

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
MIDLAND-ODESSA DIVISION**

BLUESTONE VENTURES, INC.,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Case No. 7:25-cv-00569-DC-DTG

JURY TRIAL DEMANDED

**GOOGLE'S PRELIMINARY INVALIDITY AND
SUBJECT-MATTER ELIGIBILITY CONTENTIONS**

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Pursuant to the Court's Scheduling Order (Dkt. 28), Defendant Google LLC ("Google") hereby provides these Invalidity and Subject-Matter Eligibility Contentions ("Invalidity Contentions") for the claims asserted by Plaintiff Bluestone Ventures Inc. from U.S. Patent Nos. 9,746,341 (the "'341 patent"), 10,274,337 (the "'337 patent"), 10,551,208 (the "'208 patent"), 10,677,608 (the "'608 patent"), 10,996,071 (the "'071 patent"), and 11,473,925 (the "'925 patent") (collectively, the "Asserted Patents") in its preliminary infringement contentions served April 29, 2026 ("Infringement Contentions").

These Invalidity Contentions address the invalidity of the Asserted Claims, identify additional reservations and explanations, and describe the accompanying document production. Google reserves the right to amend these contentions as provided by Federal Rule of Civil Procedure 26(e), the Scheduling Order, and any other applicable law, rule, or precedent. Google also reserves the right to amend and/or supplement these Invalidity Contentions based on information subsequently identified and/or should Plaintiff be permitted to correct, clarify, amend, and/or supplement its Infringement Contentions.

I. INTRODUCTION

A. Plaintiff's Infringement Contentions

On April 29, 2026, Plaintiff served Google with its Infringement Contentions, asserting 45 claims (the "Asserted Claims") across six Asserted Patents.¹ The Asserted Claims are:

¹ The operative Complaint alleges infringement of a seventh patent, U.S. Patent No. 11,619,513 (the "'513 patent"). Dkt. 1 ¶¶ 240-250. However, Plaintiff has informed Google, verbally and in writing, that it has abandoned its claim of infringement of the '513 patent. Plaintiff's Infringement Contentions also do not allege infringement of the '513 patent. Thus, Google does not address the invalidity of the '513 patent here. Google reserves the right to challenge the validity of the '513 patent if necessary, as the '513 patent is invalid under at least 35 U.S.C. §§ 101, 102, 103, and 112.

Asserted Patents	Asserted Claims
9,746,341 (the “’341 patent”)	11-15
10,274,337 (the “’337 patent”)	1-4
10,551,208 (the “’208 patent”)	1-6
10,677,608 (the “’608 patent”)	1-17
10,996,071 (the “’071 patent”)	1-8
11,473,925 (the “’925 patent”)	9, 11, 13-15

The Infringement Contentions are deficient in that they fail to properly and completely disclose how the Accused Instrumentalities allegedly infringe the Asserted Claims. Infringement contentions must be sufficient to provide reasonable notice to the defendant as to why the plaintiff believes it has a “reasonable chance of proving infringement.” *View Engineering, Inc. v. Robotic Vision Systems, Inc.*, 208 F.3d 981, 986 (Fed. Cir. 2000). Reasonable notice requires the patentee to specifically tie the asserted claim language to some feature within the accused product. Yet Plaintiff has failed to identify specifically how the Accused Products allegedly infringe numerous limitations of the Asserted Claims. For example, each of the Asserted Claims requires numerous specific elements arranged in a particular manner and configured to perform certain functions. Instead of meaningfully identifying which aspects of the Accused Products satisfy each claim limitation, Plaintiff’s infringement contentions merely parrot the claim language and recite boilerplate, vague, and conclusory accusations that the products practice the claim limitations—utterly failing to describe where and how the claim limitation is found in the Accused Products.

Google reserves the right to amend and/or supplement these Invalidity Contentions should the Court permit Plaintiff to correct, clarify, amend, and/or supplement its Infringement Contentions.

B. Overview of Invalidity Grounds

The Asserted Claims are invalid under 35 U.S.C. §§ 102 and 103 because all Asserted Claims are anticipated by, or would have been obvious to a skilled artisan in view of, the prior art.

See Sections II (Identification of Relevant Prior Art) and III (Anticipation and Obviousness Under 35 U.S.C. §§ 102 and 103), *infra*. In addition, the Asserted Claims are invalid for double patenting. See Section IV (Double Patenting), *infra*. The Asserted Claims also are invalid under 35 U.S.C. § 112 for lack of written description, lack of enablement, indefiniteness, and/or because they do not set forth what the patentee regarded as the invention. See Section V (Invalidity Under 35 U.S.C. § 112), *infra*. Additionally, the Asserted Claims are further invalid for failure to meet the subject-matter eligibility requirements of 35 U.S.C. § 101. See Section VI (Subject-Matter Eligibility).

Google also incorporates by reference and reserves the right to rely on the invalidity and subject-matter eligibility contentions, expert reports, and other disclosures provided to Plaintiff or its privies by any party in other cases, including *Bluestone Ventures Inc. v. Uber Technologies, Inc.*, No. 6:21-cv-00685 (W.D. Tex.); and *Eopus Innovations LLC v. Dreamworks Animation SKG, Inc.*, No. 2:13-cv-09552 (C.D. Cal.) (collectively, with any other cases filed by Plaintiff or its privies, the “Related Cases”). Google also incorporates by reference all prior art and invalidity contentions identified in any post-issuance review by the U.S. Patent and Trademark Office of any Asserted Patent or patent owned by Plaintiff and covering a subject matter that overlaps even in part with the Asserted Patents.

These disclosures are made based on prior art presently known to Google. Discovery in this case has not yet commenced. The Court has not construed the terms of the Asserted Claims in this case, and the Court has not determined the level of education or experience of one of ordinary skill in the art. These Invalidity Contentions are based on information currently available to Google and its current understanding of the Asserted Claims as stated in Plaintiff’s deficient Infringement Contentions, without the benefit of a claim construction order in this case, fact discovery, or expert testimony.

Google reserves the right to modify, amend, and/or supplement these Invalidity Contentions in view of, without limitation, information provided by Plaintiff concerning its infringement allegations; to the extent relevant, additional discovery concerning the alleged priority, conception, and reduction to practice of any of the Asserted Claims; additional prior art obtained through discovery or further investigation, including without limitation discovery from Plaintiff or third parties; claim constructions by the Court; positions taken by Plaintiff in this action or any other proceeding; the parties' expert reports; and/or as other circumstances warrant.

Google objects to any attempt to infer claim construction positions from any identification of prior art or invalidity contention contained herein. Certain positions set forth in these Invalidity Contentions are predicated (to the extent that Plaintiff's positions can be ascertained) on Plaintiff's incorrect interpretation of the Asserted Claims as evidenced by its Infringement Contentions. These Invalidity Contentions are not, and should not be construed as, admissions or adoptions of a particular claim scope or construction, or as an admission that any particular element of an Asserted Claim is found in any accused instrumentality. Google reserves the right to adopt claim construction positions that differ from positions put forth in this document.

Google disagrees with Plaintiff's application of the Asserted Claims to the Accused Instrumentalities (to the extent that Plaintiff's positions can be ascertained), and Google expressly denies infringement.

II. IDENTIFICATION OF RELEVANT PRIOR ART

A. Priority Dates

Google reserves the right to argue that some or all the Asserted Claims are not entitled to the priority date(s) claimed on the face of each Asserted Patent for failure to sufficiently disclose the full scope of the claims as of those claimed priority date(s). A patent's claims are not entitled

to an earlier priority date merely because the patent owner claims priority. *See Dynamic Drinkware, LLC v. National Graphics, Inc.*, 800 F.3d 1375, 1379-1380 (Fed. Cir. 2015). Rather, Plaintiff must show the earlier application provides written description support under 35 U.S.C. § 112(a). The test for written description sufficiency is whether the prior application's disclosure "reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

In its Infringement Contentions, Plaintiff contends that each Asserted Patent is entitled to a priority date of at least April 10, 2002. *See* Infringement Contentions at 4. Plaintiff offers no contentions or evidence in its Infringement Contentions demonstrating that the alleged inventions claimed in the Asserted Claims were invented earlier than April 10, 2002. Thus, the Asserted Patents are not entitled to any date of invention any earlier than April 10, 2002.

B. Prior Art for the Asserted Patents

Subject to its reservation of rights, Google identifies below (in Tables 1, 2, and 3) each item of prior art that anticipates or renders obvious one or more of the Asserted Claims. Table 1 provides the identity of each prior art patent publication by its number, filing or priority date, and date of issuance or publication. Table 2 provides the identity of each non-patent prior art publication including, where possible, its title, date of publication, author, and publisher. Table 3 provides the identity of each system or product that was in public use, on sale, or otherwise available to the public before the effective filing dates of the claims of all of the Asserted Patents, including (where possible): the name of the item; the identity of the person or entity that made the use or sale or that made the information known; and date the system or product was in public use, on sale, or otherwise available to the public. In addition to the systems or products listed in Table

3, Google also relies on the systems and products discussed, disclosed, or referred to the prior art references listed in Tables 1 and 2. Tables 1, 2, and 3 further include references that may be relied upon to show the state of the art at the time and/or inherency regardless of whether the references themselves qualify as prior art. Google reserves the right to rely on each reference with respect to any and all of the Asserted Patents.

Prior-art patents or publications included in these Contentions may be related (such as a divisional, continuation, continuation-in-part, parent, or child) to earlier or later-filed patents or publications, may have counterparts filed in other jurisdictions, or may incorporate (or be incorporated by) other patents or publications by reference. The listed patents or publications are intended to be representative of these other patents or publications to the extent they exist. Google accordingly reserves the right to modify, amend, or supplement these Contentions with these related patents or publications, as well as other prior art references, upon further investigation. Additionally, any reference in these Contentions, including the appendices and exhibits thereto, to a specific subsection or subsections of 35 U.S.C. § 102, is merely exemplary, and Google expressly reserves the right to rely on additional or other sections of 35 U.S.C. § 102, as appropriate. If Plaintiff asserts that one or more of these references or systems fails to disclose one or more elements of a claim, Google reserves the right to also use those references to invalidate the claim under 35 U.S.C. § 103.

As noted above, Google incorporates by reference all prior art identified in the Related Cases. Google also incorporates by reference all prior art identified in any other post-issuance review by the U.S. Patent and Trademark Office of any Asserted Patent or patent owned by Plaintiff and covering a subject matter that overlaps in whole or in part with the Asserted Patents.

Discovery has yet to commence, and Google expects relevant discovery to be obtained from Plaintiff and third parties. Google's prior art investigation, therefore, is not yet complete. As a result, Google reserves the right to present additional items of prior art under 35 U.S.C. § 102 or § 103 located through discovery. Google specifically reserves the right to supplement these Invalidity Contentions with information obtained through discovery of Plaintiff and third parties.

