ended, (i) executing ...”	61
(G) “(ii) automatically entering ...”	61
(H) “(iii) presenting ... (iv) receiving ...”	62
(I) “(v) storing at least one value ...”	62
(J) “(5) establishing a communications link ...”	63
(K) “(6) transmitting said stored at least one value ...”	63

(L) “(7) storing within said recipient computer ...”	64
(M) “(b) forming a visually perceptible report ...”	64
(iv) Claim 22	65
(v) Independent Claim 1	66
(A) “A method ...”	66
(B) “(a) creating a questionnaire ...”	66
(C) “(b) said questionnaire ...;”	67
(D) “(c) tokenizing ...;”	67
(E) “(d) transmitting ...;”	67
(F) “(e) when said remote computing device is at said location, executing ...;”	68
(G) “(f) automatically entering ...;”	68
(H) “(g) transmitting at least a portion ...”	68
(I) “(h) storing said response at said server.”	68
(vi) Claim 2	68
(vii) Claim 5	69
(viii) Independent Claim 9	69
(A) “A method ...”	69
(B) “(a) establishing communications ...”	70
(C) “(b) using said GPS ...”	70
(D) “(c) transmitting said location ...”	70
(E) “(d) receiving ...”	70
(F) “(e) ending said communications ...”	70
(G) “(f) after said communications has been ended ...”	71
(H) “(f2) storing ...”	71
(I) “(g) establishing communications ...”	71
(J) “(h) transmitting a value ...”	71
(ix) Claim 11	71

(x) Claim 13	71
(xi) Claim 15	71
(xii) Independent Claim 16	72
(A) “A method ...”	72
(B) “(a) establishing communications ...”	72
(C) “(b) receiving ...”	72
(D) “(c) ending said communications ...”	72
(E) “(d) after said communications has been terminated ...”	72
(F) “(d2) storing ...”	72
(G) “(d3) automatically entering ...”	72
(H) “(e) establishing communications ...”	72
(I) “(f) transmitting at least one value ...”	72
(xiii) Claim 17	73
(xiv) Claim 18	73
D. Hancock In View of Bandera Renders Obvious Claims 1, 2, 5, 9, 11, 13, and 15-22	73
(i) A Person of Ordinary Skill Would Have Considered Bandera In Conjunction With Hancock	73
(ii) Claims 1, 2, 5, 9, 11, 13, and 15-22	74
VIII. CONCLUSION	75

EXHIBIT LIST

<i>Exhibit No.</i>	<i>Description</i>
1001	U.S. Patent No. 9,454,748 to Payne (“the ’748 patent”)
1002	U.S. Patent No. 6,961,586 to Barbosa et al. (“Barbosa”)
1003	U.S. Patent No. 6,202,023 to Hancock et al. (“Hancock”)
1004	U.S. Patent No. 6,332,127 to Bandera et al. (“Bandera”)
1005	Declaration of Kendyl Roman
1006	Curriculum Vitae of Kendyl Roman
1007	Excerpted portions of the ’748 patent file history
1008	Patent Owner’s Infringement Contentions Cover Document against Uber Technologies, Inc. and Choice Hotels International, Inc.
1009	Patent Owner’s Infringement Contentions Chart against Uber Technologies, Inc.
1010	Patent Owner’s Infringement Contentions Chart against Choice Hotels International, Inc.
1011	U.S. Patent 7,822,816 (“the ’816 patent”)
1012	The ’816 patent Institution Decision
1013	The ’816 patent Claim Construction Order
1014	U.S. Patent No. 6,381,535 to Durocher (“Durocher”)
1015	International Patent Application Publication No. WO 00/49530 to Parasnis (“Parasnis”)

I. INTRODUCTION AND STATEMENT OF RELIEF REQUESTED (37 C.F.R. § 42.22(A))

Uber Technologies, Inc. (“Uber”) and Choice Hotels International, Inc. (“Choice Hotels”) (collectively, “Petitioners”) petition for the institution of *inter partes* review of claims 1, 2, 5, 9, 11, 13, and 15-22 (the “Challenged Claims”) of U.S. Patent No. 9,454,748 to Payne (“the ’748 patent,” attached as Ex. 1001). USPTO records indicate that the ’748 patent is assigned to Fall Line Patents, LLC (“P.O.”), which is currently asserting the ’748 patent against Petitioners in concurrent litigations.

II. MANDATORY NOTICES

A. Real Parties-in-Interest

The real parties-in-interest to this Petition are Uber Technologies, Inc. and Choice Hotels International, Inc.

B. Related Matters

P.O. sued Petitioners in the U.S. District Court for the Eastern District of Texas, alleging infringement of the ’748 patent (“’748 Litigation”). In particular, as of the filing date of this Petition, and to the best knowledge of Petitioners, the ’748 patent is or has been involved in the following matters, each in the United States District Court for the Eastern District of Texas:

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

In addition, the ’748 patent is the subject of a pending *inter partes* review petition (IPR2018-00043) (“Unified IPR”) filed on October 6, 2017 by Unified Patents Inc. (“Unified Petition”). The issues presented by this Petition are substantially different than those raised by the Unified Petition. In particular, the Unified Petition challenged only claims 16-19 and 21-22, whereas this Petition challenges those claims as well as eight additional claims—nos. 1, 2, 5, 9, 11, 13,

15, and 20. Furthermore, this Petition relies on entirely different prior art with no overlap to the prior art at issue in the Unified Petition. P.O. has not filed a preliminary response to the Unified Petition, and under 35 U.S.C. § 314(b), the Board is not required to issue a decision on whether to institute the Unified Petition until April 12, 2018.

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. Ex. 1011 at 18.

Additionally, claims 1-14 of the '816 patent were the subject of an *inter partes* review petition (IPR2014-00140), which the Board instituted ("816 Institution Decision"). Ex. 1012. Thereafter, the Board terminated IPR2014-00140 upon cancellation of the challenged claims in the aforementioned *ex parte* reexamination.

C. Lead and back-up counsel

Designation of Lead Counsel (37 C.F.R. § 42.8(b)(3))	Back-Up Counsel
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D. Service Information

Please direct all correspondence to lead and back-up counsel at the above addresses.

III. 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.

IV. OVERVIEW OF CHALLENGE AND RELIEF REQUESTED

The Challenged Claims are unpatentable for being obvious under 35 U.S.C. §§ 102 and 103. Specifically:

- A. GROUND 1:** Claims 1, 9, 11, 13, and 15-22 are obvious under § 103(a) over U.S. Patent No. 6,961,586 to Barbosa et al. (“Barbosa”) (Ex. 1002) alone in view of the knowledge of a person of ordinary skill in the art.

- B. GROUND 2:** Claims 1, 9, 11, 13, and 15-22 are obvious under § 103(a) over Barbosa (Ex. 1002) in view of U.S. Patent No. 6,332,127 to Bandera et al. (“Bandera”) (Ex. 1004).
- C. GROUND 3:** Claims 1, 2, 5, 9, 11, 13, and 15-22 are obvious under § 103(a) over U.S. Patent No. 6,202,023 to Hancock et al. (“Hancock”) (Ex. 1003) alone in view of the knowledge of a person of ordinary skill in the art.
- D. GROUND 4:** Claims 1, 2, 5, 9, 11, 13, and 15-22 are obvious under § 103(a) over Hancock (Ex. 1003) in view of Bandera (Ex. 1004).

The Board should institute review on all presented grounds: Petitioners recognize that the Board may use its discretion to institute trial on only certain grounds. Here, there is no undue burden for the Board, as only two primary references are presented, in Grounds 1-2 and 3-4 respectively. Petitioners would be prejudiced should the Board institute trial on only certain grounds because Petitioners may be precluded from asserting their best challenge. Accordingly, the Board should exercise its discretion to institute trial for the challenged claims on all grounds.

This Petition is supported by the declaration of Mr. Kendyl Roman (Ex. 1005).

V. OVERVIEW

A. The Board Should Not Exercise Its Discretion to Deny Institution

The Board should not exercise its discretion to deny the instant Petition under either 35 U.S.C. §§ 314(a) or 325(d) because the instant Petition: 1) is filed

by different petitioners, neither of whom are real parties-in-interest to the Unified Petition; 2) is being filed without the benefit of a preliminary response from P.O. or an institution decision from the Board in the Unified IPR; 3) challenges different claims; 4) relies on entirely different prior art; and 5) is being filed only two months after petitioners became aware of all of the prior art relied upon in the instant Petition.

The first two factors alone are sufficient for the Board to decline to exercise its discretion to deny the instant Petition under 35 U.S.C. § 314(a). In particular, for factor 1), the Unified Petition was filed by a different petitioner. Neither Uber nor Choice Hotels is a real party-party-in-interest to the Unified IPR, exercised any control over Unified Patents Inc. with respect to the Unified Petition, or provided any input thereto, and not instituting this Petition in view of the Unified Petition would unfairly deprive Petitioners of access to the IPR process. For factor 2), P.O. has not filed a preliminary response to the Unified Petition, which would have been due on January 12, 2018, and the Board has not yet issued a decision on whether to institute the Unified Petition, which it is not required to do until April 12, 2018. As such, Petitioners have not used the Unified IPR as a roadmap to guide the instant Petition. *See Unified Patents, Inc. v. Silver State Intellectual Techs., Inc.*, Case IPR2017-01198, Paper 6, slip op. at 19-20 (PTAB Sept. 28, 2017) (declining to exercise discretion under § 314(a) to deny an IPR petition because

“[t]he instant Petitioner is not Google, Inc., the petitioner ... that earlier challenged the ’498 patent,” and “[n]o patent owner preliminary response or other substantive paper was filed or issued in [the preceeding IPR].”).

In addition, the instant Petition challenges eight additional claims not addressed by the Unified Petition, which provides yet another reason for the Board to decline to exercise discretion under § 314(a) to deny the instant Petition. *See NVIDIA Corp. v. Polarix Innovations Ltd.*, Case IPR2017-01787, Paper 9, slip op. at 4-6 (PTAB Jan. 9, 2018) (declining to exercise discretion under § 314(a) to deny an IPR petition in part because “the current Petition challenges seven claims that are not at issue in [the previous IPR].”)

Analysis of other factors further confirm that the Board should decline to exercise its discretion under § 314(a) to deny the instant Petition. In particular, the instant Petition relies on entirely different prior art—Barbosa, Bandera, and Hancock, none of which was relied on by the Unified Petition. In addition, Petitioners did not learn of Bandera until they received the results of a prior art search on November 23, 2017, only two months prior to filing the instant Petition. Accordingly, for all of the above reasons, the Board should decline to exercise its discretion under § 314(a) to deny the instant Petition.

For the same reasons, the Board also should not exercise its discretion to deny the instant Petition under 35 U.S.C. § 325(d). In particular, the instant

Petition relies on entirely different prior art, challenges eight additional claims not addressed by the Unified Petition, and presents different arguments that are not redundant to those presented by the Unified Petition. *See Valeo North Am., Inc. v. Magna Electronics, Inc.*, Case IPR2014-01208, Paper 13, slip op. at 12-15 (Dec. 23, 2014) (declining to exercise discretion under § 325(d) to deny an IPR petition because “none of the grounds of unpatentability in this Petition rely upon exactly the same combination of prior art as the grounds of unpatentability asserted against the same claims in the [previous] IPR.”).

B. The '748 Patent

(i) Summary of Alleged Invention of the '748 Patent

Like the '816 patent, which the Board summarized in the '816 Institution Decision (Ex. 1012 at 4-7), the '748 patent generally relates to the distribution of electronic forms via the Internet or to mobile devices, and in particular, a method for the management of data collected from a remote computing device. Ex. 1001, Abstract. In particular, the '748 patent describes using computerized questionnaires to allow a user to complete a form on a wireless device for transmission to a server. *Id.* at 10:44-54. A client can design a questionnaire by creating a list of questions, with corresponding tokens, and may include follow up questions depending on responses to other questions. *Id.* at 8:51-9:2. When the questionnaire is complete, the questions and tokens can be transmitted to a handheld device, whose user can

provide responses to the questions. *Id.* at 9:3-13. The responses can be stored on the handheld device and transmitted to the server, and the server can store the data in a database. *Id.* at 9:57-10:8. In addition, the '748 patent teaches that the handheld device and server may be “loosely networked,” such that the server and handheld devices are “tolerant of intermittent network connections.” *Id.* at 4:64-5:7.

The '748 claims recite only minor differences in subject matter compared to the '816 claims that the Board found as likely obvious in the '816 Institution Decision. Ex. 1012 at 22. For example, the '748 claims include limitations directed to requesting location information, such as by specifying that the questionnaire contain “at least one question requesting GPS coordinates.” Ex. 1001 at cl. 1. In addition, some claims of the '748 patent recite that the tokens be “device independent.”¹ *Id.* at cl. 19. For example, the '748 patent 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. As demonstrated

¹ Claims 7 and 8 of the '816 patent, now cancelled, recite a similar feature of “performing at least the steps [. . .] for at least two different remote computing device types using the same tokens.”

below, however, data collection systems that addressed these issues were well-known prior to the '748 patent's priority date.

(ii) '748 Prosecution History

The prosecution history of the '748 Patent includes multiple Office Actions which included double-patenting rejections over the '816 Patent² and claim rejections under §§ 102 and 103 over various references. To overcome some rejections, the applicant alleged conception of the claims “prior to January 1, 2002” and diligent reduction to practice from the alleged conception to the August 19, 2002 filing of U.S. Provisional Application Number 60/404,491 (“the '491 Provisional”), which is the earliest claimed priority date. Ex. 1007 at 134-136.