1. Table 1: Prior Art Patents / Patent Publications²

Patent / Application	Filing Date	Publication / Issue Date	Short Name	Starting Bates Number
US20020161521	1/30/2001	10/31/2002	Abe 521	GOOG-BLUESTONE-PA-00000001
US6658352	1/30/2001	12/2/2003	Abe 352	GOOG-BLUESTONE-PA-00000012
US6356836	6/12/1998	3/12/2002	Adolph 836	GOOG-BLUESTONE-PA-00000023
WO1998057125A1	6/12/1998	12/17/1998	Adolph 125	GOOG-BLUESTONE-PA-00000041
US20030187573	5/16/2001	10/2/2003	Agnew 573	GOOG-BLUESTONE-PA-00000091
US6950745	5/16/2001	9/27/2005	Agnew 745	GOOG-BLUESTONE-PA-00000108
US6185426	11/20/1997	02/06/2001	Alperovich 426	GOOG-BLUESTONE-PA-00000125
US20080220747	3/8/2007	09/11/2008	Ashkenazi 747	GOOG-BLUESTONE-PA-00000133
US8285245	1/8/2009	10/09/2012	Ashley 245	GOOG-BLUESTONE-PA-00000152
JPH08226823A	11/2/1995	9/3/1996	Ayanoglu 823	GOOG-BLUESTONE-PA-00000201
US6756913	11/1/1999	6/29/2004	Ayed 913	GOOG-BLUESTONE-PA-00000208
US20060019724	9/23/2005	01/26/2006	Bahl 724	GOOG-BLUESTONE-PA-00000219
US20070004461	6/30/2005	01/04/2007	Bathina 461	GOOG-BLUESTONE-PA-00000232
US6232917	11/19/1998	5/15/2001	Baumer 917	GOOG-BLUESTONE-PA-00000246
US6188957	10/4/1999	02/13/2001	Bechtolsheim 957	GOOG-BLUESTONE-PA-00000257
US6208934	1/19/1999	03/27/2001	Bechtolsheim 934	GOOG-BLUESTONE-PA-00000283
US6405128	12/20/1999	6/11/2002	Bechtolsheim 128	GOOG-BLUESTONE-PA-00000307
US6735515	6/10/2002	05/11/2004	Bechtolsheim 515	GOOG-BLUESTONE-PA-00000347
US6459782	11/10/1999	10/01/2002	Bedrosian 782	GOOG-BLUESTONE-PA-00000385
US5543789	6/24/1994	08/06/1996	Behr 789	GOOG-BLUESTONE-PA-00000410
US6563824	4/20/1999	05/13/2003	Bhatia 824	GOOG-BLUESTONE-PA-00000424
US6182227	6/22/1998	01/30/2001	Blair 227	GOOG-BLUESTONE-PA-00000448

² Google may rely on earlier priority dates claimed by these patent publications, including to establish that the patent publication is prior art under pre-AIA 35 U.S.C. § 102(e).

Patent / Application	Filing Date	Publication / Issue Date	Short Name	Starting Bates Number
US5168451	2/28/1991	12/1/1992	Bolger 451	GOOG-BLUESTONE-PA-00000457
WO1998054682A1	5/29/1998	12/3/1998	Booth 682	GOOG-BLUESTONE-PA-00000472
US20010054036	3/23/2001	12/20/2001	Bouve 036	GOOG-BLUESTONE-PA-00000578
US7653544	8/8/2003	01/26/2010	Bradley 544	GOOG-BLUESTONE-PA-00000603
US20080129475	11/15/2007	06/05/2008	Breed 475	GOOG-BLUESTONE-PA-00000613
US6539080	7/14/1998	03/25/2003	Bruce 080	GOOG-BLUESTONE-PA-00000757
US20050125148	12/8/2003	06/09/2005	Buer 148	GOOG-BLUESTONE-PA-00000786
US20020087262	1/3/2001	07/04/2002	Bullock 262	GOOG-BLUESTONE-PA-00000798
US20020156572	4/23/2001	10/24/2002	Bullock 572	GOOG-BLUESTONE-PA-00000815
US6421602	1/3/2001	07/16/2002	Bullock 602	GOOG-BLUESTONE-PA-00000828
US6526349	4/23/2001	2/25/2003	Bullock 349	GOOG-BLUESTONE-PA-00000845
US20030032448	4/30/2002	02/13/2003	Bulthuis 448	GOOG-BLUESTONE-PA-00000858
US6728630	3/7/2002	4/27/2004	Burt 630	GOOG-BLUESTONE-PA-00000871
US20040008225	7/11/2002	01/15/2004	Campbell 225	GOOG-BLUESTONE-PA-00000882
US6353664	12/1/1997	03/05/2002	Cannon 664	GOOG-BLUESTONE-PA-00000931
US6466788	12/21/1998	10/15/2002	Carlsson 788	GOOG-BLUESTONE-PA-00000940
US9378511	7/15/2009	06/28/2016	Chafle 511	GOOG-BLUESTONE-PA-00000949
US2002152023	4/12/2001	10/17/2002	Chen 023	GOOG-BLUESTONE-PA-00000963
US6681179	2/15/2002	1/20/2004	Chen 179	GOOG-BLUESTONE-PA-00000972
US6980905	4/12/2001	12/27/2005	Chen 905	GOOG-BLUESTONE-PA-00000983
US6456854	5/8/2000	9/24/2002	Chern 854	GOOG-BLUESTONE-PA-00000991
US6675093	12/21/2001	1/6/2004	Childs 093	GOOG-BLUESTONE-PA-00001003
US7142205	2/28/2001	11/28/2006	Chithambaram 205	GOOG-BLUESTONE-PA-00001026
US20020128773	3/9/2001	09/12/2002	Chowanic 773	GOOG-BLUESTONE-PA-00001051
US20060129691	7/26/2005	6/15/2006	Coffee 691	GOOG-BLUESTONE-PA-00001056
WO0113069A1	8/11/2000	2/22/2001	Collier 069	GOOG-BLUESTONE-PA-00001230
US7142196	7/31/2000	11/28/2006	Connor 196	GOOG-BLUESTONE-PA-00001272
US20050062636	9/19/2003	03/24/2005	Conway 636	GOOG-BLUESTONE-PA-00001289
US6621423	9/6/2000	09/16/2003	Cooper 423	GOOG-BLUESTONE-PA-00001303
US20070032244	8/8/2005	02/08/2007	Counts 244	GOOG-BLUESTONE-PA-00001319
US20020177950	5/24/2001	11/28/2002	Davies 950	GOOG-BLUESTONE-PA-00001340
US6144338	3/17/1998	11/7/2000	Davies 338	GOOG-BLUESTONE-PA-00001370
US6615135	5/24/2001	9/2/2003	Davies 135	GOOG-BLUESTONE-PA-00001391
US20130095859	9/14/2012	4/18/2013	De Vries 859	GOOG-BLUESTONE-PA-00001420

Patent / Application	Filing Date	Publication / Issue Date	Short Name	Starting Bates Number
US8682302	9/14/2012	3/25/2014	De Vries 302	GOOG-BLUESTONE-PA-00001441
CA2280677A1	8/25/1999	2/29/2000	DeLorme 677	GOOG-BLUESTONE-PA-00001462
US5802492	6/11/1996	9/1/1998	DeLorme 492	GOOG-BLUESTONE-PA-00001621
US5948040	2/6/1997	09/07/1999	DeLorme 040	GOOG-BLUESTONE-PA-00001684
US6321158	8/31/1998	11/20/2001	DeLorme 158	GOOG-BLUESTONE-PA-00001744
US20010037174	4/4/2001	11/1/2001	Dickerson 174	GOOG-BLUESTONE-PA-00001836
US6697730	4/4/2001	2/24/2004	Dickerson 730	GOOG-BLUESTONE-PA-00001861
US20050032528	9/10/2004	2/10/2005	Dowling 528	GOOG-BLUESTONE-PA-00001883
US6983139	9/10/2004	1/3/2006	Dowling 139	GOOG-BLUESTONE-PA-00001905
US6707421	2/18/1999	3/16/2004	Drury 421	GOOG-BLUESTONE-PA-00001929
WO2000022593A1	2/18/1999	4/20/2000	Drury 593	GOOG-BLUESTONE-PA-00001987
US10641861	2/28/2011	5/5/2020	Dupray 861	GOOG-BLUESTONE-PA-00002139
US20110244887	8/23/2010	10/6/2011	Dupray 887	GOOG-BLUESTONE-PA-00002245
US20120058775	2/28/2011	3/8/2012	Dupray 775	GOOG-BLUESTONE-PA-00002338
US8994591	8/23/2010	3/31/2015	Dupray 591	GOOG-BLUESTONE-PA-00002434
US6381535	3/20/1998	4/30/2002	Durocher 535	GOOG-BLUESTONE-PA-00002578
WO1998045823A1	3/20/1998	10/15/1998	Durocher 823	GOOG-BLUESTONE-PA-00002592
US6775371	7/22/2002	08/10/2004	Elsey 371	GOOG-BLUESTONE-PA-00002627
US5727057	12/27/1994	03/10/1998	Emery 057	GOOG-BLUESTONE-PA-00002661
US2003191580	4/7/2003	10/9/2003	Endo 580	GOOG-BLUESTONE-PA-00002684
US2004204829	3/19/2002	10/14/2004	Endo 829	GOOG-BLUESTONE-PA-00002738
US2005234639	6/13/2005	10/20/2005	Endo 639	GOOG-BLUESTONE-PA-00002794
US6873905	3/19/2002	3/29/2005	Endo 905	GOOG-BLUESTONE-PA-00002847
US6978208	4/7/2003	12/20/2005	Endo 208	GOOG-BLUESTONE-PA-00002899
US7233862	6/13/2005	6/19/2007	Endo 862	GOOG-BLUESTONE-PA-00002952
US5798733	1/21/1997	08/25/1998	Ethridge 733	GOOG-BLUESTONE-PA-00003005
US20030035518	8/16/2001	02/20/2003	Fan 518	GOOG-BLUESTONE-PA-00003032
US2003009277	7/3/2001	1/9/2003	Fan 277	GOOG-BLUESTONE-PA-00003046
US5959577	8/28/1997	09/28/1999	Fan 577	GOOG-BLUESTONE-PA-00003065
US6529159	3/8/2000	03/04/2003	Fan 159	GOOG-BLUESTONE-PA-00003083
US6594576	7/3/2001	7/15/2003	Fan 576	GOOG-BLUESTONE-PA-00003102
US5801700	1/19/1996	09/01/1998	Ferguson 700	GOOG-BLUESTONE-PA-00003121
US6441752	12/30/2000	08/27/2002	Fomukong 752	GOOG-BLUESTONE-PA-00003132
US8332402	1/25/2008	12/11/2012	Forstall 402	GOOG-BLUESTONE-PA-00003147