Although the Examiner withdrew some prior art rejections based on applicant's prior conception arguments (*id.* at 173), the Examiner continued to reject the claims under § 103. *Id.* at 159-172. In an attempt to overcome the § 103 rejections, P.O. amended the claims to recite, *inter alia*, that the questionnaire recited in the claims comprised “device independent tokens.” *Id.* at 180-214. Additionally, P.O. amended the claims to require that at least one question

² Applicant submitted a terminal disclaimer against the '816 patent to overcome the double-patenting rejections, establishing that the claims in the '748 patent are not patentably distinct from its now-canceled parent. Ex. 1007 at 153.

requested “location identifying information” and that the remote computing device of the claims had a “GPS integral thereto.” *Id.* at 250-285.

The Examiner then issued a Notice of Allowance. *Id.* at 296. However, the grounds and references on which Petitioners seek review, which were not before the Examiner, teach or suggest all the features of the Challenged Claims.

(iii) Effective Filing Date Of The Challenged Claims

The '748 patent claims the benefit of U.S. Provisional App. No. 60/404,491 (“the '491 Application”). Accordingly, the August 19, 2002 filing date (“Earliest Filing Date”) of the '491 Application is the earliest filing date to which the Challenged Claims could be entitled, provided that Plaintiff is able to demonstrate that the Challenged Claims are disclosed in the '491 Application in the manner required by 35 U.S.C. § 112, ¶ 1. *See, e.g., SAP America, Inc. v. Pi-Net Int'l, Inc.*, Case IPR2014-00414, Paper No. 11 at 11-14 (PTAB August 18, 2014). This is the same priority date asserted by P.O. against Petitioners in the '748 Litigation. Ex. 1008 at 2.

C. The Primary Prior Art References

(i) Barbosa

Barbosa is a U.S. patent that was filed on September 17, 2001 and issued on November 1, 2005. Ex. 1002 at 1. Accordingly, Barbosa is prior art at least under 35 U.S.C. § 102(e) (pre-AIA) because Barbosa's September 17, 2001 filing date

predates the earliest invention date P.O. has claimed for the '748 patent—August 19, 2002, as explained above. Barbosa's filing date also predates the earliest invention date claimed during prosecution—January 1, 2002.

(ii) Hancock

Hancock is a U.S. patent that issued on March 13, 2001. Ex. 1003 at 1. Accordingly, Hancock is prior art at least under 35 U.S.C. § 102(b) (pre-AIA) because Hancock pre-dates by more than one year the Earliest Filing Date.

(iii) Bandera

Bandera is a U.S. patent that was filed on January 28, 1999 and issued on December 18, 2001. Ex. 1004 at 1. Accordingly, Bandera is prior art at least under 35 U.S.C. § 102(e) (pre-AIA) because Bandera's January 28, 1999 filing date predates the earliest invention date P.O. has claimed for the '748 patent—August 19, 2002, as explained above, and Bandera issued as a U.S. patent. Bandera also is prior art under 35 U.S.C. § 102(a) (pre-AIA) because Bandera's December 18, 2001 issuance date predates the earliest claimed invention date.

VI. RELEVANT INFORMATION CONCERNING THE '748 PATENT

A. Person of Ordinary Skill in the Art

As Mr. Roman explains, 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, as well as significant working knowledge of developing applications for mobile devices that provide location-based services. Ex. 1005 ¶ 104. In addition, the prior art references asserted in this Petition, which assume knowledge on how to program applications for mobile devices using programming languages such as Java or C++ to provide location-based services (*see, e.g.*, Ex. 1002 at 12:45-47), reflect sufficiently the appropriate level of skill at the time of the claimed invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Construction of Terms Used in the Claims

In this proceeding, claims must be given their broadest reasonable construction in light of the specification. 37 CFR § 42.100(b). In the proposed constructions below, Petitioner identifies subject matter which falls within the scope of the claims, read in their broadest reasonable construction, which Petitioner submits is sufficient for the purposes of this proceeding.

(i) “GPS integral thereto”

This claim phrase is recited in independent claims 9, 19 and 21 in the context of a handheld computing device that “has a GPS integral thereto.” The ’748 specification does not use the 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. Ex. 1005 ¶ 106.

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. Ex. 1005 ¶ 107. Rather, a POSITA would have understood the claim language “GPS integral thereto” to reasonably refer to, for example, a GPS receiver being integral to the handheld computing device, as indicated by the ’748 specification. Ex. 1001 at 5:47–48, 10:56–57. Thus, a POSITA would have understood the broadest reasonable interpretation of “GPS integral thereto” to mean “GPS receiver integral thereto.” Ex. 1005 ¶ 107.

(ii) “token”

Each of the challenged independent claims recites “tokens.” The ’748 patent does not provide an explicit definition for this term. In IPR2014-00140, concerning the parent ’816 patent, the 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.’” Ex. 1012 at 10. In the ’816 Institution Decision, the Board adopted the petitioner’s proposed construction of “token,” determining that “Petitioner’s proposed construction is the broadest reasonable construction consistent with the specification” *Id.* The ’748 patent and the ’816 patent share substantially

identical specifications. Accordingly, the broadest reasonable construction of “token” consistent with the ’748 specification should be the same as the Board previously determined—“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.” Ex. 1012 at 10.

During prosecution of the ’748 patent, 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 (col. 8, ll. 56-59 of the ’748 Patent). Ex. 1007 at 297. While this portion of the specification is important context in which to understand the term, Petitioners submit 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...” Ex. 1001 at 8:56–59 (emphasis added).³ *See Google Inc. v. Visual Real Estate, Inc.*, Case IPR2014-01338, Paper 11, slip op. at 7 (PTAB Feb. 23, 2015) (declining to construe term to include features that the specification states are “preferably include[d]” because such a construction is “not necessarily

³ All emphases herein are added unless indicated otherwise.

the broadest reasonable interpretation of this claim phrase in the context of the entire disclosure.”).

In previous litigation concerning the parent ’816 Patent, the district court construed the term “token” as “any non-reducible element of the computer code that is being parsed.” Ex. 1013 at 13–14. District courts use a different standard than the PTAB when construing claim terms, but ultimately, the differences between this construction and the Board’s previous construction in IPR2014-00140 (“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”) 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.” Ex. 1005 ¶ 110. Regardless, under either interpretation, the claims are rendered obvious by the grounds of challenge herein.

Accordingly, for purposes of construction, Petitioners propose 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 that can represent something else such as a question, answer, or operation.” Ex. 1005 ¶¶ 108-111.

(iii) “questionnaire”

Each of the challenged independent claims recites a “questionnaire.” With respect to the parent ’816 patent, the ’816 Institution Decision declined to construe “questionnaire,” finding “the broadest reasonable construction of ‘questionnaire comprising a series of questions’ ... to be apparent from [its] usage in the claims.” Ex. 1012 at 10. Petitioners agree for purposes of this IPR, and the broadest reasonable construction of “questionnaire” in the ’748 patent likewise is apparent from its usage in the claims.

In the previous ’816 litigation, the Court, applying the *Phillips* standard, ultimately construed “questionnaire” as “a program or form that includes a question or statement, which calls for a response.” Ex. 1013 at 13. The broadest reasonable construction cannot be any narrower than the *Phillips* construction. Thus, although the broadest reasonable construction of “questionnaire” is apparent from its usage in the challenged claims, to the extent the Board finds that an explicit construction is necessary in this proceeding, Petitioners propose that the Board adopt the construction used in the ’816 litigation. Regardless, under either interpretation, the claims are rendered obvious by the grounds of challenge herein.

(iv) “originating computer” / “recipient computer” / “central computer”

The ’748 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. Ex. 1005 ¶ 114. For example, the claims do not include any negative limitations requiring that these computers be different. To the contrary, the dependent claims recite that the “originating computer,” “recipient computer,” and “central computer” can be a single computer. Ex. 1001 at cl. 18 (“wherein said originating computer and said recipient computer are a same computer.”); *id.* at cl. 22 (“wherein said central computer and said recipient computer are a same computer.”). Accordingly, under broadest reasonable interpretation, the terms “originating computer,” “recipient computer,” and “central computer” should be broad enough to encompass either a single computer or different computers.

VII. SPECIFIC GROUNDS FOR PETITION

The Challenged Claims are unpatentable for the reasons set forth below. The analysis below compares each claim element to the prior art.

A. Barbosa Renders Obvious Claims 1, 9, 11, 13, and 15-22

(i) Independent Claim 19

(A) “A method for managing data comprising the steps of:”

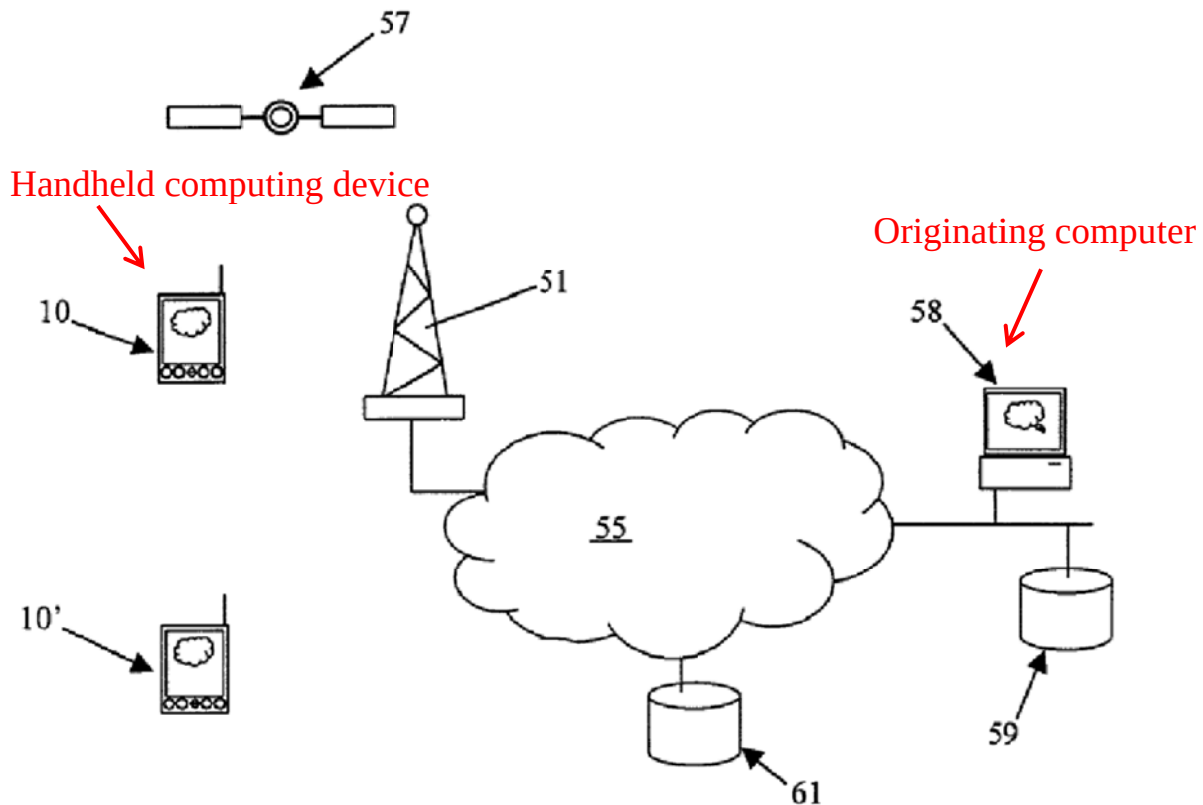
Barbosa is directed to “methods of conducting field assessments utilizing handheld data management devices.” Ex. 1002 at Abstract. To the extent the preamble is limiting, Barbosa discloses its limitations. Ex. 1005 ¶ 119.

(B) “(a) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto”

Barbosa discloses establishing communications between a handheld computing device and an originating computer. Barbosa’s “device 10” is a handheld computing device. Ex. 1002 at 5:43-45 (“The device 10 [is] easily portable such that it substantially fit within the palm of a users hand.”); *id.* at 5:29-34 (“The present invention provides portable, handheld data management devices (e.g., handheld or palm computer/PC, PDA, mobile telephony devices) with access to industry/profession-specific processes and applications to enable users to be more productive in field assessments.”). Barbosa further discloses that its invention is implemented as “a set of instructions in a code module resident in the RAM 26 of the device” (*id.* at 6:1-2), and that the instructions are “downloaded from a server via the Internet” (*id.* at 6:2-6), which the device may do using its “[w]ireless communication module 42” (*id.* at 6:9-14). *See also id.* at 6:21-22 (“Communications module 42 provides wireless real-time access to servers.”).

Likewise, with respect to Fig. 6, Barbosa discloses that “communication” is established between device 10, corresponding to the handheld computing device,

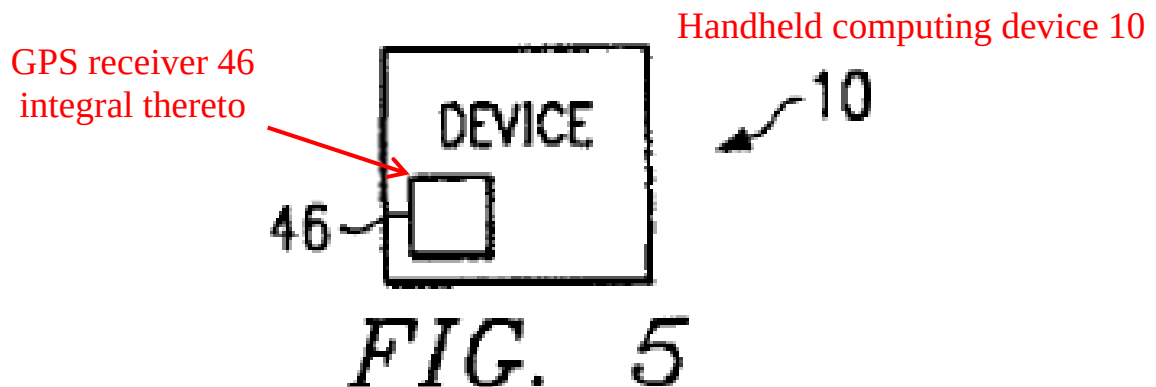
and server 58, corresponding to the originating computer, to download “templates (e.g., task/punch lists) and/or programs”:



Id. at Fig. 6; *id.* at 7:23-28; *see also id.* at 7:31-37 (“Job templates and/or programs may also be centrally stored within one or more databases 61/59 accessible ... directly by the a handheld device 10/10' ... [using] wireless communications.”). Accordingly, Barbosa discloses “establishing communications between a handheld computing device and an originating computer.” Ex. 1005 ¶ 121.

Barbosa further discloses that a GPS receiver is integral to device 10. Ex. 1002 at 6:40-44 (“the handheld device may also be equipped within a position

module 46 to enable the handheld device to utilize positioning systems or methods known in the art such as satellite position (e.g., Global Positioning System (GPS))). As shown in Fig. 5, the GPS receiver 46 is integral to the device 10:



Id. at Fig. 5. Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 122.

(C) **“(b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer,”**

As explained above, Barbosa discloses that the handheld computing device 10 receives, from the originating computer, “a set of instructions in a code module” that “implement[]” the “invention” (Ex. 1002 at 6:1-2) and/or “templates (e.g., task/punch lists) and/or programs” (*id.* at 7:27-28). The downloaded code modules, templates, and/or programs represent a questionnaire. Ex. 1005 ¶ 123. Specifically, Barbosa discloses that the “programs operated by the microprocessor ask questions or provide guidance related to a particular field problem.” Ex. 1002 at 6:60-61; *see also id.* at 7:47-48 (“The program would prompt the user for input of data related

to the problem.”); *id.* at 9:54-56 (“Once a program is opened on the handheld device, the assessor may be asked (e.g., prompted) to identify the job 801 (e.g., location, customer name, date, type of job).”).

In addition, Barbosa’s questionnaire is tokenized. For example, Barbosa discloses that “[c]omputer program code for carrying out operations of the present invention can be written in an object oriented programming language such as Java....” *Id.* at 12:45-51. A questionnaire (e.g., downloaded code modules, templates, and/or programs) written in an object oriented programming language such as Java would have included an index, an instruction, or a command that can represent something else such as a question, answer, or operation. Ex. 1005 ¶ 124. Therefore, Barbosa discloses a tokenized questionnaire.

Moreover, Barbosa’s program provides “[a]n interactive question and answer session.” *Id.* at 6:62. To provide an interactive question and answer session, the program would have included distinguishable units, such as indexes, instructions, or commands, that represent the questions, answers, or operations connecting the interactive questions and answers. Ex. 1005 ¶ 125. For example, Barbosa discloses that “[t]he program may start by asking for the identification of [] the client or matter 703 (e.g., customer, or job site),” and “[t]he program may next ask the representative to identify the problem or type of assessment 704 (e.g., HVAC, plumbing, electrical, landscaping, etc.).” Ex. 1002 at 8:54-59. Thus, a

POSITA would have understood that Barbosa's program would have included instructions that ask these questions (e.g., identification of type of assessment), as well as indexes corresponding to the available answers (e.g., HVAC, plumbing, electrical, or landscaping), and additionally would have included instructions and operations connecting the first question to the next. Ex. 1005 ¶ 125. Accordingly, Barbosa's questionnaire is "tokenized" under the broadest reasonable construction of the term "token", as explained in **VI.B.ii**.

Even under the construction of "token" offered by the Examiner during prosecution of the '748 patent, Barbosa's questionnaire is still "tokenized." A POSITA would have understood that Barbosa's program, which provides "[a]n interactive question and answer session," would have included logical, mathematical and branching operations. Ex. 1005 ¶ 126. Such functionality also provides internal branching logic between questions. *Id.* For example, Barbosa provides an example of a questionnaire that represents an "appraisal program." Ex. 1002 at 8:49-54. Barbosa explains that "only the most relevant questions and/or interaction [should] be invoked by the program." *Id.* at 8:59-60. In particular, "[t]he program may start by asking for the identification of [] the client or matter 703 (e.g., customer, or job site)," and "[t]he program may next ask the representative to identify the problem or type of assessment 704 (e.g., HVAC, plumbing, electrical, landscaping, etc.)." *Id.* at 8:54-59. Based on the responses

(i.e., the “identified subject matter 705”), “[t]he program would then start asking the user specific questions, or provide initial information, related to the identified subject matter 705.” *Id.* at 8:60-63. By asking specific questions based on responses to previous questions, Barbosa discloses branching logic between the questions. Ex. 1005 ¶ 126.

Accordingly, under any construction of “tokens,” Barbosa discloses this limitation. Ex. 1005 ¶¶ 123-27.

(D) “said tokenized questionnaire including at least one question requesting location identifying information,”

Barbosa’s questionnaire includes at least one question requesting location identifying information. Ex. 1005 ¶ 128. For example, Barbosa discloses that “[o]nce a program is opened on the handheld device, **the assessor may be asked** (e.g., prompted) to identify the job 801 (e.g., **location**, customer name, date, type of job).” Ex. 1002 at 9:54-56. Barbosa further discloses that location identifying information can be provided using GPS coordinates. *Id.* at 7:66-67; *id.* at 12:30-32 (“GPS coordinate[s] associated with the collection of data [is an] important attribute[.]”). Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 128.

(E) “said tokenized questionnaire comprising a plurality of device independent tokens;”

As discussed above in **VII.A.i.C**, Barbosa’s program is a tokenized questionnaire. Barbosa further discloses that this program comprises a plurality of

device independent tokens. For example, Barbosa discloses that the “computer program transmitted from the [server]” can be “in the form of a JAVA applet.” Ex. 1002 at 12:14-18. Likewise, Barbosa discloses that the “[c]omputer program code for carrying out operations of the present invention can be written in an object oriented programming language such as Java....” *Id.* at 12:45-47.

A POSITA would have understood that the Java programming language is a programming language that provides device independency—it runs irrespective of the particular hardware or operating system of any given device. Ex. 1005 ¶ 130. For example, the knowledge of a POSITA regarding Java is reflected in Bandera, which explains that “JAVA® is a portable and architecturally neutral language,” and “**JAVA® source code is compiled into a machine-independent format** that can be run on any machine with a JAVA® runtime system known as the JAVA® Virtual Machine (JVM).” Ex. 1004 at 5:40-44; Ex. 1005 ¶ 130. A POSITA would have further understood that Java code is not only machine independent, but also operating-system independent. *Id.* at 5:47-49 (“[M]achines running under diverse operating systems, including UNIX, Windows NT, and MacIntosh having a JVM can execute the same JAVA® program.”); Ex. 1005 ¶ 130. Furthermore, a POSITA would have understood that such platform independence—allowing a program to be written once but run on diverse platforms—has been a defining

feature of Java. *See id.*; *see also* U.S. Patent No. 6,381,535 to Durocher⁴ (Ex. 1014) (“[W]ritten in Java ... making it possible to write a single program compatible with several telephones.”); *see also* International Patent Application Publication No. WO 00/49530 to Parasnis⁵ (Ex. 1015) (“The client function is developed in Java, which makes it platform independent”).

Accordingly, Barbosa’s disclosure that its tokenized questionnaire is implemented using the Java programming language would have informed a POSITA that it comprises a plurality of device independent tokens. Ex. 1005 ¶ 131. This disclosure also is consistent with the subject matter that P.O. has contended is sufficient to meet this limitation in its infringement contentions in the ’748 Litigation. *See, e.g.*, Ex. 1009 at 14 (“Uber app is a tokenized questionnaire comprising a plurality of device independent tokens” because “it is downloaded as bytecode, typically a type of Java.”); *see also* Ex. 1010 at 13 (same). Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶¶ 129-131.

⁴ Durocher is prior art at least under 35 U.S.C. § 102(e) (pre-AIA) because

Durocher was filed on Mar. 20, 1998 and issued on Apr. 30, 2002. Ex. 1014 at 1.

⁵ Parasnis is prior art at least under 35 U.S.C. § 102(b) (pre-AIA) because Parasnis issued on August 24, 2000. Ex. 1015 at 1.

(F) “(c) ending said communications between said handheld computing device and said originating computer;”

As explained above in **VII.A.i.B-C**, Barbosa discloses that the handheld device 10 can download the questionnaire from a server. Barbosa explains that the questionnaire can be “downloaded from a server via the Internet **until required by the device 10.**” Ex. 1002 at 6:5-6. Likewise, Barbosa discloses that after “communication between a handheld device 10 (client) and remote management system 58 (e.g., server, desktop PC)” is established to download the program, the program “may be **stored locally** on a user’s [device].” *Id.* at 7:23-31. To the extent that Barbosa does not expressly disclose ending communications between a handheld computing device and an originating computer, it would have been obvious to a POSITA that either the handheld device 10 or the remote management system 58 may end communications after downloading because Barbosa discloses that the questionnaire can be stored locally on the handheld device following completion of being downloaded. Ex. 1005 ¶ 132. Accordingly, Barbosa discloses this limitation or renders it obvious. *Id.*

(G) “(d) after said communications has been ended, (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,”

As explained above in **VII.A.i.F**, communications with the server that provides the questionnaire end when the download is complete. In addition, as explained above in **VII.A.i.C**, Barbosa discloses that the downloaded code modules, templates, and programs that represent the questionnaire can be executed to provide “[a]n interactive question and answer session.” Ex. 1002 at 6:58-64; *see also id.* at 7:43-45 (“The user can execute a industry-specific program on the handheld device 10 related to the problem being addressed.”). A POSITA would understand that Barbosa discloses “after said communications has been ended,” “executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device,” as this execution cannot occur until after the questionnaire had been downloaded. Ex. 1005 ¶ 133. In addition, the program collects at least one response from a first user. Ex. 1002 at 7:47-48 (“The program would prompt the user for input of data related to the problem.”). Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 133.

(H) (d2) storing within said computing device said at least one response from the first user;

Barbosa discloses that the “handheld data management device for field assessments can include a memory for storing field assessment programs and related data.” Ex. 1002 at 3:44-46. Similarly, Barbosa discloses that “data collected with the device 10 ... may be stored in local memory for subsequent use” *Id.* at 8:4-8. Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 134.

(I) “(d3) using said GPS to automatically obtain said location identifying information in response to said at least one question that requests location identifying information;”

As explained above in **VII.A.i.D**, Barbosa discloses that the questionnaire includes at least one question requesting location identifying information. Ex. 1002 at 9:54-56. Barbosa further discloses that the location can be obtained automatically using the device’s GPS receiver. *Id.* at 10:14-17 (“[L]ocation information may be provided by the handheld device automatically via [the] resident GPS module.”). Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 135.

(J) “(e) establishing communications between said handheld computing device and a recipient computer;”

Barbosa discloses that communications are established between the handheld computing device and a recipient computer, such as a server, in order to transmit collected responses back to the server for analysis. Ex. 1005 ¶ 136. For example, Barbosa discloses that “Realtime analysis of data obtained may also be undertaken by remote processor (e.g., server)” Ex. 1002 at 7:54-56. Likewise, Barbosa discloses that “a transcript of the assessor's interaction with the handheld (e.g., questions and responses) may be transmitted to remote resources for further analysis.” *Id.* at 9:38-40; *see also id.* at 9:3-7 (“At completion of the series of questions, ... [t]he data may then be ... provided [] to a remote processor 709 via a

network where the data will be analyzed.”). Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 136.

(K) “(f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer; and,”

As explained above in **VII.A.i.H, J**, Barbosa discloses that the collected responses, which are stored by the handheld device, are transmitted to the server for analysis. Ex. 1002 at 7:54-56; *id.* at 9:38-40. The actual responses are values that represent the responses. Ex. 1005 ¶ 137. Accordingly, Barbosa discloses this limitation. *Id.*

(L) “(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.”

Barbosa discloses that the server transmits a notice of the received values representative of each of the responses back to the user of the device. For example, Barbosa discloses that the remote server that analyzes the responses can provide “a **final output, such as a report, bid, recommendation**, or the like ... to the user.” Ex. 1002 at 7:56-58. Because the report, bid, or recommendation is generated based on the received responses, the report, bid, or recommendation corresponds to “a notice of said received value representative of each of said at least one response.” Ex. 1005 ¶ 138. A transmission of the report, bid, or recommendation back to the user therefore is a transmission of a notice of received

value representative of each of the received responses. *Id.*; *see also, e.g.*, Ex. 1002 at 9:10-14.