Patent / Application	Filing Date	Publication / Issue Date	Short Name	Starting Bates Number
US20020119789	2/23/2001	8/29/2002	Friedman 789	GOOG-BLUESTONE-PA-00003174
US6714791	2/23/2001	3/30/2004	Friedman 791	GOOG-BLUESTONE-PA-00003195
US6674849	7/28/2000	01/06/2004	Froeberg 849	GOOG-BLUESTONE-PA-00003216
US5812959	2/27/1996	9/22/1998	Froeburg 959	GOOG-BLUESTONE-PA-00003227
JPH10160491A	12/3/1996	6/19/1998	Fujiwara 491	GOOG-BLUESTONE-PA-00003244
US7142163	8/30/2004	11/28/2006	Fukano 163	GOOG-BLUESTONE-PA-00003265
US6204844	10/8/1999	03/20/2001	Fumarolo 844	GOOG-BLUESTONE-PA-00003277
US6366782	10/8/1999	04/02/2002	Fumarolo 782	GOOG-BLUESTONE-PA-00003305
US20060268120	5/16/2006	11/30/2006	Funakura 120	GOOG-BLUESTONE-PA-00003325
US7751614	5/16/2006	07/06/2010	Funakura 614	GOOG-BLUESTONE-PA-00003351
JPH0554295A	8/21/1991	3/5/1993	Furuya 295	GOOG-BLUESTONE-PA-00003375
US6072409	1/28/1998	06/06/2000	Fushimi 409	GOOG-BLUESTONE-PA-00003385
JPH0668389A	8/19/1992	3/11/1994	Futamura 389	GOOG-BLUESTONE-PA-00003413
US6411897	12/20/2001	06/25/2002	Gaspard 897	GOOG-BLUESTONE-PA-00003424
US5610821	11/18/1994	03/11/1997	Gazis 821	GOOG-BLUESTONE-PA-00003441
US6732077	5/28/1996	5/4/2004	Gilbert 077	GOOG-BLUESTONE-PA-00003453
US5933100	12/27/1995	08/03/1999	Golding 100	GOOG-BLUESTONE-PA-00003478
US5684951	3/20/1996	11/04/1997	Goldman 951	GOOG-BLUESTONE-PA-00003486
CN1434946A	7/13/2001	8/6/2003	Gotou 946	GOOG-BLUESTONE-PA-00003506
US2001044693	7/29/1998	11/22/2001	Gotou 693	GOOG-BLUESTONE-PA-00003558
US6721716	9/29/2000	04/13/2004	Gross 716	GOOG-BLUESTONE-PA-00003570
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US7167187	3/29/2001	01/23/2007	Scott 187	GOOG-BLUESTONE-PA-00010632
JPH1194578A	9/17/1997	4/9/1999	Sekino 578	GOOG-BLUESTONE-PA-00010646
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US8019581	1/2/2008	9/13/2011	Sheha 581	GOOG-BLUESTONE-PA-00010841
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US6658353	11/6/2001	12/2/2003	Shimizu 353	GOOG-BLUESTONE-PA-00010876
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US20030061211	11/1/2002	03/27/2003	Shultz 211	GOOG-BLUESTONE-PA-00010908
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US6084951	4/23/1997	07/04/2000	Smith 951	GOOG-BLUESTONE-PA-00010945
US6226367	4/23/1997	05/01/2001	Smith 367	GOOG-BLUESTONE-PA-00010975
US6314365	1/18/2000	11/6/2001	Smith 365	GOOG-BLUESTONE-PA-00011006
US6603405	12/5/2000	08/05/2003	Smith 405	GOOG-BLUESTONE-PA-00011020
US7103476	5/28/2004	9/5/2006	Smith 476	GOOG-BLUESTONE-PA-00011034
US20010016849	2/20/2001	08/23/2001	Squibbs 849	GOOG-BLUESTONE-PA-00011046
US6049718	7/29/1997	04/11/2000	Stewart 718	GOOG-BLUESTONE-PA-00011069
US6643516	3/6/2000	11/04/2003	Stewart 516	GOOG-BLUESTONE-PA-00011081
US20100042592	8/10/2009	02/18/2010	Stolz 592	GOOG-BLUESTONE-PA-00011092
US5774824	8/24/1995	6/30/1998	Streit 824	GOOG-BLUESTONE-PA-00011136
US20160018969	7/21/2014	01/21/2016	Sundarraman 969	GOOG-BLUESTONE-PA-00011149
US6885937	12/10/1998	4/26/2005	Suranyi 937	GOOG-BLUESTONE-PA-00011177
JP2001141492A	11/18/1999	5/25/2001	Tada 492	GOOG-BLUESTONE-PA-00011199

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US6819919	10/18/2000	11/16/2004	Tanaka 919	GOOG-BLUESTONE-PA-00011231
US5911775	10/8/1996	06/15/1999	Tanimoto 775	GOOG-BLUESTONE-PA-00011243
US20050242168	4/29/2004	11/03/2005	Tesavis 168	GOOG-BLUESTONE-PA-00011251
US20170227367	2/9/2016	08/10/2017	Thangaraj 367	GOOG-BLUESTONE-PA-00011261
GB2305568A	9/25/1995	4/9/1997	Thompson 568	GOOG-BLUESTONE-PA-00011291
US5945919	5/30/1996	8/31/1999	Trask 919	GOOG-BLUESTONE-PA-00011327
US7786876	8/3/2005	08/31/2010	Troxler 876	GOOG-BLUESTONE-PA-00011342
US20100004993	7/2/2009	01/07/2010	Troy 993	GOOG-BLUESTONE-PA-00011378
JP3116376B2	6/5/1992	12/11/2000	Tsuiki 376	GOOG-BLUESTONE-PA-00011395
US5467276	6/5/1992	11/14/1995	Tsuyiki 276	GOOG-BLUESTONE-PA-00011402
US5675492	5/17/1995	10/7/1997	Tsuyuki 492	GOOG-BLUESTONE-PA-00011412
GB2352292A	6/13/2000	1/24/2001	Turner 292	GOOG-BLUESTONE-PA-00011422
US20020184200	10/3/2001	12/5/2002	Ueda 200	GOOG-BLUESTONE-PA-00011449
US7003288	10/3/2001	2/21/2006	Ueda 288	GOOG-BLUESTONE-PA-00011495
WO2002031441A1	10/3/2001	4/18/2002	Ueda 441	GOOG-BLUESTONE-PA-00011537
JPH10319840A	5/19/1997	12/4/1998	Ura 840	GOOG-BLUESTONE-PA-00011625
US20090105944	10/21/2008	04/23/2009	Urano 944	GOOG-BLUESTONE-PA-00011634
US6721655	3/14/2001	4/13/2004	Utsumi 655	GOOG-BLUESTONE-PA-00011669
US6415224	2/6/2001	07/02/2002	Wako 224	GOOG-BLUESTONE-PA-00011680
US6816782	10/10/2002	11/09/2004	Walters 782	GOOG-BLUESTONE-PA-00011704
US5793310	2/3/1995	8/11/1998	Watanabe 310	GOOG-BLUESTONE-PA-00011725
US6169516	1/20/1998	01/02/2001	Watanabe 516	GOOG-BLUESTONE-PA-00011809
US4092718	7/18/1975	5/30/1978	Wendt 718	GOOG-BLUESTONE-PA-00011878
US20120166074	12/23/2010	06/28/2012	Weng 074	GOOG-BLUESTONE-PA-00011889
US20090113346	10/30/2007	04/30/2009	Wickramasuriya 346	GOOG-BLUESTONE-PA-00011913
US5721678	3/10/1994	02/24/1998	Widl 678	GOOG-BLUESTONE-PA-00011931
US6125278	7/27/1998	09/26/2000	Wieczorek 278	GOOG-BLUESTONE-PA-00011938
US6801850	10/29/2001	10/05/2004	Wolfson 850	GOOG-BLUESTONE-PA-00011948
US6895329	10/29/2001	5/17/2005	Wolfson 329	GOOG-BLUESTONE-PA-00011975
US6965827	6/21/2004	11/15/2005	Wolfson 827	GOOG-BLUESTONE-PA-00012003
US6401027	5/24/1999	06/04/2002	Xu 027	GOOG-BLUESTONE-PA-00012033
US6208935	4/29/1999	03/27/2001	Yamada 935	GOOG-BLUESTONE-PA-00012051
US20040186880	10/16/2003	09/23/2004	Yamamoto 880	GOOG-BLUESTONE-PA-00012071
US20020052689	10/29/2001	5/2/2002	Yamashita 689	GOOG-BLUESTONE-PA-00012106

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US20020165668	6/28/2002	11/7/2002	Yamashita 668	GOOG-BLUESTONE-PA-00012159
US6466869	10/29/2001	10/15/2002	Yamashita 869	GOOG-BLUESTONE-PA-00012211
US6505120	6/28/2002	1/7/2003	Yamashita 120	GOOG-BLUESTONE-PA-00012263
EP0345818A2	6/12/1989	12/13/1989	Yoneyama 818	GOOG-BLUESTONE-PA-00012313
US5187810	11/27/1991	2/16/1993	Yoneyama 810	GOOG-BLUESTONE-PA-00012335
JPH11295092A	4/6/1998	10/29/1999	Yoshimura 092	GOOG-BLUESTONE-PA-00012357
US2002077122	11/30/2001	6/20/2002	Yule 122	GOOG-BLUESTONE-PA-00012362
US20040068364	10/2/2003	4/8/2004	Zhao 364	GOOG-BLUESTONE-PA-00012375
US6973384	10/2/2003	12/6/2005	Zhao 384	GOOG-BLUESTONE-PA-00012419
US20030149526	10/29/2001	8/7/2003	Zhou 526	GOOG-BLUESTONE-PA-00012464

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Datta et al., Applicability of Digital Data Communication Features in Public Transit Systems: Executive Summary (Sept. 1978).	1978	1978 Datta Applicability of Digital Data Communication	GOOG-BLUESTONE-PA-00012558
Honda Motor Co., Ltd., Honda Develops Driving Support Device, Honda Electro Gyroator, World's First Practical Application of a Gyro for Automobiles (Aug. 24, 1981).	1981	1981 Honda, Honda Develops Driving Support Device, Honda Electro Gyroator	GOOG-BLUESTONE-PA-00012584
Toyota Motor Co. & Toyota Motor Sales Co., Toyota Celica Undergoes Full Model Change: An Outstanding New World-Class Specialty Car: The Summation of the Most Advanced Automotive Technology, No. 14-81 (July 2, 1981).	1981	1981 Toyota, Toyota Celica Undergoes Full Model Change	GOOG-BLUESTONE-PA-00012587
McDaniel, An Evaluation of a Honda "Electro Gyro-Cator" Land Navigation System, Technical Report RG-83-16, U.S. Army Missile Laboratory, Redstone Arsenal (Aug. 1983).	1983	1983 McDaniel, An Evaluation of a Honda Electro Gyro-Cator Land Navigation System	GOOG-BLUESTONE-PA-00012596

³ Google may rely on a reference published after the priority date of the Asserted Patents to the extent the reference serves as evidence of the structure, ability, features, functionality, availability, and/or use of a prior art product or system listed in Table 3 below that was in public use, on sale, offered for sale, or otherwise known to others or available to the public (including in the United States) prior to the priority date of the Asserted Patents.

Description	Publication Date³	Short Name	Starting Bates Number
1986: COMPACT DISCS - The future of CAR NAVIGATION? Top Gear Retro Transport BBC Archive, YouTube, https://www.youtube.com/watch?v=qBCPA1GTnK0 (last visited May 5, 2026).	1986	1986 BBC Archive, Compact Discs - The Future of Car Navigation - Top Gear	GOOG-BLUESTONE-PA-00012676
1986: Satellite Navigation for Cars of the Future Tomorrow's World Retro Tech BBC Archive, YouTube, https://www.youtube.com/watch?v=EpA8Lf8Gt1Q (last visited May 5, 2026).	1986	1986 BBC Archive, Satellite Navigation for Cars of the Future - Tomorrow's World	GOOG-BLUESTONE-PA-00012677
Recordata West, Inc., Advertisement, Journal of Emergency Medical Services (Sept. 1987).	1987	1987 Recordata West, Advertisement	GOOG-BLUESTONE-PA-00012696
Tom Hunter & Javad Ashjaee, Land Navigation and Fleet Management With GPS, Loran, and Dead Reckoning Sensors, Proceedings of the International Technical Meeting of the Satellite Division of The Institute of Navigation (ION GPS 1988)	1988	1988 Hunter, Land Navigation and Fleet Management With GPS, Loran, and Dead Reckoning Sensors	GOOG-BLUESTONE-PA-00012699
Krakiwsky et al., A Kalman Filter for Integrating Dead Reckoning, Map Matching and GPS Positioning, in Proceedings of the IEEE Position Location and Navigation Symposium (PLANS '88) 39 (1988).	1988	1988 Krakiwsky, A Kalman Filter for Integrating Dead Reckoning, Map Matching and GPS Positioning	GOOG-BLUESTONE-PA-00012704
Magellan Sys. Corp., First Affordable GPS Navigation Product Introduced to the Marine Market (Sept. 29, 1988).	1988	1988 Magellan, First Affordable GPS Navigation Product Introduced to the Marine Market	GOOG-BLUESTONE-PA-00012712
Davies et al., Standards for the Radio Data System – Traffic Message Channel, SAE Paper No. 891684, in SP-791, Vehicles/Highway Automation: Technology and Policy Issues, Soc'y of Auto. Eng'rs, Future Transportation Technology Conference and Exposition (Aug. 1989).	1989	1989 Davies, Standards for the Radio Data System - Traffic Message Channel	GOOG-BLUESTONE-PA-00012730
James Raymond Davis, Back Seat Driver: Voice Assisted Automobile Navigation, Ph.D. dissertation, Massachusetts Institute of Technology (1989).	1989	1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation	GOOG-BLUESTONE-PA-00012746
Davis et al., The Back Seat Driver: Real Time Spoken Driving Instructions, in Proceedings of the IEEE Vehicle Navigation and Information Systems Conference 146 (1989).	1989	1989 Davis, The Back Seat Driver - Real Time Spoken Driving Instructions	GOOG-BLUESTONE-PA-00012911

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Dan Perlstein, Automatic Vehicle Location Systems: A Tool for Computer Aided Despatch Systems of the Future, presented at the First Vehicle Navigation and Information Systems Conference (VNIS '89) (Sept. 1989).	1989	1989 Perlstein, Automatic Vehicle Location Systems	GOOG-BLUESTONE-PA-00012916
Saito et al., Automobile Navigation System Using Beacon Information, Conference Record of Papers Presented at the First Vehicle Navigation and Information Systems Conference (VNIS '89) (1989).	1989	1989 Saito, Automobile Navigation System Using Beacon Information	GOOG-BLUESTONE-PA-00012924
Christopher M. Schmandt & James Raymond Davis, Synthetic Speech for Real Time Direction-Giving, 35 IEEE Transactions on Consumer Electronics 649 (Aug. 1989).	1989	1989 Schmandt, Synthetic Speech for Real Time Direction-Giving	GOOG-BLUESTONE-PA-00012931
Magellan Systems Corporation, Magellan NAV 1000 Plus User Guide (1990).	1990	1990 Magellan, Magellan NAV 1000 Plus - User Guide	GOOG-BLUESTONE-PA-00012943
Prasad, Intelligent Vehicle/Highway Systems (IVHS): EDS Role and Strategy White Paper, First Ed., EDS Technical Systems Development (July 1990).	1990	1990 Prasad, Intelligent Vehicle Highway Systems	GOOG-BLUESTONE-PA-00013094
Tanaka et al., Navigation System with Map-Matching Method, 14 Inst. of Image Info. & Television Eng'rs Tech. Rep., No. 15, at 17 (Mar. 1990).	1990	1990 Tanaka, Navigation System with Map-Matching Method	GOOG-BLUESTONE-PA-00013131
Davies et al., Field Trials and Evaluations of Radio Data System Traffic Message Channel, 1324 Transp. Res. Rec. 1 (1991).	1991	1991 Davies, Field Trials and Evaluations of Radio Data System Traffic Message Channel	GOOG-BLUESTONE-PA-00013137
Ishikawa et al., Map Navigation Software of the Electro-Multivision of the '91 Toyota Soarer, SAE Paper No. 912790, in Proceedings of the Vehicle Navigation and Information Systems Conference (VNIS '91) 462 (1991).	1991	1991 Ishikawa, Map Navigation Software of the Electro-Multivision of the '91 Toyota Soarer	GOOG-BLUESTONE-PA-00013144
Krage, The TravTek Driver Information System, SAE Paper No. 912820, in Proceedings of the Vehicle Navigation and Information Systems Conference (VNIS '91)	1991	1991 Krage, The TravTek Driver Information System	GOOG-BLUESTONE-PA-00013156
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David Watling & Tom van Vuren, The Modelling of Dynamic Route Guidance Systems, Institute of Transport Studies, University of Leeds, Working Paper 341 (July 1991).	1991	1991 Watling, The Modelling of Dynamic Route Guidance Systems	GOOG-BLUESTONE-PA-00013193
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Fleischman et al., A Preliminary Account of TravTek Route Guidance Use by Rental and Local Drivers, in Proceedings of the IEEE-IEE Vehicle Navigation and Information Systems Conference (VNIS '93) 120 (1993).	1993	1993 Fleischman, A Preliminary Account of TravTek Route Guidance Use by Rental and Local Drivers	GOOG-BLUESTONE-PA-00013367
Garmin, GPS 95 AVD Personal Navigator: Owner's Manual (June 1993).	1993	1993 Garmin, GPS 95 AVD Personal Navigator - Owner's Manual	GOOG-BLUESTONE-PA-00013373
Garmin, GPS 95 STD Personal Navigator: Owner's Manual (July 1993).	1993	1993 Garmin, GPS 95 STD Personal Navigator - Owner's Manual	GOOG-BLUESTONE-PA-00013496
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Description	Publication Date³	Short Name	Starting Bates Number
Trimble Navigation Ltd., GPS Pathfinder Systems User Guide, Version 2.00, Revision A (Apr. 2004).	2004	2004 Trimble GPS Pathfinder Systems v.20 User Guide	GOOG-BLUESTONE-PA-00026011
Press Release, Mercedes-Benz, 120 Years of Steering Wheel Development at Mercedes-Benz: From a Simple Tiller to a Capacitive Command Center (May 18, 2020), https://media.mbusa.com/releases/release-e1e7fcc167804a1c32dd1ec08e190515-120-years-of-steering-wheel-development-at-mercedes-benz .	2020	2020 Mercedes-Benz, 120 years of steering wheel development at Mercedes-Benz	GOOG-BLUESTONE-PA-00026161
Sebastian, Mitsubishi Multi Communication System Repair Help: Learn How to Fix It Yourself, iFixit (June 23, 2026), https://www.ifixit.com/Device/Mitsubishi_MCS .	2026	2026 iFixit, Mitsubishi Multi Communication System Repair Help	GOOG-BLUESTONE-PA-00026220
J-SH04, Wikipedia (last visited June 23, 2026), https://en.wikipedia.org/w/index.php?title=J-SH04&oldid=1360795647 .	2026	2026 Wikipedia, J-SH04	GOOG-BLUESTONE-PA-00026249

3. Table 3: Prior Art Products and Systems⁴

Developer, Provider, or Manufacturer⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public⁶
Alpine Electronics, Inc.	NVE-N871A DVD Car Navigation System (and related products, services, or systems)	NVE-N871A	2001

⁴ Documents and things relied on as evidence of the prior art products and systems are included in Table 2 above. Any citation to one or more of those prior art references, or other prior art references regarding any method or system, should be construed to constitute not only a citation to the prior art reference itself but also a reference to the system itself.

⁵ Including all relevant affiliates and/or successors in interest. In addition, in some cases, the prior art systems were combined and used together with software components developed by others, as noted in the relevant charts and/or supporting documents.

⁶ These products were in public use, on sale, offered for sale, or otherwise known to the public at least as of this date. Google reserves the right to revise these dates or rely on subsequent versions of the products in light of additional discovery from the parties or third parties.