Fig. 7 of Barbosa illustrates the process:

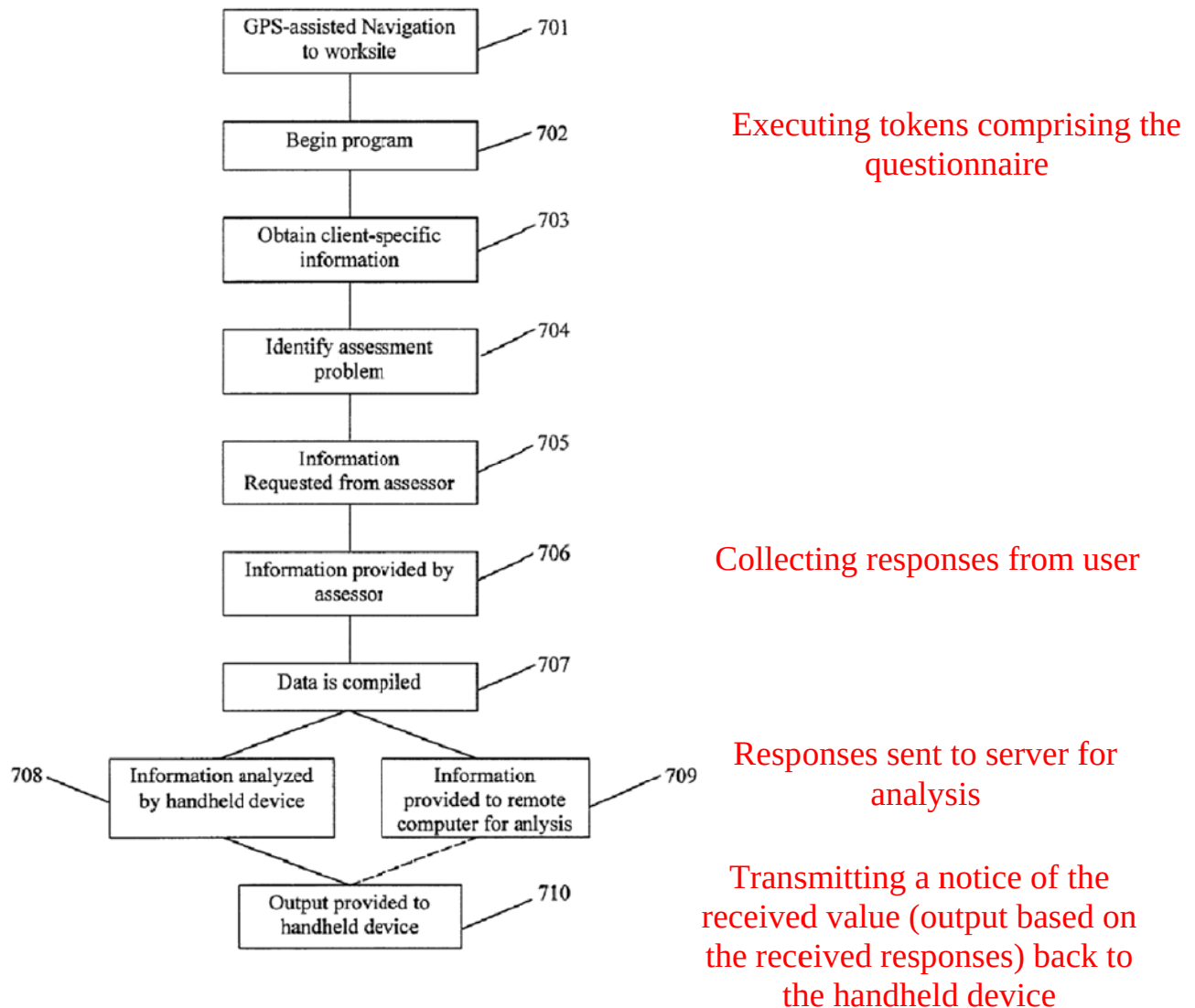


FIG. 7

Ex. 1002 at Fig. 7 (annotated).

The claims do not include a limitation requiring that the “second user” be different than the “first user.” To the contrary, dependent claim 20 clarifies that the

“second user” may be the same as the “first user.” Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 140.

(ii) Claim 20

Claim 20, which depends from claim 19, recites “wherein the first user and the second user are a same user.” As explained above in **VII.A.i.L**, Barbosa satisfies this limitation.

(iii) Independent Claim 21

As explained below, Barbosa also anticipates claim 21.

(A) “A method for managing data comprising the steps of:”

As explained in **VII.A.i.A**, Barbosa discloses a method for managing data. Ex. 1002 at Abstract.

(B) “(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 explained in **VI.B.iv**, the “central computer” and “recipient computer” may be the same computer. *See also* ’748 patent at cl. 22. As explained in **VII.A.i.J-K**, Barbosa’s remote server that receives responses from the user device corresponds to a “recipient computer.” *See, e.g.*, Ex. 1002 at 7:54-56; *id.* at 9:3-7; *id.* at 9:38-40. Barbosa further explains that user responses may be stored by the server. *Id.* at 8:46-48 (“server ... may be used as a centralized data collection and

analysis facility for input received from more than one handheld device/user.”).

Accordingly, Barbosa discloses that the server may access at least one user data item stored within it. Ex. 1005 ¶ 144. As explained below, Barbosa discloses obtaining the user data item via the claimed steps.

- (C) **“(1) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto;”**

As explained in **VII.A.i.B**, Barbosa discloses this limitation.

- (D) **“(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;”**

As explained in **VII.A.i.C** and **VII.A.i.E**, Barbosa discloses “receiving within said handheld computing device a transmission of a tokenized questionnaire,” where “said tokenized questionnaire comprising a plurality of device independent tokens.” In addition, for the same reasons as explained in **VII.A.i.D**, Barbosa discloses that the tokenized questionnaire includes “one question requesting GPS coordinates” and “at least one additional question.” For example, Barbosa discloses that “[o]nce a program is opened on the handheld device, **the assessor may be asked** (e.g., prompted) to identify the job 801 (e.g., **location, customer name, date, type of job**).” Ex. 1002 at 9:54-56. Barbosa

further discloses identifying the location using GPS coordinates. *Id.* at 12:30-32 (“GPS coordinate[s] associated with the collection of data [is an] important attribute[.]”). It would have been obvious to a POSITA that such GPS coordinates may have been entered in response to a question requesting them. Ex. 1005 ¶ 146. Moreover, Barbosa discloses asking and receiving responses to additional questions, such as “customer name, date, type of job,” and others, such as “ask[ing] the representative to identify the problem or type of assessment.” Ex. 1002 at 6:59-67, 8:54-63, and 9:54-56. Accordingly, Barbosa discloses this limitation.

(E) “(3) ending said communications between said handheld computing device and said originating computer;”

As explained in VII.A.i.F, Barbosa discloses or renders obvious this limitation.

(F) “(4) after said communications has been ended, (i) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device,”

As explained in VII.A.i.G, Barbosa discloses this limitation.

(G) “(ii) automatically entering the GPS coordinates into said questionnaire:”

As explained in VII.A.i.I and VII.A.iii.D, Barbosa discloses this limitation.

(H) “(iii) presenting said at least one additional question to a user; (iv) receiving at least one response from the

user to each of said presented at least one additional question,”

As explained in **VII.A.iii.D**, Barbosa discloses presenting at least one additional question to a user and receiving at least one response to the additional question. Ex. 1002 at 6:59-67, 8:54-63, and 9:54-56; Ex. 1005 ¶ 150.

(I) “(v) storing at least one value representative of said GPS coordinates and said at least one response within said handheld computing device;”

As explained in **VII.A.i.H**, Barbosa discloses that “data collected with the device 10 ... may be stored in local memory for subsequent use” *Id.* at 8:4-8.

As explained in **VII.A.i.I** and **VII.A.iii.D**, the data collected by the device, which is stored by the device, includes values representative of GPS coordinates as well as responses to questions. Ex. 1005 ¶ 151. Accordingly, Barbosa discloses this limitation. *Id.*

(J) “(5) establishing a communications link between said handheld computing device and a recipient computer;”

As explained in **VII.A.i.J**, Barbosa discloses this limitation.

(K) “(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,”

As explained in **VII.A.i.K**, Barbosa discloses transmitting the responses stored by the handheld device to the remote server. As explained above, the

responses stored by the handheld device, which are transmitted to the remote server, include values representative of GPS coordinates as well as responses to questions. Ex. 1005 ¶ 153. In addition, Barbosa explicitly discloses that “GPS coordinates associated with the collected data may also be transmitted to the server with the collected data.” Ex. 1002 at 12:28-30. Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 153.

(L) “(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,”

As explained above in **VII.A.iii.B**, Barbosa discloses that the remote server, corresponding to the “recipient computer,” stores the user responses, including the transmitted GPS coordinates and responses to questions, thereby creating a user data item stored in the recipient computer. *See* Ex. 1002 at 8:46-48 (“server ... may be used as a centralized data collection and analysis facility for input received from more than one handheld device/user.”). Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 154.

(M) “(b) forming a visually perceptible report from any of said at least one stored user data item.”

As explained in **VII.A.i.L**, Barbosa discloses that the recipient computer may form a visually perceptible report based on the stored user data item. *See* Ex. 1002 at 8:46-48. For example, Barbosa discloses that the remote server that

analyzes the responses can provide “a final output, such as a report, bid, recommendation, or the like ... to the user.” Ex. 1002 at 7:56-58. Likewise, Barbosa discloses that the “the handheld device may provide **output** to the [user] (**which may have been received from the remote processor**) that can be in the form of an estimate or analysis and may be provided to the client.” Ex. 1002 at 9:10-14. A POSITA would have understood Barbosa’s “report” to be visually perceptible. Ex 1005 ¶ 155. Accordingly, Barbosa discloses this limitation. *Id.*

(iv) Claim 22

Claim 22, which depends from claim 21, recites “wherein said central computer and said recipient computer are a same computer.” As explained in **VII.A.iii.B**, the “recipient computer” and “central computer” disclosed by Barbosa are the same computer. Accordingly, Barbosa discloses this limitation. Ex 1005 ¶ 156.

(v) Independent Claim 1

As explained below, Barbosa also anticipates claim 1.

(A) “A method for managing data including the steps of:”

As explained in **VII.A.i.A**, Barbosa discloses a method for managing data.

(B) “(a) creating a questionnaire comprising a series of questions customized for a location;”

As explained in **VII.A.i.C-E**, Barbosa discloses creating a questionnaire comprising a series of questions. Ex. 1005 ¶ 159. In addition, Barbosa discloses

that its questionnaire may be customized for a location. With respect to an “environmental catastrophe,” Barbosa discloses that “[a]ssessors equipped with handheld devices are assigned/deployed to **specific positions** of the affected environment.” Ex. 1002 at 12:1-3. In addition, Barbosa discloses that “[a]t **their respective positions**, assessor[s] are provide[d] a **template** from the remote server 1302 **comprising unique/updated instructions** for their respective assessment of the position (e.g., data collection instructions).” *Id.* at 12:11-14. Because the assessors are at different positions, and each is provided with a unique template/questionnaire, Barbosa discloses this claim limitation. Ex. 1005 ¶ 159.

(C) **“(b) said questionnaire including at least one question requesting GPS coordinates;”**

As explained in **VII.A.i.D** and **VII.A.iii.D**, Barbosa discloses this limitation.

(D) **“(c) tokenizing said questionnaire, thereby producing a plurality of device indifferent tokens representing said questionnaire;”**

As explained in **VII.A.i.C-E**, Barbosa discloses this limitation.

(E) **“(d) transmitting said plurality of tokens to a remote computing device;”**

As explained in **VII.A.i.B-C**, Barbosa discloses this limitation.

(F) **“(e) when said remote computing device is at said location, executing at least a portion of said plurality of tokens representing said questionnaire at within**

said remote computing device to collect a response from a user;”

As explained in **VII.A.i.G**, Barbosa discloses this limitation.

(G) “(f) automatically entering the GPS coordinates into said questionnaire;”

As explained in **VII.A.iii.G**, Barbosa discloses this limitation.

(H) “(g) transmitting at least a portion of said response from the user to a server in real time via a network; and”

Barbosa discloses transmitting user responses in real time via a network to the remote server. Specifically, Barbosa discloses that “[r]ealtime analysis of data obtained may also be undertaken by remote processor (e.g., server ...).” Ex. 1002 at 7:54-56; *see also id.* at Abstract (“[T]wo-way communication between remote computing means (e.g., servers, desktop computers) and handheld data management devices to facilitate **real-time** access to remote programs, assistance and/or information related to the field assessment being undertaken by using a handheld data management device user.”) Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 165.

(I) “(h) storing said response at said server.”

As explained in **VII.A.iii.L**, Barbosa discloses this limitation.

(vi) Independent Claim 9

As explained below, Barbosa also anticipates claim 9.

- (A) **“A method for managing data comprising the steps of:”**

As explained in VII.A.i.A, Barbosa discloses a method for managing data.

- (B) **“(a) establishing communications between a handheld computing device and an originating computer wherein said handheld computing device has a GPS integral thereto;”**

As explained in VII.A.i.B, Barbosa discloses this limitation.

- (C) **“(b) using said GPS to automatically obtain location identifying information for said handheld computing device;”**

As explained in VII.A.i.I, Barbosa discloses this limitation.

- (D) **“(c) transmitting said location identifying information from said handheld computing device to said originating computer;”**

As explained in VII.A.iii.K, Barbosa discloses this limitation.

- (E) **“(d) receiving within said handheld computing device a transmission of a tokenized questionnaire customized for a particular location from said originating computer, said tokenized questionnaire comprising a plurality of device indifferent tokens;”**

As explained in VII.A.i.C-E and VII.A.v.B, Barbosa discloses this limitation.

- (F) **“(e) ending said communications between said handheld computing device and said originating computer;”**

As explained in VII.A.i.F, Barbosa discloses this limitation.

- (G) “(f) after said communications has been ended, when said handheld computing device at said particular location: (f1) 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 user, and,”**

As explained in **VII.A.i.G** and **VII.A.v.B**, Barbosa discloses this limitation.

- (H) “(f2) storing within said computing device said at least one response from the user;”**

As explained in **VII.A.i.H**, Barbosa discloses this limitation.

- (I) “(g) establishing communications between said handheld computing device and a recipient computer; and,”**

As explained in **VII.A.i.J**, Barbosa discloses this limitation.

- (J) “(h) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer.”**

As explained in **VII.A.i.K**, Barbosa discloses this limitation.