Developer, Provider, or Manufacturer⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public⁶
Benefon Oyj	Benefon Esc! (and related products, services, or systems)	Esc!	1999
Blaupunkt-Werke GmbH / Robert Bosch Corp.	TravelPilot (and related products, services, or systems, including the TravelPilot RNS and DX series systems)	TravelPilot	1989
BMW / Siemens VDO	BMW Navigation System (and related products, services, or systems)	BMW Navigation	2001
CAA AG	CAA CarPC (and related products, services, or systems)	CarPC	2001
CABIT	Cabit Online Service Bureau (OSB) (and related products, services, or systems)	Cabit OSB	2001
Cadec	Mobius TTS Onboard Computer (and related products, services, or systems)	Mobius TTS	2001
Cadillac	Cadillac Navigation System (and related products, services, or systems, including in Cadillac Seville and DeVille models)	Cadillac Navigation	1999
Clarion	AutoPC 310C (and related products, services, or systems)	AutoPC 310C	1998
Clarion	Joyride (and related products, services, or systems)	Joyride	2002
DeLorme	3-D TopoQuads (and related products, services, or systems)	3-D TopoQuads	1999
DeLorme / American Automobile Association (AAA)	AAA Map 'n' Go (and related products, services, or systems)	Map 'n' Go	1994
DeLorme	Street Atlas USA (and related products, services, or systems)	Street Atlas USA	1991
DeLorme	Topo USA (and related products, services, or systems)	Topo USA	1997
DeLorme	XMap (and related products, services, or systems, including CD products, Palm OS and Pocket PC products)	Xmap	2001
Etak, Inc.	Etak Navigator (and related products, services, or systems)	Etak Navigator	1985
Garmin	GPS 100 (and related products, services, or systems)	Garmin GPS 100	1990

Developer, Provider, or Manufacturer⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public⁶
Garmin	GPS 95 (and related products, services, or systems)	Garmin GPS 95	1993
Garmin	GPS II (and related products, services, or systems)	Garmin GPS II	1995
Garmin	GPS III (and related products, services, or systems)	Garmin GPS III	1998
Garmin	GPSMAP (and related products, services, or systems)	Garmin GPSMAP	1998
Garmin	StreetPilot (and related products, services, or systems)	StreetPilot	1998
Garmin	NavTalk (and related products, services, or systems)	NavTalk	1998
Garmin	eTrex (and related products, services, or systems)	eTrex	1999
Garmin	GPS V (and related products, services, or systems)	Garmin GPS V	1999
Garmin	NavTalk PILOT (and related products, services, or systems)	NavTalk PILOT	1999
Garmin	StreetPilot III (and related products, services, or systems)	StreetPilot III	2001
Garmin	Rino (and related products, services, or systems)	Rino	2001
Garmin	GPSMAP 76 (and related products, services, or systems)	Garmin GPSMAP 76	2001
General Motors (GM) / Oldsmobile	GuideStar (and related products, services, or systems)	GuideStar	1995
General Motors (GM) / Electronic Data Systems (EDS) / Hughes Electronics Corp.	OnStar (and related products, services, or systems)	OnStar	1997
General Motors (GM) / American Automobile Association (AAA) / Federal Highway Administration (FHWA) / Florida Department of Transportation (FDOT) / City of Orlando / Motorola / Magnavox / Avis	TravTek (and related products, services, or systems)	TravTek	1992
Honda	Honda Navigation System (and related products, services, or systems)	Honda Navigation	1997

Developer, Provider, or Manufacturer⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public⁶
Honda	Electro Gyro-Cator (and related products, services, or systems)	Electro Gyro-Cator	1981
Infiniti	Infiniti Navigation System (and related products, services, or systems)	Infiniti Navigation	1999
Jaguar	Jaguar Navigation System (and related products, services, or systems)	Jaguar Navigation	1999
Johnson Controls	Harmony Infotainment (and related products, services, or systems, including Harmony Generation I and Harmony Generation III)	Harmony Infotainment	2000
J-Phone / Sharp Corporation	J-Navi (and related products, services, or systems, including Sharp J-SH04)	J-Navi	2000
Kenwood	KNA-DV2100 (and related products, services, or systems, including Kenwood LZ-800W display)	KNA-DV2100	2000
Lexus	Lexus Navigation System (and related products, services, or systems)	Lexus Navigation	1998
Lowrance Electronics / Lowrance Avionics	AirMap (and related products, services, or systems)	AirMap	1996
Lowrance Electronics / Lowrance Avionics	AirMap 100 (and related products, services, or systems)	AirMap 100	1998
Lowrance Electronics / Lowrance Avionics	AirMap 300 (and related products, services, or systems)	AirMap 300	1998
Lowrance Electronics / Lowrance Marine & Fishing	GlobalMap 2000 (and related products, services, or systems)	GlobalMap 2000	1995
Lowrance Electronics / Lowrance Marine & Fishing	GlobalMap Sport (and related products, services, or systems)	GlobalMap Sport	1996
Magellan Navigation	Magellan GPS Receivers (and related products, services, or systems, including NAV 100, NAV 1000, NAV 1000M, NAV 1000 Plus, NAV 1200XL, NAV 5000, NAV 5000DLX, NAV 5200DX, NAV 6000, NAV 6500, NAV 6510, GPS 2000, GPS 2000XL, GPS 3000, GPS 3000XL, GPS4000XL, GPS 300, GPS 310, GPS 315, GPS 320, GPS Pioneer, Trailblazer, Trailblazer XL, ColorTRAK, MAP 330, MAP 330M, MAP 410)	Magellan GPS	1989

Developer, Provider, or Manufacturer⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public⁶
Magellan Navigation / Hertz	Magellan Vehicle Navigation (and related products, services, or systems, including 750NAV, 750M, Hertz NeverLost, GPS Companion, RoadMate, PathMaster)	Magellan Vehicle Navigation	2001
Magellan Navigation	Meridian GPS Receivers (and related products, services, or systems, including Meridian Gold, Meridian Marine, Meridian Platinum)	Meridian	2001
Magellan Navigation	SporTrak GPS Receivers (and related products, services, or systems, including SporTrak, SporTrak Pro, SporTrak Map)	SporTrak	2002
Mercedes Benz	Cockpit Management and Data (COMAND) (and related products, services, or systems)	COMAND	1998
Microsoft / NextBase	Streets & Trips (and related products, services, or systems, including AutoRoute)	Streets & Trips	1988
Microsoft	Streets & Trips 2000 (and related products, services, or systems, including Pocket Streets)	Streets & Trips 2000	1999
MIT Media Laboratory	Back Seat Driver (and related products, services, or systems, including Pocket Streets)	Back Seat Driver	1989
Mitsubishi	Mitsubishi Multi Communication System (MMCS) (and related products, services, or systems)	MMCS	2001
Nissan	Pathfinder Navigation System (and related products, services, or systems)	Nissan Pathfinder Navigation	2001
PeopleNet	PeopleNet Wireless Fleet Solutions (and related products, services, or systems, including PeopleNet Metro)	PeopleNet Fleet	2001
Philips	CAR information and Navigation (CARiN) System (and related products, services, or systems, including CARiN 220/420, CARiN 522/520, BMW-Philips Navigation (Mk I, Mk II, Mk III), Land Rover-Philips Navigation (Range Rover P38), Holden-Philips Navigation (Commodore), Hyundai-Philips Navigation (Sonata))	CARiN	1996

Developer, Provider, or Manufacturer⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public⁶
Pioneer	AVIC-9DVD (and related products, services, or systems)	AVIC-9DVD	2001
PowerLOC Technologies	DesinAtor (and related products, services, or systems)	DesinAtor	2001
Pronounced Technologies	AudioNav AN221 (and related products, services, or systems)	AudioNav AN221	1999
Qualcomm / Eaton	FleetAdvisor (and related products, services, or systems)	FleetAdvisor	1997
Qualcomm	MVPc In-Vehicle Computer (and related products, services, or systems)	MVPc	2000
Qualcomm	OmniTRACS (and related products, services, or systems, including QTRACS)	OmniTRACS	1988
Rand McNally	TripLink (and related products, services, or systems, including Pocket TripLink)	TripLink	2001
Toyota	Electro-Multivision (and related products, services, or systems)	Electro-Multivision	1991
Toyota	NAVICOM (and related products, services, or systems)	NAVICOM	1981
TravRoute	CoPilot (and related products, services, or systems, including CoPilot 2000, CoPilot 2001, CoPilot 2002)	CoPilot	1997
Trimble	GPS Pathfinder (and related products, services, or systems)	GPS Pathfinder	1989
TruckScribers	MoniTrux (and related products, services, or systems)	MoniTrux	2000
Valde	Valde VehiclePC (and related products, services, or systems, including VPC-2000, SmarTruck)	VehiclePC	2001
Visteon	Information, Communication, Entertainment, Safety & Security System (ICES) (and related products, services, or systems)	ICES	1999
Visteon	NavMate (and related products, services, or systems)	NavMate	2001
Volvo	Road and Traffic Information (RTI) System (and related products, services, or systems)	Volvo RTI	1996

Developer, Provider, or Manufacturer ⁵	Product(s) and System(s)	Short Name	Date in Public Use, on Sale, or Otherwise Available to the Public ⁶
XATA Corporation	XATA Driver Information System (and related products, services, or systems)	XATA Driver Information System	1985

C. Admitted Prior Art

The Asserted Patents, in their file histories or specifications, contain statements admitting that certain claim limitations were already known in the art at the time of the purported invention or cite references as prior art. Such admissions (“admitted prior art”) “are binding on the patentee for purposes of a later inquiry into obviousness.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1362 (Fed. Cir. 2007); *see also Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570 (Fed. Cir. 1988) (same as to anticipation). Exemplary admissions are discussed below. Google reserves the right to rely on all admitted prior art for the Asserted Patents. References cited as admitted prior art in the Asserted Patents (or any patent or application related thereto) are incorporated herein by reference. All specification citations below are to the ’341 patent as a representative example, but the admissions therein bind Plaintiff on all Asserted Patents, as they share a common specification. For example, the Asserted Patents admit, expressly and/or implicitly, the following concepts as being known in the prior art:

- **“Computerized mapping software” / “mapping programs” / “GPS” / “personal navigation application”:** “Computerized mapping software” and “mapping programs” admittedly were “widespread” and “commonly used to automate tasks of calculating routes, viewing location-specific geographical areas for their spatial content, such as addresses, roadways, rivers, etc., and for the purpose of being used with Global

- Positioning System (GPS) devices for various applications, such as a personal navigation application,” (’341 patent 1:43-51);
- **“Mapping software programs”**: admittedly “apply to a wide variety of uses, such as personal navigation, telematics, thematic mapping, resource planning, routing, fleet tracking, safety dispatching (i.e., Police, Fire, and Rescue organizations), and a wide variety of specialized Geographic Information System (GIS) applications, all of which are well known to people skilled in the art.” (’341 patent 1:51-57);
 - **“Real-time communication networks”**: admittedly “provide the ability to transfer, in real-time, voice and data information from various mobile devices, such as wireless phones, telemetry devices, or the like, to a multitude of other devices, either mobile or stationary, all of which are well known to people that are skilled in the art.” (’341 patent 1:58-63);
 - **“GPS” and “wireless MODEM” communications**: “GPS devices that are connected to a wireless MODEM are able to transfer their position coordinates, such as latitude and longitude, wirelessly to a computer or server for later retrieval or real-time viewing of said information” (’341 patent 1:63-67); “[A] mobile device is attached to a positioning device, such as a GPS receiver, that has a positional error typically on the order of 2-15 meters.” (’341 patent 4:47-49);
 - **Dynamic Route Computation Using Map Data**: “Current applications that integrate or combine mapping, real-time communication capabilities, and position devices, for various computing devices are well known to people skilled in the art. These applications are referred to by various terminologies, including, but not limited to Automatic Vehicle Location (AVL), Location-Based Services (LBS), Fleet Tracking

Systems, etc., all of which are well known to people skilled in the art.” (’341 patent 1:67-2:8);

- **“AVL systems” / “sending location information ... at discrete time intervals to a computer for the viewing of said information” / “monitoring, or tracking, of real-time location information” / “breadcrumb trail”:** “Conventional systems, such as AVL systems, typically involve a positioning device connected to a wireless MODEM sending location information, amongst other telemetry information, at discrete time intervals to a computer for the viewing of said information. This monitoring, or tracking, of real-time location information or of location-history information is sometimes referred to as the breadcrumb trail or history information of the mobile device, since it illustrates the current and/or previous locations that the mobile device is or has been in space and time.” (’341 patent 2:9-18); “Conventional applications will sometimes associate the term ‘route’ with a breadcrumb trail that directly connects discrete points with straight lines For example, a route is typically defined as a road, course, or way for traveling from one place to another over a set of various defined paths, such as a route along a highway. True routing applications include a network of paths that are used in combination with destination points, where destination points can include both an origin and stop points, in order to determine a specific route along said network paths between each of the destination points. Conventional systems widely use this method of connecting direct lines between location updates for illustrating the breadcrumb trail path and direction between location updated points. Some conventional systems further illustrate the order of the location updates that the mobile device traveled by chronologically numbering each of the location updates or by

connecting a direct line from each point, or drawing an arrow at each point, with an arrow illustrating the mobile device's heading or pseudo heading.” (’341 patent 2:27-47); “having only the points displayed on the map, straight lines between the points, or arrows at the points indicating the heading of the device at that specific point” (’341 patent 15:8-11); “Illustrating a breadcrumb history with only points and/or direct lines” (’341 patent 16:5-10); “FIG. 11 illustrates a typical breadcrumb history trail. The trail consists of points 1101, 1102, 1103, 1104, 1105, 1106, 1107, and 1108, all in chronological order of the mobile devices path.” (’341 patent 16:5-10); “As people skilled in the art will appreciate, it is not necessary to compute an entire new route for the entire breadcrumb trail, but only the portion of the estimated route that needs to be calculated. As shown in FIG. 14, the original estimated route 1201 does not need to be recalculated, but only the new additional estimated route segment 1401 needs to be calculated.” (’341 patent 16:27-31);

- **“preferences” / “origin and destination information” / “map data information” / “mobile device information” / “route preferences”:** “Predictive routing provides the user or application with estimated predicted route calculation information between location updates based on various preferences, such as origin and destination information, map data information (e.g., road speed limits, one-way information, etc.), mobile device information (i.e., heading, speed, vehicle type, etc.).” (’341 patent 3:37-43); “[R]oute preferences, when using map data that consists of road networks for motor vehicles, includes various types of categories, such as Driving Speeds, Route Optimization Goals, Road Preferences, etc. For example, Driving Speeds illustrates average speeds the vehicle travels over various types of roads, such as Interstate

Highways Average Speed, Other Highways Average Speed, Arterial Roads Average Speed, Surface Streets Average Speed, or the like” (’341 patent 4:14-21); “[A]n estimated route is calculated based on a set of user route preferences (e.g., shortest time, etc.).” (’341 patent 7:54-56); “These ordering calculation metrics may include preferences such as shortest time, shortest distance, most use of highways, most use of surface streets, least amount of traffic, least amount of cost, such as fuel usage for each mobile satellite and/or central point (which in this case can be considered to be a mobile motor vehicle), or the like.” (’341 patent 8:3-9); “various route preferences such as Driving Speeds, Route Optimization Goals, Road Preferences, etc.” (’341 patent 8:15-17); “various route preferences and map data for each of the satellite mobile devices, such as the posted driving speed of the roads, number of stop lights required and the typical time spent at each stop light, etc.” (’341 patent 8:34-37); “These route preferences can include various categories, such as Driving Speeds, Route Optimization Goal, Road Preferences, etc. For example, Driving Speeds illustrates various types of average speeds the specific motor vehicle travels over various type of roads, such as Interstate Highways Average Speed, Other Highways Average Speed, Arterial Roads Average Speed, Surface Streets Average Speed, or the like.” (’341 patent 14:42-49);

- **“map data” / “network paths”**: “The route preferences can be specific to each device thus allowing a more precise approximation of the actual versus estimated route traveled by the mobile device. In one embodiment, route preferences, when using map data that consists of road networks for motor vehicles, includes various types of categories, such as Driving Speeds, Route Optimization Goals, Road Preferences, etc.

For example, Driving Speeds illustrates average speeds the vehicle travels over various types of roads, such as Interstate Highways Average Speed, Other Highways Average Speed, Arterial Roads Average Speed, Surface Streets Average Speed, or the like. In this embodiment, Route Optimization Goals illustrates either the Fastest Route or the Shortest Route, while Road Preferences illustrates whether the motor vehicle typically avoids Highways, Arterial Roads, or Toll Roads.” (’341 patent 4:10-21); “It is another object of the present invention to provide a method and system for providing the route to be calculated from a known infrastructure of network paths, such as a road, highway, exit, ramp, etc., which is usually associated with the type of map data, such as road, nautical, aviation, topographical, or the like.” (’341 patent 4:29-34); “Map data consists of various segments of roadways, each of which typically has its own positional error, sometimes on the order of 2-50 meters.” (’341 patent 4:49-52); “A server application component uses, from the database, the stored location history records for the mobile device for the time past and pre-defined general route preferences to calculate the estimated route information for the specific mobile device’s journey on a known map data set.” (’341 patent 6:37-42); “a known set, or sets, of map data” (’341 patent 8:1-2); “Additionally, map data also has its own inherent positional error typically associated with every element, such as a highway or surface street.” (’341 patent 13:48-50);

- **“local storage medium” / “hard disk drive” / “flash memory” / “floppy disk drive” / “memory” / “optical disk drive” / “SDRAM”:** “[T]he mobile device [can] store location updates to a local storage medium, such as a hard disk drive or flash memory, on the mobile device ... Additionally, the transfer to the in-vehicle navigation system

could consist of using a floppy disk drive to transfer said location update information.” (’341 patent 5:42-62); “The end client can also calculate the route estimation and prediction information in real-time or store the location history information for post-processing the route estimation information after it has been stored locally, such as in memory or in the local computing device’s hard disk drive, optical disk drive, etc.” (’341 patent 6:14-20); “[T]he user can select a subset of the entire estimated route and/or location history information and save only that portion to the local hard disk drive or flash memory” (’341 patent 7:44-47); “captures the location information from a positioning device and stores it locally, such as in its hard disk drive, optical drive, local memory (i.e., Flash, SDRAM, etc.), floppy disk drive, etc.” (’341 patent 12:20-23);

- **“remote client” / “server” / “personal computer” / “computing systems” / “mobile device”**: “Additionally, the mobile device can transfer the location information to a remote client directly (i.e., peer-to-peer) or to a server (i.e., peer-to-server), which can then deliver the location information to a client (i.e., server-to-peer), which may include the estimated route already calculated.” (’341 patent 5:47-52); “The embodiment of the present invention will be described in the general context of an application that executes on an operating system in conjunction with a personal computer or server, but those skilled in the art will realize that this invention may also be implemented in combination with other program modules. Furthermore, this invention is not limited to a typical personal computer, but may also be utilized with other computing systems, such as handheld devices, mobile laptop computers, wireless phones, in-vehicle navigation systems, programmable consumer electronics, mainframe computers,

distributed computer systems, etc., and the like.” (’341 patent 10:32-42); “[A] server system preferably includes a XML router 115 for routing the location update packets, a position device server gateway 113 that connects to various mobile devices, a database 124 for storing the location information, a web page server client 118 for calculating on the server the estimated route information, and a web server 121 for delivering the location information or estimated route information to the end client.” (’341 patent 11:1-8); “a mobile device (i.e., where the mobile device does not need to be a wireless device, such as a non-wireless Personal Digital Assistant (PDA))” (’341 patent 12:17-19);

- **“transfer methods”**: “The transfer to the remote client and/or server can occur using various transfer methods, such as wireless (e.g., Bluetooth, 802.11, etc.), infrared, wired (i.e., USB cable, etc.), or storage transfer (i.e., floppy disk, etc.).” (’341 patent 5:52-55); “The mobile device can then transfer its stored discrete location information to another computing device, either stationary or mobile, using various methods. These transfer methods include, but are not limited to, the use of an infrared connection, floppy disk, Bluetooth connection, removable hard drive, or the like.” (’341 patent 12:23-28); “Location history information can be stored completely on the server and, by request, be transferred to an end peer client, such as a stationary computing device 108 or a mobile computing device 107 using either a wireless 106 or dedicated landline connection, such as an Ethernet cable.” (’341 patent 12:37-42); “the discrete location history information is transferred from the server system 125 to the end client 108 by the primary means of the Internet 111 and the direct connections that interface 120, 122 to the Internet with the end client 108 and XML Router 115. The XML Router 115

routes the location history information to the end client 108 from its storage place in the database 124 contained in the online server system 125.” (’341 patent 12:59-66); “The present invention can also allow a user to pull the entire location history information from a server or the mobile device in a number of ways, such as wirelessly, over the Internet, through a floppy disk, etc. As shown in FIG. 15, the entire location history trail was pulled from a server.” (’341 patent 16:35-39);

- **“graphical user interface (GUI)” / “local application” / “server application” / “end client” / “web interface” / “web service” / “communication protocol and interface” / “web browser”**: “It is yet another object of the present invention to provide a method and system for calculating estimated and predicted route information using various map data sets and location update information either on the end client application, such as a graphical user interface (GUI) local application, or on a server application.” (’341 patent 5:64-6:2); “Specifically, the server application can calculate, in real-time or on demand (using stored location history), the estimated route information for delivery to the end client (i.e., mobile or stationary computing device), either through a web interface (i.e., Web Browser), web service, or other communication protocol and interface.” (’341 patent 6:7-12); “At a later time, and using a web browser, the user of the mobile wireless device preferably logs onto the online server and request to see the location history information of their trek, including the estimated route information.” (’341 patent 6:33-37); “[L]ocation information points and estimated route information are displayed to the mobile device's user via a web browser end client.” (’341 patent 6:42-45); “A typical graphical users interface (GUI) program (i.e., RTCMP) 201 is best

utilized with an icon pointer 203, typically known as a mouse icon pointer to those skilled in the art.” (’341 patent 13:11-15);