(vii) Claim 11

Claim 11, which depends from claim 9, recites “wherein said originating computer and said recipient computer are a same computer.” Barbosa discloses that the remote server 58 corresponds to the “originating computer” (making download available) and the “recipient computer” (receiving responses). Ex. 1012 at 7:23-66. Accordingly, Barbosa discloses this limitation. Ex. 1005 ¶ 178.

(viii) Claim 13

Claim 13, which depends from claim 9, recites “wherein said questionnaire comprises at least one question that requests location identifying information and at least one other Question.” As explained in **VII.A.iii.D**, Barbosa discloses this limitation. Ex. 1005 ¶ 179.

(ix) Claim 15

Claim 15, which depends from claim 9, recites “wherein step (a) comprises the step of establishing communications via a global computer network between said handheld computing device and said originating computer.” Barbosa discloses that communications may occur over the Internet. Ex. 1012 at 6:2-6 (“The set of instructions may [be] downloaded from a server via the Internet.”). Ex. 1005 ¶ 180.

(x) Independent Claim 16

As explained below, Barbosa also anticipates claim 16.

(A) “A method for manacning[sic] data comprising the steps of:”

As explained in **VII.A.i.A**, Barbosa discloses a method for managing data.

(B) “(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;”

As explained in **VII.A.i.B**, Barbosa discloses this limitation.

(C) “(b) 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;”

As explained in **VII.A.iii.D**, Barbosa discloses this limitation.

- (D) “(c) ending said communications between said handheld computing device and said originating computer;”**

As explained in **VII.A.i.F**, Barbosa discloses this limitation.

- (E) “(d) after said communications has been terminated, when said handheld computing device is at said particular location (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;”**

As explained in **VII.A.i.G, I**, Barbosa discloses this limitation..

- (F) “(d2) storing within said handheld computing device said current location;”**

As explained in **VII.A.i.H**, Barbosa discloses this limitation.

- (G) “(d3) automatically entering the GPS coordinates into said questionnaire;”**

As explained in **VII.A.iii.G**, Barbosa discloses this limitation.

- (H) “(e) establishing communications between said handheld computing device and a recipient computer; and,”**

As explained in **VII.A.i.J**, Barbosa discloses this limitation.

- (I) “(f) transmitting at least one value representative of said stored current location to said recipient computer.”**

As explained in **VII.A.iii.K**, Barbosa discloses this limitation.

(xi) Claim 17

Claim 17, which depends from claim 16, recites “wherein said current location of said handheld computing device is determined using GPS.” As explained in **VII.A.i.I**, Barbosa discloses this limitation.

(xii) Claim 18

Claim 18, which depends from claim 16, recites “wherein said originating computer and said recipient computer are a same computer.” As explained in **VII.A.vii**, Barbosa discloses this limitation.

B. Barbosa In View of Bandera Renders Obvious Claims 1, 9, 11, 13, and 15-22

Barbosa renders obvious Claims 1, 9, 11, 13, and 15-22 for the reasons set forth in Section **VII.A** above. For example, as explained in **VII.A.i.E**, a POSITA would have known that code written in Java corresponds to the recited “device independent tokens,” as reflected by Bandera, Durocher, and Parasnis. To the extent that the Board does not find that Barbosa alone renders these claims obvious, a POSITA would have considered those claims to have been obvious over Barbosa in view of Bandera. Ex. 1005 ¶¶ 193-95.

(i) A Person of Ordinary Skill Would Have Considered Barbosa In Conjunction With Bandera

A person of ordinary skill would have considered Barbosa in conjunction with Bandera for several reasons. Ex. 1005 ¶ 194. For example, Barbosa and Bandera are in the same field of endeavor, as both relate to providing location

based services to mobile devices. In particular, as explained above in **VII.A.i.J-M**, Barbosa discloses that a user’s handheld device may collect a user’s GPS location, transmit it to a server along with other data, and receive a report. Likewise, Bandera discloses that a mobile web client may collect a user’s GPS location, transmit it to a server, and received targeted advertisements based on the user’s GPS location. *See* Bandera at Abstract; *id.* at 2:63-64. In addition, with respect to the problem of providing programs on mobile devices, Barbosa and Bandera provide the same solution—using the Java programming language. *See, e.g.*, Ex. 1004 at 5:37-49. Accordingly, a POSITA would have been motivated to combine the teachings of Barbosa and Bandera.

(ii) Claims 1, 9, 11, 13, and 15-22

As explained above in **VII.A**, a POSITA would have found the “device independent tokens” limitation to have been obvious in view Barbosa’s disclosure that its program was implemented using Java. Bandera explicitly teaches that Java is used to provide device-independent code. In particular, Bandera explains that “**JAVA®** is a portable and architecturally neutral language,” and “**JAVA® source code is compiled into a machine-independent format** that can be run on any machine with a **JAVA®** runtime system known as the **JAVA® Virtual Machine (JVM).**” Ex. 1004 at 5:40-44. Not only is Java code machine independent, it also is independent of operating system. *Id.* at 5:47-49 (“[M]achines running under

diverse operating systems, including UNIX, Windows NT, and MacIntosh having a JVM can execute the same JAVA® program.”). Accordingly, to the extent Barbosa’s disclosure that its program was implemented using Java does not expressly disclose or render obvious the “device independent tokens” limitation, it would have been obvious over Barbosa in view of Bandera. Ex. 1005 ¶ 195.

C. Hancock Renders Obvious Claims 1, 2, 5, 9, 11, 13, and 15-22

(i) Independent Claim 19

(A) “A method ...”

Hancock discloses a “method for automatically providing services over a computer network” in which “[t]he application program builds a data packet comprising location information and user information.” Ex. 1003 at Abstract. Accordingly, Hancock discloses a method of managing data. Ex. 1005 ¶ 196.

(B) “(a) establishing communications ...”

Hancock discloses establishing communications between a handheld computing device and an originating computer. With respect to Figure 18, Hancock discloses that in step 1802, “the client 1404 connects with the server 1314.” Ex. 1003 at 30:32-34. Hancock’s client 1404 corresponds to a handheld computing device, and the server 1314 corresponds to an originating computer. *Id.* at 25:9-10 (“[P]ortable-computing device 1302 comprises a client computer 1404.”); *id.* at 24:39-41 (“A primary server 1314 is coupled to the Internet 1318”

and “is used to interface with the portable-computing device 1302.”) Ex. 1005 ¶ 197.

Hancock’s portable-computing device 1302 has a GPS receiver integral thereto. Hancock explains that “the portable-computing device 1302 comprises ... an ALI device 1406” *Id.* at 25:9-13. Hancock further explains that “well-known ALI devices are GPS systems” *Id.* at 26:15-16. Hancock explicitly recognizes that “the ALI device 1406 ... may be **imbedded within** the portable-computing device 1302.” *Id.* at 25:15-17. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 198.

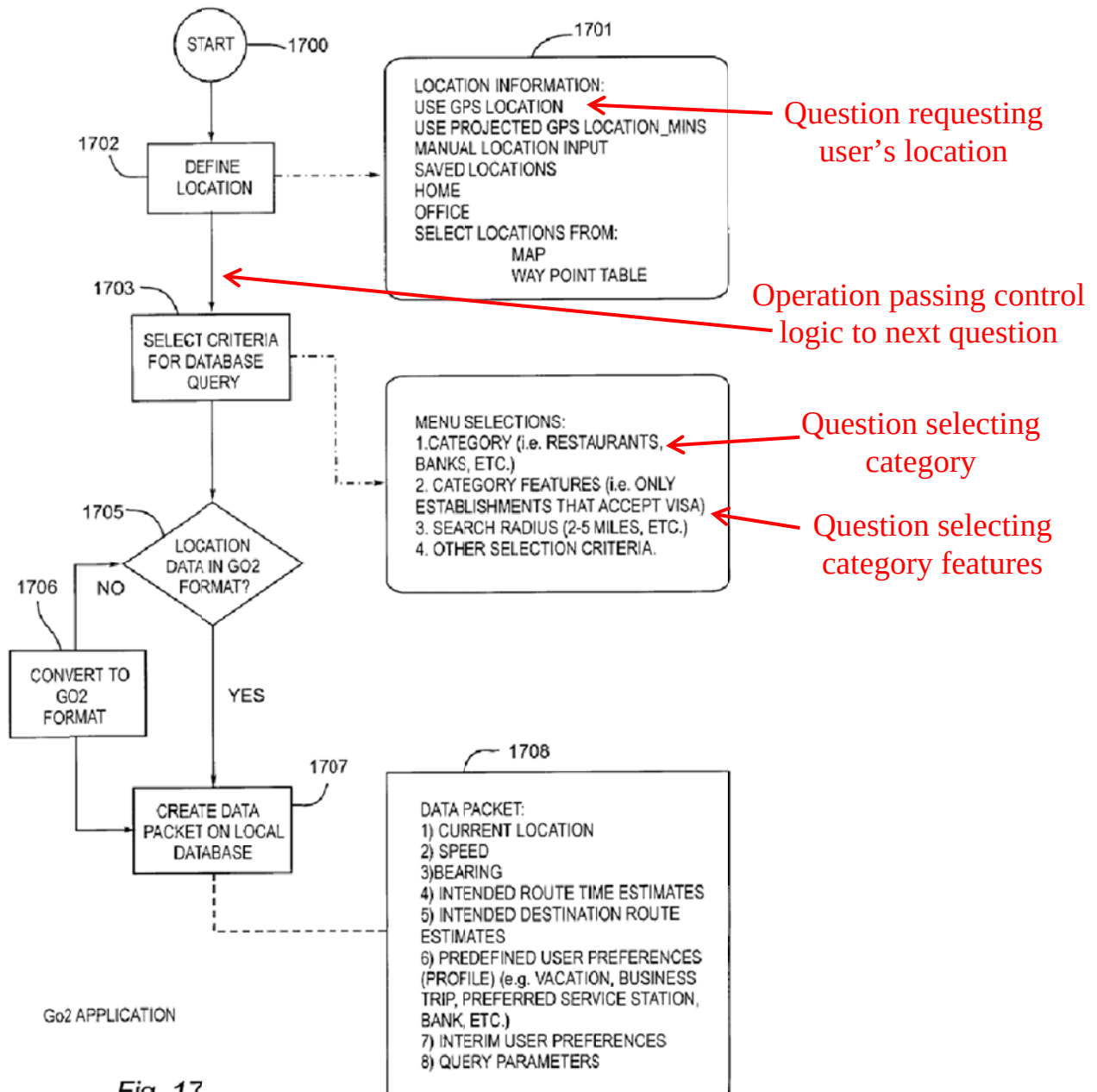
(C) “(b) receiving within said handheld computing device ...”

Hancock discloses that “an application program is installed on the client computer system.” Ex. 1003 at 3:15-16. This application program asks the user a series of questions that call for responses from the user. *Id.* at 3:15-20 (“The application program prompts the user to select a category of interest, a preference for specifying location information (i.e. via manual input, or automatically through an attached ALI device), and other user preferences.”). Thus, the application program corresponds to the questionnaire. Ex. 1005 ¶ 199.

Hancock refers to the application program as the Go2 Application program. Ex. 1003 at 25:59-61. As shown with respect to Fig. 18, in step 1824, Hancock explains that “the Go2 Application software is downloaded to the client 1404.” *Id.*

at 30:45-46. Accordingly, Hancock discloses that the portable-computing device 1302 receives transmission of the Go2 Application from the primary server 1314. Ex. 1005 ¶ 200.

Hancock further discloses that its questionnaire—the Go2 Application—is tokenized. Fig. 17 illustrates a flowchart that can be used to implement a portion of the Go2 Application. Ex. 1003 at 5:30-32. First, in step 1702, the Go2 Application asks a question requesting a user’s location. *Id.* at Fig. 17; *id.* at 28:9-23. Next, “once location information is specified in step 1702, control passes to step 1703,” where the Go2 Application proceeds to ask additional questions. For example, as shown in Fig. 17, the Go2 Application first asks a user to select a category, such as restaurants or banks. Next, the Go2 Application asks the user to specify “one or more features associated with the selected category,” which “narrow or drill-down the subsequent database search.” *Id.* at 28:66-29:2. For example, as shown in Fig. 17, a user could select only establishments that accept Visa. To provide this functionality, a POSITA understands that the Go2 Application includes distinguishable units, such as indexes, instructions, or commands, that represent the questions, answer choices, and operations connecting the questions and answer choices. Ex. 1005 ¶ 201. Such indexes, instructions, and commands representing the questions, answer choices, and operations are apparent from Figure 17 of Hancock:



Ex. 1003 at Fig. 17 (annotated). Accordingly, Hancock's questionnaire is "tokenized" under the broadest reasonable construction of the term "token", as explained in **VI.B.ii**.

In addition, Hancock's questionnaire also is "tokenized" under the construction of "token" offered by the Examiner during prosecution of the '748 patent, as a POSITA would have understood that the Go2 Application would have included logical, mathematical and branching operations for the same reasons explained above. Ex. 1005 ¶ 202.

Furthermore, it would have been obvious to a POSITA that the Go2 Application provides logical, mathematical, or branching logic connecting the series of questions and permitted responses and therefore would correspond to a tokenized questionnaire. *Id.* As illustrated in Fig. 17, after a user selects a category, such as a restaurant or bank, the Go2 Application presents a question regarding desired category features, such as selecting only establishments that accept Visa. It would have been obvious to one of skill in the art that such a follow-up question would only be appropriate if the user had selected the restaurant category (or another category that accepts credit card payment), and not banks. In particular, Hancock specifies that "[m]ultiple levels of category features can be presented based on the needs and requirements of each specific implementation." Ex. 1003 at 29:8-10. Accordingly, to the extent Hancock does not explicitly disclose providing logical, mathematical, or branching logic connecting the series of questions and permitted responses, a POSITA would have found it obvious to provide such

functionality. Ex. 1005 ¶ 203. Thus, regardless of which construction of “tokens” the Board adopts, Hancock discloses that the Go2 Application is tokenized. *Id.*

(D) “said tokenized questionnaire including at least one question requesting location identifying information,”

As explained above in **VII.C.i.C**, Hancock discloses that the Go2 Application includes at least one question requesting location identifying information. See Ex. 1003 at Fig. 17; *see also id.* at 3:16-20 (“The application program prompts the user to select a category of interest, a preference for specifying location information (i.e. via manual input, or automatically through an attached ALI device), and other user preferences.”). Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 204.

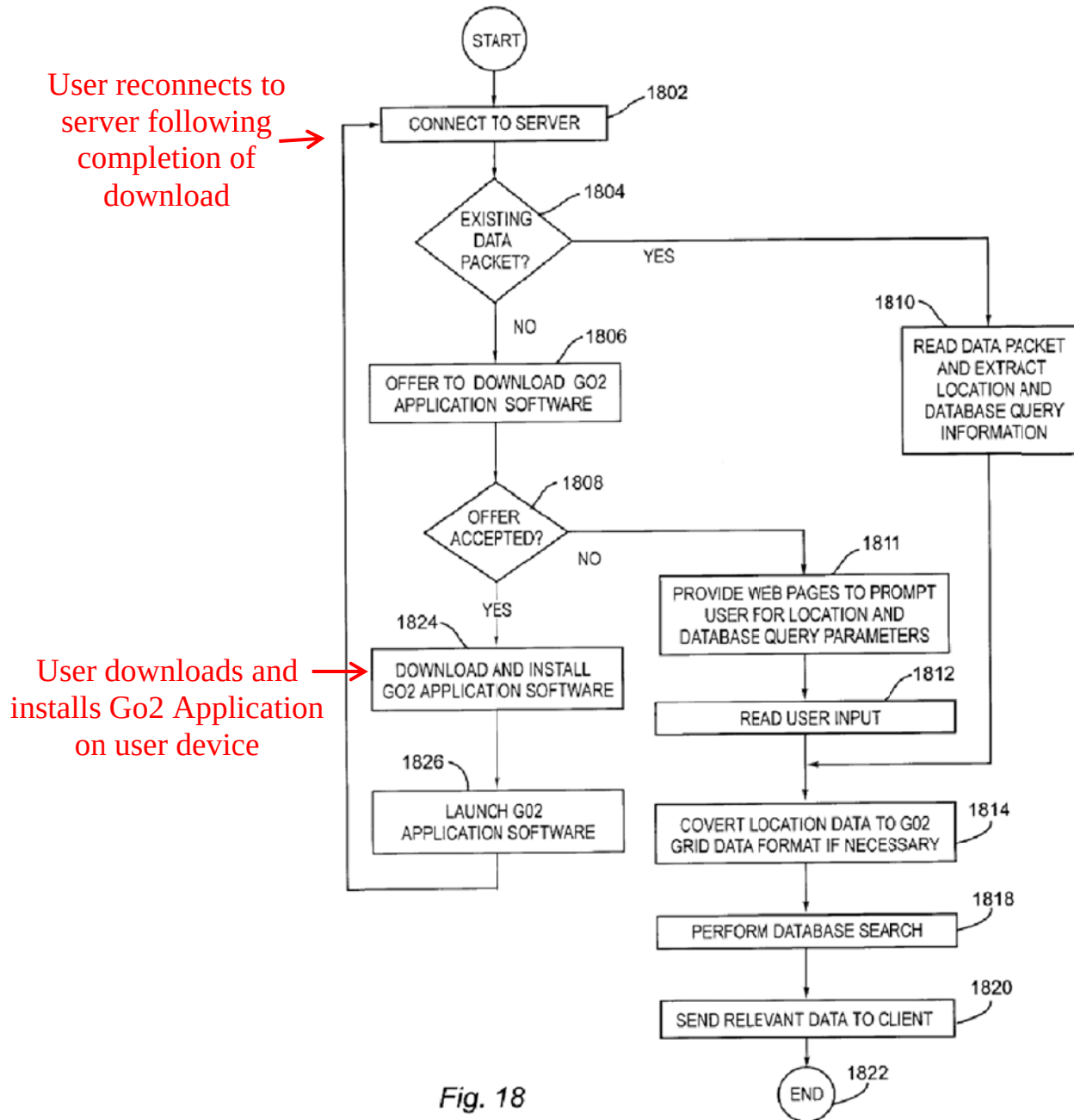
(E) “said tokenized questionnaire comprising a plurality of device independent tokens;”

As explained above in **VII.C.i.C**, Hancock discloses that the Go2 Application is a tokenized questionnaire comprising a plurality of tokens. However, Hancock is silent regarding a programming language used to create the Go2 Application. As explained above in **VII.A.i.E**, a POSITA would have understood that the Java programming language is a programming language that provides device independency. Ex. 1005 ¶¶ 130-31, 205. As such, it would have been an obvious design choice to a POSITA that the Go2 Application could have been implemented using Java. *Id.* Accordingly, because it would have been an

obvious design choice to implement the Go2 Application using Java, and because a POSITA would have understood that Java provides device-independent code, a POSITA would have found it obvious to implement the Go2 Application using Java such that it would include a plurality of device independent tokens. *See KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.”).

(F) “(c) ending said communications ...”

As explained above in **VII.C.i.B-C**, with respect to Figure 18, Hancock discloses establishing communications between portable-computing device 1302 and primary server 1314 to download the Go2 Application. As explained above in **VII.A.i.F**, completion of a download is sufficient to satisfy this limitation. Moreover, Figure 18 of Hancock confirms that communication between the portable-computing device and primary server ends when the Go2 Application is downloaded, as Figure 18 of Hancock illustrates that the user must reconnect to the server:



Ex. 1003 at Fig. 18 (annotated). Furthermore, Hancock discloses that “at least some functions provided by the U/I module 1506 are **performed without a live connection to the server**,” which explicitly indicates that communications with

the server have ended. *Id.* at 26:59-63. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 206.

(G) “(d) after said communications has been ended, (d1) executing ...”

As explained above in **VII.C.i.C**, Hancock discloses that the downloaded Go2 Application can be executed on the portable-computing device 1302 to collect responses from the user to questions such as the user’s location, selected category, and selected category features. *See* Ex. 1003 at Fig. 17; *id.* at 28:9-23, 28:66-29:10. Likewise, Hancock explicitly discloses that “in step 1826, the Go2 Application software 1500 is executed on the client 1404,” and that “[d]uring the execution of the Go2 Application software 1500, the user inputs user preferences, location specifications and other database query parameters” *Id.* at 30:47-50. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 207.

(H) (d2) storing within said computing device ...”

Hancock discloses that the responses collected from the user are stored within the portable-computing device 1302. For example, Hancock discloses that “the portable-computing device 1302 comprises ... a persistent storage device or database 1408” *Id.* at 25:9-11. Hancock discloses that “[a]fter such information is entered, the Go2 Application software 1500 creates a data packet 1708 and stores it on the data storage device 1408.” *Id.* at 30:51-53. In addition, Hancock discloses that “[t]he data packet 1708,” which contains a user’s responses, “is then

stored on the local storage device 1408.” *Id.* at 31:18-20. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 208.

(I) “(d3) using said GPS ...”

Hancock discloses that “[t]he application program prompts the user to select a category of interest, a preference for specifying location information (i.e. via manual input, or **automatically through an attached ALI device**), and other user preferences.” *Id.* at 3:15-20. In addition, Hancock clarifies that obtaining a user’s location information automatically using the imbedded ALI device refers to using its GPS receiver. *Id.* at 26:15-16 (“Examples of well-known ALI devices are GPS systems”). A POSITA would have understood that if a user selects a preference for specifying location information automatically through an ALI device (e.g., GPS system), the GPS receiver on the mobile device would automatically obtain location information in response to a one question that requests location information. Ex. 1005 ¶ 209. Accordingly, Hancock discloses this limitation or renders it obvious. *Id.*

(J) “(e) establishing communications ...”

As explained above in **VII.C.i.F**, Figure 18 of Hancock shows that the portable-computing device re-establishes communications with the primary server after the Go2 Application is downloaded. *See* Ex. 1003 at Fig. 18; *id.* at 30:30-31:10. For example, Hancock explains that after “the Go2 Application

software 1500 creates a data packet 1708 and stores it on the data storage device 1408, ... control passes back to step 1802” *Id.* at 30:31-33. Furthermore, Hancock explains that “[s]tep 1802 represents a step where the client 1404 connects with the server 1314.” *Id.* at 30:32-34. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 210.

(K) “(f) transmitting a value ...”

Hancock discloses that the Go2 Application transmits the stored data packet, which contains a user’s responses, to the server. With respect to the process illustrated in Figure 19, Hancock discloses that after “[t]he data packet 1708 is then stored on the local storage device 1408,” in the next step, 1906, **“the data packet 1708 is transmitted to the server 1314.”** Ex. 1003 at 31:18-21. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 211.

(L) “(g) after receipt of said transmission of step (f), transmitting a notice of said received value ...”

After the server receives transmission of the data packet comprising user response data, as described above in **VII.C.i.K**, Hancock discloses that the server performs a search based on the response data, then returns the results to the user. In particular, with respect to the process illustrated in Figure 19, Hancock discloses that, following receipt of the user’s data packet, “the primary server 1314 searches its database 1316 and retrieves a specific Uniform Resource Locator (“URL”) that satisfies the database search criteria entered by the user” Ex. 1003 at 31:28-30.

Furthermore, Hancock discloses that “[n]ext, in step 1912, **the client 1404 receives a second data packet 1914,**” which “comprises the URL result from the data base query, plus any other additional information that may be required by the enhanced server 1315 ...”. A POSITA would have understood that the second data packet 1914 is transmitted by the primary server 1314. Ex. 1005 ¶ 212. A POSITA would have further understood that the second data packet 1914 corresponds to a notice of a received value representative of each of at least one response, as the second data packet 1914 includes the URL that has been generated using the received user data packet. *Id.* As indicated by claim 20, “second user” may be the same as person as the “first user.” Hancock discloses that the second data packet 1914 is received by the client 1404 that has sent the first data packet 1708. Ex. 1003 at 31:11-41. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 212.

(ii) Claim 20

As explained above in **VII.C.i.L**, Hancock discloses this limitation.

(iii) Independent Claim 21

As explained below, Hancock also renders obvious the method of claim 21.

(A) “A method ...”

As explained in **VII.C.i.A**, Hancock discloses a method for managing data.

(B) “(a) within a central computer ...”

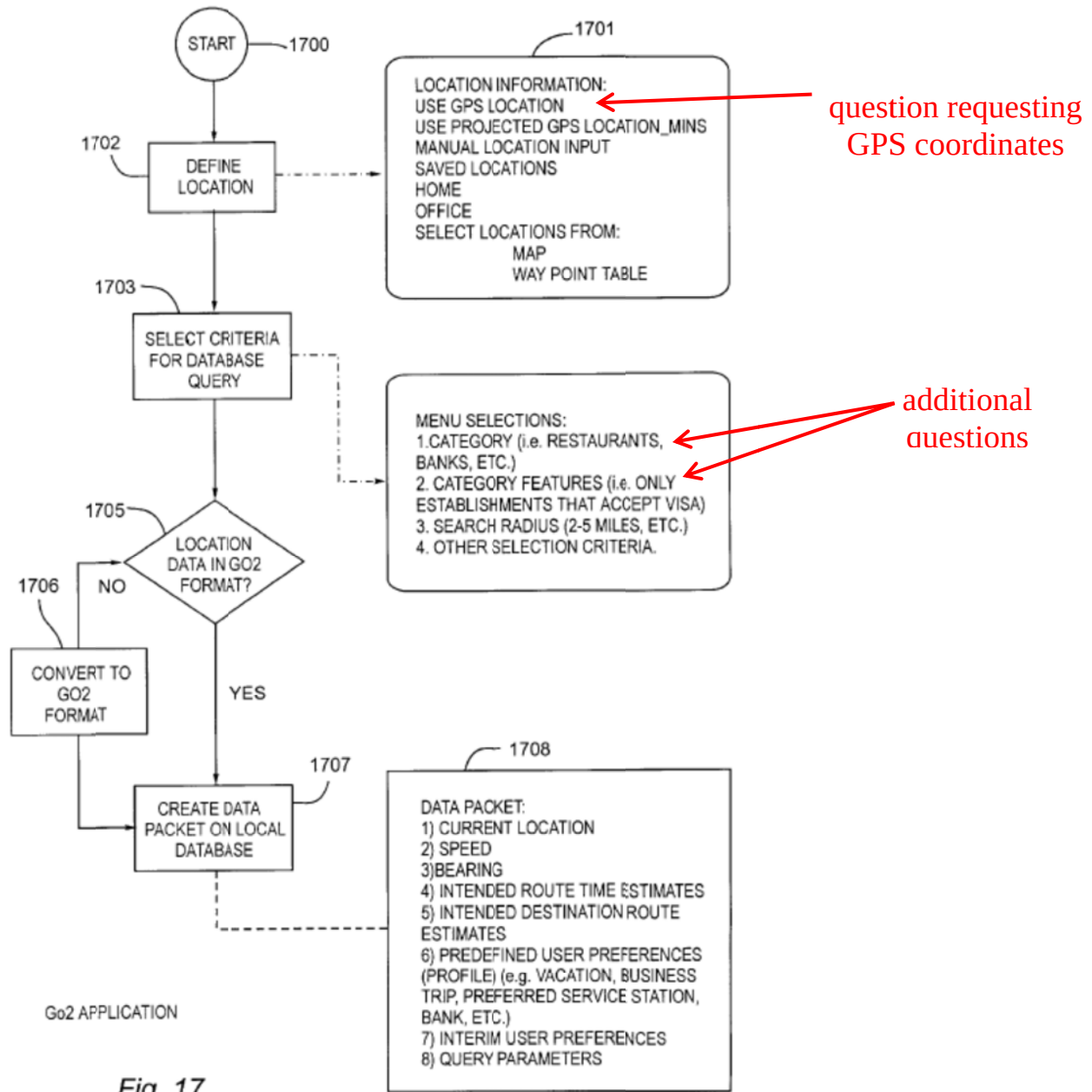
As recited in claim 22, the “central computer” and “recipient computer” may be the same computer. *See also* ’748 patent at cl. 22. Also, as explained in **VII.C.i.J-K**, Hancock’s primary server 1314 that receives responses from the portable-computing device corresponds to the “recipient computer.” *See, e.g.*, Ex. 1003 at Fig. 18; *id.* at 30:30-31:10.; *id.* at 30:31-33. Hancock further explains that the primary server includes attached storage. *See, e.g.*, Ex. 1003 at 24:41-42 (“The primary server 1314 is coupled with a database or persistent storage device 1316.”). Each of the data packets 1708, which the primary server receives from the portable-computing device (*id.* at 31:17-21), as well as the second data packets 1914, which include the URL result that is sent back to the portable-computing device (*id.* at 31:37-41), correspond to a user data item that is stored in a recipient computer. In particular, it would have been obvious to a POSITA to use the primary server’s attached storage to store the data packets 1708 and second data packets 1914. Ex. 1005 ¶ 216. A POSITA would have understood that it would have been desirable to maintain a historical log of user data in order to learn the user’s interests and troubleshoot any issues that users may have using the Go2 Application. *Id.* Accordingly, Hancock discloses or renders obvious that the server may access at least one user data item stored within it. *Id.* As explained below, Hancock discloses obtaining the user data item via the claimed steps.