- **“wireless communication network” / “Internet” / “broadcast” / “wireless base station”**: “In one embodiment, a wireless mobile device sends its location information to an online server, via a wireless communication network and the Internet, every 60 seconds. The server routes the location information to an end client that dynamically, and in real-time, calculates and displays the estimated route information of the mobile wireless device as the location updates arrive at the end client through the Internet connection to the online server. In another embodiment, a wireless mobile device sends its location information to an online server, via a wireless communication network and the Internet, every period of predetermined time interval.” (’341 patent 6:21-32); “It is yet another object of the present invention to provide a method and system for enabling the mobile device to send location updates to a receiving device or devices (i.e., broadcast) directly, in a peer-to-peer configuration, where the receiving device or devices can be client-type devices, either mobile or stationary, or server-type devices. In one embodiment, a mobile device is connected to a GPS receiver that transmits its location information, via a wireless communication network and the Internet, preferably at a frequency of one update per second (i.e., 1 Hz) to another mobile device connected to a different wireless communication network and is connected to the Internet. In another embodiment, a mobile device sends its updated position information intermittently and directly (i.e., peer-to-peer) to an online server-computing device via a wireless communications network and the Internet.” (’341 patent 4:63-5:11); “It is yet another object of the present invention to provide a

method and system for enabling the mobile device to send location updates to a receiving computing device, either a client or server, by means of a server, such as a centralized or distributed server system, that acts as a router and directs the location updates to the specific receiving computing and/or server device or devices (i.e., broadcast), which are either mobile or stationary. In one embodiment, a mobile device is connected to a GPS receiver that transmits its location information, via a wireless connection and the Internet, preferably at a frequency of one update every half a second (i.e., 2 Hz) to a centralized server that is connected to the Internet and routes the location information to a stationary computing device by means of an Internet connection.” (’341 patent 5:12-26); “The wireless base station 104 provides the interface, typically a connection 110 to the Internet, Intranet, or Extranet 111, but those skilled in the art will appreciate that the connection may include a wireless communication network, such as a telephone network. Additionally, other mobile computing devices 107 can also be supported by the wireless base station 104 through various types of connections 106, such as a TDMA, CDMA, or the like, connection.” (’341 patent 10:55-63); “The wireless base station 104 then routes, typically using an IP (i.e., TCP or UDP) protocol, to the appropriate other device, which is either a mobile device 107 connected 106 using the same or different wireless base station 104, or is a stationary computing device 108, which is typically connected 109 to the Internet, or the like. The remote peer can also be a server system 125 that would receive, calculate, and display the route information (i.e., estimated route information, predictive route information, total distance traveled, etc.).” (’341 patent 11:29-38); “The discrete location update information is then transmitted 103 to the wireless base station 104 that

is connected 110 to the Internet 111. The server system's 125 positioning device gateway 113 is also connected 112 to the Internet 111, and is capable of receiving location update packets from the mobile wireless device sending said packets. Thus the mobile wireless device 100 is capable of transmitting its discrete location update information to the server system (i.e., P2S). The same, or another client, such as a stationary computing device 108 (i.e., a personal computer) is also connected 109 to the Internet 111. The stationary computing device 108 has a connection to the server system 125 preferably by means of the XML Router 115, that is also connected to the Internet 111. If the discrete location packets are sent by the mobile wireless device 100, they arrive at the server system's 125 positioning device gateway, and are then preferably routed 114 to the XML Router 115 which then forwards the location packets to the stationary computing device 108 via the Internet 111 and the XML Router's Internet connection 120. The discrete location packets are then sent to the stationary computing device 108 preferably by means of a dedicated Internet connection 109, which is the S2P part of the third routing architecture. In another embodiment, the peer device in the S2P portion of the model could be a different mobile device 107, or even the same mobile device 100 that is transmitting the location updates." ('341 patent 11:44-12:3);

- **“stop information” / “waypoint information” / “PIM (Personal Information Management) information” / “Point of Interest (POI) information”:** “The additional information contained in this information packet consists of various location-related information, such as stop information (e.g., origin, stop, via, destination), waypoint information (e.g., personal notes, etc.), PIM (Personal

- Information Management) information, Point of Interest (POI) information (e.g., restaurants, gas stations, etc.), or the like.” (’341 patent 6:54-60);
- **“dispatch application” / “dispatching software application”**: “In one embodiment, such as a dispatch application, a user of a wireless mobile device, such as a wireless phone, arrives at a customer's location and enters the location and other appropriate information about the customer into an application on the wireless mobile device.” (’341 patent 6:60-65); “The location of the house 2501 represents the pick-up location, as in a dispatching software application, where the person at the house wants to receive transportation to the airport from a cab. The requirements for this customer are that they need a vehicle with a capacity to hold 3 passengers to pick them up at the house in 15 minutes. The local dispatch application computes the vehicle best suited to meet the customer’s needs by first performing a search for vehicles in the area that can support 3 or more passengers, and then calculating the estimated route for each of the mobile vehicles from their current location to the pick-up location.” (’341 patent 18:12-23);
 - **“location update information” / “location information”**: “It is still another object of the present invention to provide a method and system for providing the capability of adding the location update information (i.e., position information, such as GPS, etc.) and/or location information generated by a mobile device (i.e., POI, waypoint, etc.) to a route planner for the purpose of modifying the collection of discrete location history information.” (’341 patent 7:1-7); “It should be noted that the location information could also be obtained by means of a server connected to the mobile wireless device 100 at its location, thus sending the location update information directly to the Internet

111, or the like, and to the server system 125. This scenario also applies for all of the other architectures of routing location update information. As it will be appreciated to those skilled in the art, the position information obtained for calculating the discrete location information can vary across networks that use various technology implementations, such as E-OTD, TOA, AOA, gpsOne from Qualcomm, SnapTrack Servers, Assisted-GPS, etc., which are known to those skilled in the art.” (’341 patent 12:4-16); “It should be noted and appreciated to those skilled in the art that location update points, such as Point T1 400 of FIG. 4, have a positional error associated with it, typically referred to as a circular error probability or error radius. This error radius is due to the original calculation of the position coordinates on the device or by using the device's characteristics (e.g., Time-of-Arrival (TOA) Location Estimation), and is typically due to the datum used, GPS satellite orbit error, multipath, or the like.” (’341 patent 13:40-48); “As shown in FIG. 4A, that point is illustrated 416 on 9th Street 421. As people skilled in the art will appreciate, this point 416 also has a street address, but it is omitted in this example. This same approach is applied to all location update points shown in FIG. 4A, such as Point-1 404, Point-2 403, Point-3 406, and Point-4 405.” (’341 patent 14:19-24);

- **“route information” / “route” / “link”:** “The estimated route information range (i.e., date, time, position, etc.) can be selected to indicate the starting and ending point boundaries for the route and/or location history information to be saved.” (’341 patent 7:34-37); “estimated route information, such as driving distance” (’341 patent 7:50-51); “route information (i.e., estimated route information, predictive route information, total distance traveled, etc.)” (’341 patent 11:36-38); “A route 207 preferably includes

an origin 204 and one or more destination points 205 & 206, which can each be considered a “link”. The route is illustrated as a series of links, such as link between the origin point 204 and the first destination point 205. It should be noted and appreciated to those skilled in the art that a link is not typically a straight line as illustrated in the sample map, but rather follows the topography of the roadways calculated between two route points, such as an origin 204 and destination 205 point.” (’341 patent 13:15-23);

- **Updating Displayed Information:** “A subset of information can also be illustrated, such as driving instructions (i.e., Turn Right onto Lawrence Road, etc.), heading, distance, and elapsed time for each portion of the estimated route, including summary information for the estimated route, such as total driving distance traveled.” (’341 patent 7:58-63); “Additionally, as people skilled in the art will appreciate, individual points can be modified, moved or deleted, and new points can be added to the route. This is possible by adding the highlighted estimated route or location history points into a route planner where all of these modifications can be implemented either in the planner or on the map display.” (’341 patent 17:25-31); “As people skilled in the art will appreciate, the route planner window 2310 gives the user complete control over the location history trail and estimated route 2306, in the event that they want to modify it at anytime.” (’341 patent 17:48-51);
- **“‘satellite’ points” / “‘central’ destination” / “origin location point”:** “Additionally, these destination points can be accompanied by additional information, such as notes, start/departure time, stop duration, etc.” (’341 patent 7:27-29); “The central satellite destination or origin point can be a place, such as a POI (i.e., address, house, landmark,

etc.), or a stationary or mobile device, where the mobile device's location is provided in real-time or from a cached location either locally, where the estimate route is calculated, or on the server system.” (’341 patent 8:9-14); “[E]ach of the satellite points and/or central point can have estimated routes based on individual route preferences for each mobile or stationary point. The satellite points or central point can include real-time location updates from mobile devices, and known position points, such as POIs (i.e., stationary points), or the like.” (’341 patent 8:17-22);

- **“mobile positioning device”**: “FIG. 1 illustrates a network server and client system for sending and receiving packets of data information, such as location updates, and includes a typical mobile positioning device, such as a wireless device, but those skilled in the art will appreciate that this may also include an optical or wired mobile device. The mobile device 100 includes or is attached via a connection interface 101, to a positioning device 102, such as a GPS receiver.” (’341 patent 10:43-50); “As illustrated in FIG. 1, the end clients, such as the stationary computing device 108 or mobile computing device 107, can directly interact with each other through the provided system, or directly with the server systems 125. For instance, a personal computer 108 can request to view estimated route information through a web server application 118 that interfaces to the server system's 125 database 124. The web server application 118 can display the estimated route information to the stationary computing device 108 using its interface 123 to the web server 121, the web server's connection 122 to the Internet 111, and a dedicated connection 109 from the Internet 111 to the stationary computing device 108.” (’341 patent 12:43-55);

- **“distributed server system”**: “The online server system 125 is displayed as a centralized server system, but can also embody a distributed server system, which is well known to those skilled in the art.” (’341 patent 13:1-4); “Using the map data as the current datum, it is necessary to ‘snap’ the location update information to the most likely road position on the map data that a location update point actually represents. This is a moot point if, for example, the location update information is accompanied with other location-relevant information, such as an address.” (’341 patent 13:60-66);
- **“GEO-Coded” / “GEO-Coding”**: “If this is the case, then the point on the street can be GEO-Coded, which allows the address information to be compared against an additional file, typically contained in the map data, where the file provides the latitude and longitude position of the device in the map data, such as on 9th Street 416. GEO-Coding is a term widely known to people skilled in the art.” (’341 patent 13:66-14:5);
- **“predictive route”**: “[A]s shown in FIG. 8, if an origin point 800 and destination point 801 are known, and the origin update arrives at a given time, using either the road speed limit or the mobile device's typical speed (i.e., motor vehicle, bicycle, runner, etc.), a predictive route can be calculated. For example, given that point 800 is the starting point, and using the expected velocity and system time, it is possible to compute the average distance traveled as a factor of time ($\text{Distance} = F(t) = \text{Velocity} * \text{Time}$) and display that information without requiring the known or expected position of the next or destination point 801.” (’341 patent 15:21-31);
- **“Line-Of-Sight (LOS)”**: “Line-Of-Sight (LOS) distance calculations which are currently used in the prior art” (’341 patent 18:2-3);

- **“XML Router”**: “a server system preferably includes a XML router 115 for routing the location update packets” (’341 patent 11:1-3); “The stationary computing device 108 has a connection to the server system 125 preferably by means of the XML Router 115, that is also connected to the Internet 111. If the discrete location packets are sent by the mobile wireless device 100, they arrive at the server system’s 125 positioning device gateway, and are then preferably routed 114 to the XML Router 115 which then forwards the location packets to the stationary computing device 108 via the Internet 111 and the XML Router’s Internet connection 120.” (’341 patent 11:54-63); “In another embodiment, the discrete location history information is transferred from the server system 125 to the end client 108 by the primary means of the Internet 111 and the direct connections that interface 120, 122 to the Internet with the end client 108 and XML Router 115. The XML Router 115 routes the location history information to the end client 108 from its storage place in the database 124 contained in the online server system 125.” (’341 patent 12:59-66).