(C) “(1) establishing communications ...”

As explained in **VII.C.i.B**, Hancock discloses this limitation.

**(D) “(2) receiving within said handheld computing device
...”**

As explained in **VII.C.i.C-E**, Hancock discloses “receiving within said handheld computing device a transmission of a tokenized questionnaire” and “said tokenized questionnaire comprising a plurality of device independent tokens.” Hancock also discloses that its questionnaire includes at least one question requesting GPS coordinates. Specifically, Hancock discloses that the G02 Application can include a question requesting that the Go2 Application automatically obtain a user’s location using the portable device’s GPS receiver. Ex. 1003 at 28:18-20 (“[A]s indicated by the block 1701, the user has the option to specify that the process retrieve location information from the attached GPS receiver.”). Receiving location information from Hancock’s GPS receiver indicates receiving GPS coordinates. *Id.* at 2:23-24 (“This location is typically output from the GPS receiver as latitude and longitude numbers”). In addition, Hancock discloses that its questionnaire include at least one additional question. For example, as illustrated in Fig. 17, the Go2 Application also includes questions requesting that a user select a category, such as a restaurant or bank, and the Go2 Application additionally includes questions regarding desired category features, such as selecting only establishments that accept Visa:



Id. at Fig. 14 (annotated); *see also id.* at 28:49-54, 28:66-29:2. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 218.

(E) “(3) ending said communications ...”

As explained in **VII.C.i.F**, Hancock discloses this limitation.

(F) “(4) after said communications has been ended, (i) executing ...”

As explained in VII.C.i.G, Hancock discloses this limitation.

(G) “(ii) automatically entering ...”

As explained in VII.C.i.I, Hancock discloses this limitation. In addition, Figure 12a of Hancock illustrates “the system determining and outputting corresponding latitude and longitude coordinates,” which corresponds to automatically entering GPS coordinates into the questionnaire. Ex. 1003 at 20:20-23. As Hancock explains, the system determines latitude and longitude coordinates using a GPS receiver. *Id.* at 3:56-57.

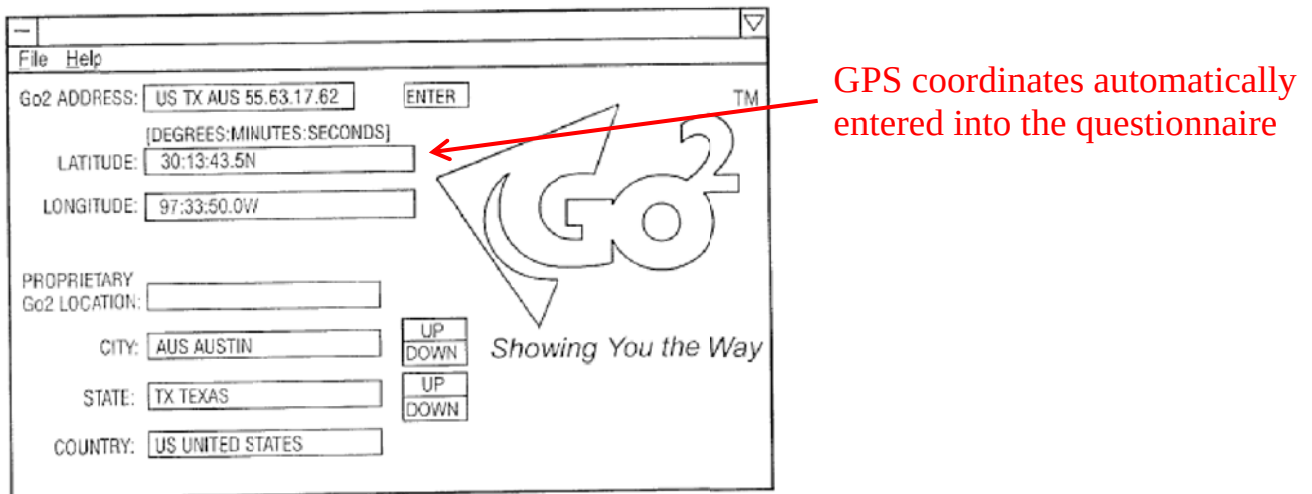


Fig. 12a

Ex. 1003 at Fig. 12a (annotated). Accordingly, Hancock discloses this limitation.

Ex. 1005 ¶ 221.

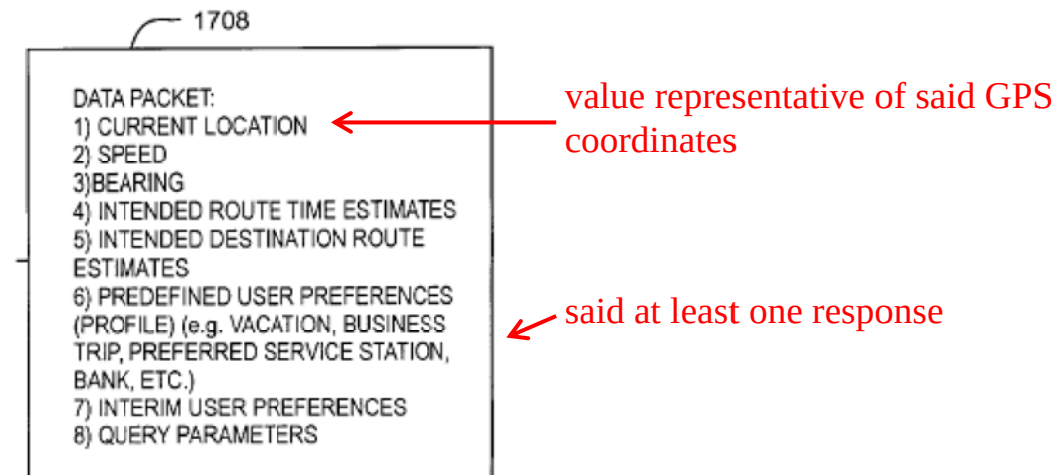
(H) “(iii) presenting ... (iv) receiving ...”

As explained in **VII.C.iii.D**, Hancock discloses presenting at least one additional question to a user and receiving at least one response to the additional question. For example, as explained in **VII.C.iii.D** and illustrated in Fig. 17, the Go2 Application also includes questions requesting that a user select a category, such as a restaurant or bank, and the Go2 Application additionally includes questions regarding desired category features, such as selecting only establishments that accept Visa. *Id.* Fig. 17; *see also id.* at 28:49-54, 28:66-29:2. The Go2 Application receives responses from the user to the additional presented questions. *Id.* at 28:52-54 (“In this example, the user selects a category of interest, one or more category features, a search radius and other selection criteria.”). For example, the Go2 Application can present the user with a “selectable menu” for providing responses. *Id.* at 28:55-56. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 222.

(I) “(v) storing at least one value ...”

As explained in **VII.C.i.H**, Hancock discloses that the responses collected from the user are stored within the portable-computing device 1302. For example, Hancock discloses that “the portable-computing device 1302 comprises ... a persistent storage device or database 1408” *Id.* at 25:9-11. Hancock discloses that “[a]fter such information is entered, the Go2 Application software 1500

creates a data packet 1708 and stores it on the data storage device 1408.” As shown in Figure 17, the data packet 1708 that is stored includes the values representative of GPS coordinates as well as the responses to the other questions:



Ex. 1003 at excerpt of Figure 17 (annotated). Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 223.

(J) “(5) establishing a communications link ...”

As explained above in **VII.C.i.J**, Figure 18 of Hancock shows that the portable-computing device re-establishes communications with the primary server after the Go2 Application is downloaded. Ex. 1005 ¶ 224.

(K) “(6) transmitting said stored at least one value ...”

As explained in **VII.C.i.K**, Hancock discloses this limitation. In particular, Hancock discloses **“the data packet 1708 is transmitted to the server 1314.”** Ex. 1003 at 31:18-21. As explained in **VII.C.iii.I**, the data packet 1708 includes the values representative of GPS coordinates as well as the responses to the other

questions. *Id.* at Fig. 17. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 225.

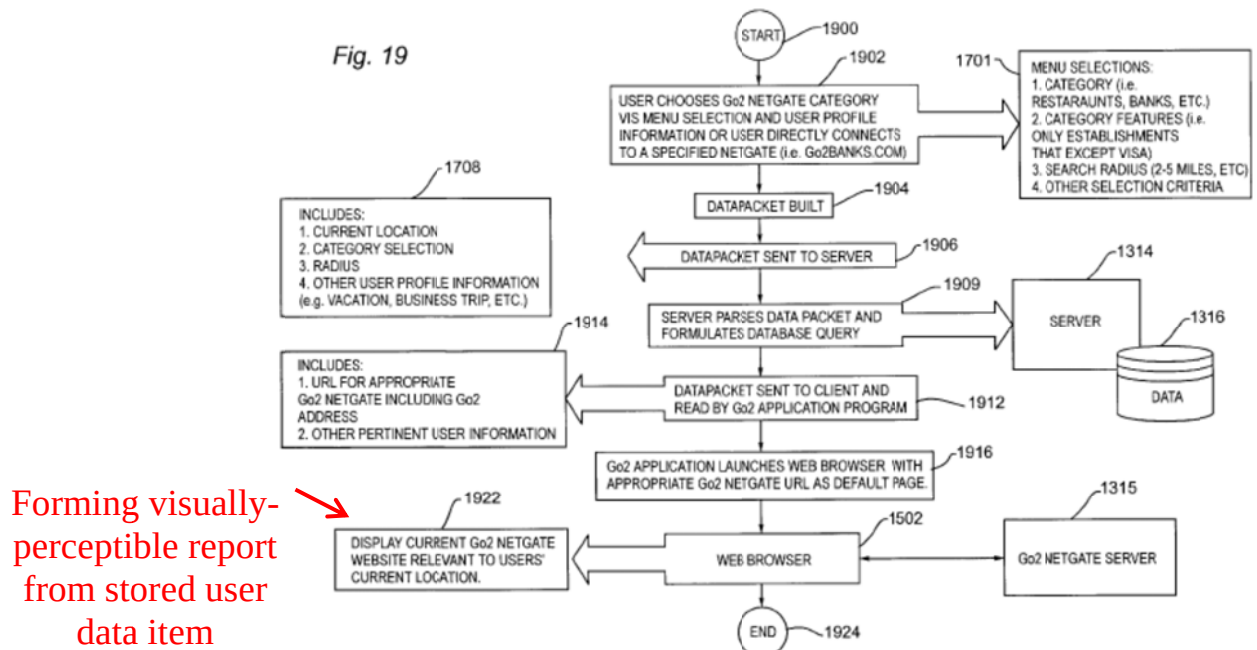
(L) “(7) storing within said recipient computer ...”

As explained in **VII.C.iii.I**, the data packet 1708 includes the values representative of GPS coordinates as well as the responses to the other questions. *Id.* at Fig. 17. As explained in **VII.C.iii.B**, Hancock’s primary server includes attached storage (Ex. 1003 at 24:41-42), and it would have been obvious to a POSITA to use the primary server’s attached storage to store the data packets 1708. Ex. 1005 ¶ 226. For example, a POSITA would have understood that it would have been desirable to maintain a historical log of user data in order to learn the user’s interests and troubleshoot any issues that users may have using the Go2 Application. *Id.* Accordingly, this limitation would have been obvious in view of Hancock. *Id.*

(M) “(b) forming a visually perceptible report ...”

As explained in **VII.C.i.L**, after the server receives transmission of the data packet comprising user response data, as described above in **VII.C.i.K**, Hancock discloses that the server performs a search based on the response data, then returns the results to the user. In particular, with respect to the process illustrated in Figure 19, Hancock discloses that, following receipt of the user’s data packet, “the primary server 1314 searches its database 1316 and retrieves a specific Uniform

Resource Locator (“URL”) that satisfies the database search criteria entered by the user” Ex. 1003 at 31:28-30. Furthermore, Hancock discloses that “[n]ext, in step 1912, **the client 1404 receives a second data packet 1914,**” which “comprises the URL result from the data base query, plus any other additional information that may be required by the enhanced server 1315” Next, the “Go2 Application launches the web browser component 1502 and automatically connects to the URL received in the data packet,” thereby forming a visually perceptible report from the at least one stored user data item:



Id. at Fig. 19 (annotated); *see also* at 31:42-45. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 227.

(iv) Claim 22

As explained in **VII.C.iii.B**, the “recipient computer” and “central computer” disclosed by Barbosa are the same computer. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 228.

(v) Independent Claim 1

As explained below, Hancock also renders obvious the method of claim 21.

(A) “A method ...”

As explained in **VII.C.i.A**, Hancock discloses a method for managing data.

(B) “(a) creating a questionnaire ...”

It would have been obvious to a POSITA in view Hancock to customize the questions presented by the Go2 Application for a location. For example, as shown in Fig. 12c, Hancock discloses the ability to associate a user’s location with a particular business:

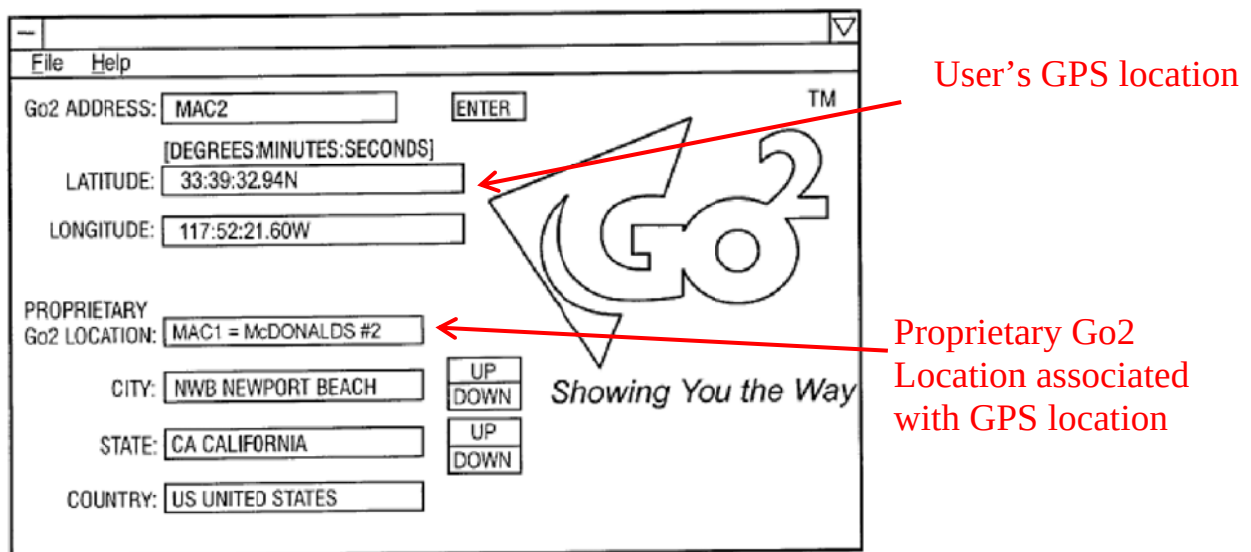


Fig. 12c

Ex. 1003 at Fig. 12c (annotated). In addition, as illustrated in Fig. 17, Hancock discloses that the Go2 Application can prompt a user to select a category, such as a restaurant or bank, and then the Go2 Application can prompt a user to select desired category features, such as selecting only establishments that accept Visa. It would have been obvious to one of skill in the art that the questions and available answer choices should be customized based on the proprietary business information associated with a user's GPS location. Ex. 1005 ¶ 231; *see also* Ex. 1003 at 29:8-10 ("Multiple levels of category features can be presented based on the needs and requirements of each specific implementation."). For example, a POSITA would have understood that a permissible category feature based on type of credit card accepted may be appropriate if a user's location was determined to be a restaurant, but not a bank. Ex. 1005 ¶ 231. Accordingly, it would have been obvious to a POSITA in view Hancock to customize the questions presented by the Go2 Application for a location. *Id.*

(C) "(b) said questionnaire ...;"

As explained in **VII.C.iii.D**, Hancock discloses this limitation.

(D) "(c) tokenizing ...;"

As explained in **VII.C.i.C, E**, Hancock discloses this limitation.

(E) "(d) transmitting ...;"

As explained in **VII.C.i.B**, Hancock discloses that the primary server 1314 transmits the Go2 Application to the portable-computing device 1302.

(F) “(e) when said remote computing device is at said location, executing ...;”

As explained in **VII.C.i.G**, Hancock discloses this limitation.

(G) “(f) automatically entering ...;”

As explained in **VII.C.iii.G**, Hancock discloses this limitation.

(H) “(g) transmitting at least a portion ...”

Hancock discloses that “the present invention ... allows for ... customized information [to] be presented to users **in real-time** with minimal delays.” Ex. 1003 at 4:1-5. As explained in **VII.C.iii.M**, Hancock discloses that the Go2 Application presents customized information to a user that is based on the user responses in the data packet 1708 that the portable-computing device transmits to the server. A POSITA would have understood that for customized information to have been presented to users in real-time, the user responses in data packet 1708 also would have been transmitted to the server in real time. Ex. 1005 ¶ 237. Accordingly, Hancock discloses this limitation. *Id.*

(I) “(h) storing said response at said server.”

As explained in **VII.C.iii.L**, storing user data packets in the storage attached to Hancock’s primary server would have been obvious in view of Hancock.

(vi) Claim 2

Claim 2, which depends from Claim 1, recites “(i) translating said response to a format recognizable by a particular computer program;” and “(j) accessing the translated response from a computer executing said particular computer program.” Hancock discloses these limitations. For example, with respect to the process shown in Fig. 17, Hancock discloses that “the process determines whether the location information is [in] the Go2 grid system format,” and, “[i]f it is not, it is converted to the Go2 grid coordinate system ...” Ex. 1003 at 29:30-33. As shown in Fig. 17, the translated location information is used to create data packet 1708, which, as explained in **VII.C.i.K-L**, is accessed by the Go2 Application. Ex. 1005 ¶ 239. Accordingly, Hancock discloses this limitation. *Id.*

(vii) Claim 5

Claim 5, which depends from Claim 1, recites: “The method of data management of claim 1 wherein the transmission of said tokens in step d) occurs via the network of step g).” Hancock explains that all communication between the portable-computing device 1302 and the primary server 1314 can occur via the Internet. Ex. 1003 at 24:39-41; *id.* at Fig. 13. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 240.

(viii) Independent Claim 9

As explained below, Hancock also renders obvious the method of claim 9.

(A) “A method ...”

As explained in **VII.C.i.A**, Hancock discloses a method for managing data.

(B) “(a) establishing communications ...”

As explained in **VII.C.i.B**, Hancock discloses this limitation.

(C) “(b) using said GPS ...”

As explained in **VII.C.i.I**, Hancock discloses this limitation.

(D) “(c) transmitting said location ...”

As explained in **VII.C.i.K**, Hancock discloses transmitting the location identifying in data packet 1708 from the user’s portable-computing device to the primary server 1314. As explained in **VII.C.i.B**, the primary server 1314 corresponds to the originating computing. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 245.

(E) “(d) receiving ...”

As explained in **VII.C.i.C-E**, Hancock discloses receiving within said handheld computing device a transmission of a tokenized questionnaire that comprises a plurality of device independent tokens. As explained in **VII.C.v.B**, it would have been obvious in view of Hancock to customize its questionnaire for a particular location. Accordingly, this limitation is obvious in view of Hancock. Ex. 1005 ¶ 246.

(F) “(e) ending said communications ...”

As explained in **VII.C.i.F**, Hancock discloses this limitation.

(G) “(f) after said communications has been ended ...”

As explained in **VII.C.i.G** and **VII.C.v.B**, Hancock discloses this limitation.

(H) “(f2) storing ...”

As explained in **VII.C.i.H**, Hancock discloses this limitation.

(I) “(g) establishing communications ...”

As explained in **VII.C.i.J**, Hancock discloses this limitation.

(J) “(h) transmitting a value ...”

As explained in **VII.C.i.K**, Hancock discloses this limitation.

(ix) Claim 11

As explained above in **VII.C.i.K** and **VII.C.i.B**, Hancock’s primary server 1314 corresponds to both the originating computing and the recipient computer. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 252.

(x) Claim 13

As explained in **VII.C.iii.D**, Hancock discloses that the Go2 Application comprises at least one question that requests location identifying information and at least one other question. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 253.

(xi) Claim 15

Hancock explains that the portable-computing device 1302 connects to the primary server 1314 via the Internet. Ex. 1003 at 24:39-41; *id.* at Fig. 13. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 254.

(xii) Independent Claim 16

As explained below, Hancock also renders obvious the method of claim 16.

(A) “A method ...”

As explained in **VII.C.i.A**, Hancock discloses a method for managing data.

(B) “(a) establishing communications ...”

As explained in **VII.C.i.B**, Hancock discloses this limitation.

(C) “(b) receiving ...”

As explained in **VII.C.iii.D**, Hancock discloses this limitation.

(D) “(c) ending said communications ...”

As explained in **VII.C.i.F**, Hancock discloses this limitation.

(E) “(d) after said communications has been terminated ...”

As explained in **VII.C.i.G, I**, Hancock discloses this limitation.

(F) “(d2) storing ...”

As explained in **VII.C.i.H**, Hancock discloses this limitation.

(G) “(d3) automatically entering ...”

As explained in **VII.C.i.I and VII.C.iii.G**, Hancock discloses this limitation.

(H) “(e) establishing communications ...”

As explained in **VII.C.i.J**, Hancock discloses this limitation.

(I) “(f) transmitting at least one value ...”

As explained in **VII.C.i.K**, Hancock discloses this limitation.

(xiii) Claim 17

As explained in **VII.C.i.I**, Hancock discloses this limitation.

(xiv) Claim 18

As explained above in **VII.C.i.K** and **VII.C.i.B**, Hancock's primary server 1314 corresponds to both the originating computing and the recipient computer. Accordingly, Hancock discloses this limitation. Ex. 1005 ¶ 266.

D. Hancock In View of Bandera Renders Obvious Claims 1, 2, 5, 9, 11, 13, and 15-22

Hancock renders obvious Claims 1, 2, 5, 9, 11, 13, and 15-22 for the reasons set forth in Section **VII.C** above. To the extent that the Board finds that Hancock alone does render obvious the limitations of these claims, a person of ordinary skill in the art would have considered those claims to have been obvious over Hancock in view of Bandera. Ex. 1005 ¶¶ 267-69.

(i) A Person of Ordinary Skill Would Have Considered Bandera In Conjunction With Hancock

A person of ordinary skill would have considered Hancock in conjunction with Bandera for several reasons. Ex. 1005 ¶ 268. For example, Hancock and Bandera are in the same field of endeavor, as both relate to providing location based services to mobile devices. In particular, as explained above in **VII.C.i.G-L**, Hancock discloses that a user's handheld device may collect a user's GPS location,

transmit it to a server along with other data, and receive a custom URL result based on the user's location and preferences. Likewise, Bandera discloses that that a mobile web client may collect a user's GPS location, transmit it to a server, and received targeted advertisements based on the user's GPS location. *See* Ex. 1004 at Abstract; *id.* at 2:63-64. In addition, while Hancock is silent as to the programming language used to implement its Go2 Application, Bandera disclose that the Java programming language may be used to provide programs on mobile devices and that Java is machine and operating-system independent. *See* Bandera at 5:37-49. Accordingly, a POSITA would have been motivated to combine the teachings of Hancock and Bandera to implement Hancock's Go2 Application using Java to yield a device-independent application.

(ii) Claims 1, 2, 5, 9, 11, 13, and 15-22

As explained above in **VII.C.i.E**, a POSITA would have found the "device independent tokens" limitation to have been obvious in view of Hancock alone because the Java programming language is an obvious design choice to program the Go2 Application, and a POSITA understands that Java would have provided device-independent code for the Go2 Application. Bandera explicitly discloses that Java is used to provide device-independent code. *See* Ex. 1004 at 5:40-44; *see also id.* at 5:47-49. Accordingly, to the extent it would not have been obvious in view of Hancock alone to implement the Go2 Application using Java in order to provide

device-independent code, a POSITA would have found it obvious to do so in view of Bandera.

VIII. CONCLUSION

Petitioners respectfully requests that a Trial be instituted and that the Challenged Claims of the '748 patent be canceled as unpatentable.

Attached hereto or included herewith are Powers of Attorney, an Exhibit List, and copies of the references per 37 C.F.R. §§ 42.10(b), 42.63(e), and 42.6(c). Petitioner paid the requisite fee via Deposit Account. The Office is authorized to charge fee deficiencies and credit overpayments to Deposit Account No. 50-1529 (Order No. 971877.20006).

Dated: January 25, 2018

Respectfully submitted,

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CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes Review*, not inclusive of table of contents, table of authorities, mandatory notices under §42.8, certificate of service or word count, or appendix of exhibits or claim listing, totals approximately 13,999, which is less than the 14,000 allowed under 37 CFR § 42.24(a)(i).

Respectfully submitted,

Date: January 25, 2018

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CERTIFICATION OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(b), the undersigned hereby certifies that the above-captioned Petition for *Inter Partes* Review of U.S. Patent No. 9,454,748, including its supporting exhibits and Powers of Attorney, was served on January 25, 2018 via Priority Mail Express upon the following counsel of record for the patent:

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