III. ANTICIPATION AND OBVIOUSNESS UNDER 35 U.S.C. §§ 102 AND 103

Google contends that all the Asserted Claims are invalid as anticipated under 35 U.S.C. § 102 and/or obvious under 35 U.S.C. § 103. Google relies on and incorporates all prior art references cited on the cover of the Asserted Patents and in their prosecution histories, including for supporting Google’s arguments regarding the obviousness of the Asserted Claims. Google further relies on and incorporates by reference, as if originally set forth herein, all invalidity positions, and all associated prior art and claim charts, disclosed to Plaintiff in the Other Plaintiff Cases or by potential or actual licensees to any of the Asserted Claims. Google hereby discloses and identifies as if originally set forth herein, all prior art references listed and/or asserted in the

above as invalidating prior art against each of the Asserted Claims. In addition, Google identifies prior art patents, publications, products, and systems that disclose the elements of the Asserted Claims explicitly, inherently, or as part of an obvious combination, and also may be relied on to show the state of the art in the relevant timeframes and/or reasons or motivations to combine prior art references.

In those instances in which Google asserts that an Asserted Claim is invalid under 35 U.S.C. § 112, Google has applied the prior art in accordance with its assumption that Plaintiff contends such Asserted Claim (1) has sufficient supporting written description, (2) is enabled, (3) is not indefinite, and (4) sets forth what the inventor(s) regarded as the invention. Google's Invalidity Contentions should not be construed as an admission that any Asserted Claim meets the requirements of § 112.

A. Google's Claim Chart Exhibits

Google contends that the prior art references listed in Tables 1–3 above anticipate and/or render obvious each of the Asserted Claims of those patents under the proper construction of those claims and/or under Plaintiff's apparent interpretation of the claims as set forth in its operative complaint and Infringement Contentions.

In addition, Google has prepared Claim Chart Exhibits of prior art references that render the Asserted Claims anticipated and/or obvious under the proper construction of those claims and/or under Plaintiff's apparent interpretation of the claims as set forth in its operative complaint and Infringement Contentions. Charts identifying where each element of each Asserted Claim is found in each of these prior art references are attached as Exhibits A-01 to A-18 for the '341 patent, Exhibits B-01 to B-21 for the '337 patent, Exhibits C-01 to C-12 for the '208 patent, Exhibits D-

01 to D-12 for the '608 patent, Exhibits E-01 to E-12 for the '071 patent, and Exhibits F-01 to F-16 for the '925 patent (collectively, the "Claim Chart Exhibits").

Claim Charts for the '341 Patent

Exhibit	Prior Art Reference	Short Name
A-01	U.S. Patent No. 6,356,836	Adolph 836
A-02	Int'l Patent Pub. No. WO1998054682A1	Booth 682
A-03	Int'l Patent Pub. No. WO2001013069A1	Collier 069
A-04	U.S. Patent No. 6,615,135	Davies 135
A-05	U.S. Patent No. 6,067,502	Hayashida 502
A-06	U.S. Patent No. 6,249,740	Ito 740
A-07	U.S. Patent App. Pub. No. 2004/0220726	Jin 726
A-08	Japanese Patent App. Pub. No. JPH1047983A	Morita 983
A-09	U.S. Patent App. Pub. No. 2002/0184200	Ueda 200
A-10	U.S. Patent No. 5,793,310	Watanabe 310
A-11	U.S. Patent No. 6,895,329	Wolfson 329
A-12	Chris Wood & Owen Mace, <i>Dead Reckoning Keeps GPS In Line</i> , 12 GPS World, at 14 (2001)	Wood
A-13	Yilin Zhao, <i>Vehicle Location and Navigation Systems</i> (1997)	Zhao
A-14	Kenwood KNA-DV2100 System	KNA-DV2100
A-15	Philips CARiN 522/520 System	CARiN
A-16	Pioneer Corporation AVIC-9DVD System	AVIC-9DVD
A-17	TravRoute CoPilot System	CoPilot
A-18	TravTek System	TravTek

Claim Charts for the '337 Patent

Exhibit	Prior Art Reference	Short Name
B-01	U.S. Patent No. 6,356,836	Adolph 836
B-02	Int'l Patent Pub. No. WO1998054682A1	Booth 682
B-03	Int'l Patent Pub. No. WO2001013069A1	Collier 069
B-04	U.S. Patent No. 6,615,135	Davies 135
B-05	U.S. Patent No. 6,697,730	Dickerson 730
B-06	Japanese Patent App. Pub. No. JP2002032889A	Hamada 889
B-07	U.S. Patent No. 6,067,502	Hayashida 502
B-08	U.S. Patent No. 6,249,740	Ito 740
B-09	U.S. Patent App. Pub. No. 2004/0220726	Jin 726
B-10	Japanese Patent App. Pub. No. JPH1047983A	Morita 983
B-11	U.S. Patent App. Pub. No. 2002/0184200	Ueda 200
B-12	U.S. Patent No. 5,793,310	Watanabe 310
B-13	U.S. Patent No. 4,092,718	Wendt 718

Exhibit	Prior Art Reference	Short Name
B-14	U.S. Patent No. 6,895,329	Wolfson 329
B-15	Chris Wood & Owen Mace, <i>Dead Reckoning Keeps GPS In Line</i> , 12 GPS World, at 14 (2001)	Wood
B-16	Yilin Zhao, <i>Vehicle Location and Navigation Systems</i> (1997)	Zhao
B-17	Kenwood KNA-DV2100 System	KNA-DV2100
B-18	Philips CARiN 522/520 System	CARiN
B-19	Pioneer Corporation AVIC-9DVD System	AVIC-9DVD
B-20	TravRoute CoPilot System	CoPilot
B-21	TravTek System	TravTek

Claim Charts for the '208 Patent

Exhibit	Prior Art Reference	Short Name
C-01	U.S. Patent No. 6,381,535	Durocher 535
C-02	U.S. Patent App. Pub. No. 2002/0119789	Friedman 789
C-03	U.S. Patent No. 6,067,502	Hayashida 502
C-04	U.S. Patent App. Pub. No. 2008/0045234	Reed 234
C-05	U.S. Patent No. 5,675,492	Tsuyuki 492
C-06	U.S. Patent App. Pub. No. 2002/0052689	Yamashita 689
C-07	Yilin Zhao, <i>Vehicle Location and Navigation Systems</i> (1997)	Zhao
C-08	Garmin Systems	Garmin
C-09	Magellan Systems	Magellan
C-10	Pioneer Corporation AVIC-9DVD System	AVIC-9DVD
C-11	TravRoute CoPilot System	CoPilot
C-12	TravTek System	TravTek

Claim Charts for the '608 Patent

Exhibit	Prior Art Reference	Short Name
D-01	U.S. Patent No. 6,381,535	Durocher 535
D-02	U.S. Patent App. Pub. No. 2002/0119789	Friedman 789
D-03	U.S. Patent No. 6,067,502	Hayashida 502
D-04	U.S. Patent App. Pub. No. 2008/0045234	Reed 234
D-05	U.S. Patent No. 5,675,492	Tsuyuki 492
D-06	U.S. Patent App. Pub. No. 2002/0052689	Yamashita 689
D-07	Yilin Zhao, <i>Vehicle Location and Navigation Systems</i> (1997)	Zhao
D-08	Garmin Systems	Garmin
D-09	Magellan Systems	Magellan
D-10	Pioneer Corporation AVIC-9DVD System	AVIC-9DVD

Exhibit	Prior Art Reference	Short Name
D-11	TravRoute CoPilot System	CoPilot
D-12	TravTek System	TravTek

Claim Charts for the '071 Patent

Exhibit	Prior Art Reference	Short Name
E-01	U.S. Patent No. 6,381,535	Durocher 535
E-02	U.S. Patent App. Pub. No. 2002/0119789	Friedman 789
E-03	U.S. Patent No. 6,067,502	Hayashida 502
E-04	U.S. Patent App. Pub. No. 2008/0045234	Reed 234
E-05	U.S. Patent No. 5,675,492	Tsuyuki 492
E-06	U.S. Patent App. Pub. No. 2002/0052689	Yamashita 689
E-07	Yilin Zhao, <i>Vehicle Location and Navigation Systems</i> (1997)	Zhao
E-08	Garmin Systems	Garmin
E-09	Magellan Systems	Magellan
E-10	Pioneer Corporation AVIC-9DVD System	AVIC-9DVD
E-11	TravRoute CoPilot System	CoPilot
E-12	TravTek System	TravTek

Claim Charts for the '925 Patent

Exhibit	Prior Art Reference	Short Name
F-01	U.S. Patent No. 6,356,836	Adolph 836
F-02	U.S. Patent No. 6,756,913	Ayed 913
F-03	U.S. Patent No. 6,526,349	Bullock 349
F-04	U.S. Patent No. 6,697,730	Dickerson 730
F-05	U.S. Patent No. 6,381,535	Durocher 535
F-06	U.S. Patent No. 6,636,806	Irie 806
F-07	U.S. Patent No. 5,604,676	Penzias 676
F-08	U.S. Patent No. 5,774,824	Streit 824
F-09	U.S. Patent No. 5,945,919	Trask 919
F-10	U.S. Patent No. 6,721,655	Utsumi 655
F-11	U.S. Patent No. 4,092,718	Wendt 718
F-12	U.S. Patent App. Pub. No. 2002/0052689	Yamashita 689
F-13	Philips CARiN 522/520 System	CARiN
F-14	Toyota Electro-Multivision System	Toyota Electro-Multivision
F-15	TravTek System	TravTek
F-16	Navigation products, services, or systems with route calculation and location tracking	Navigation Systems

Google's Claim Chart Exhibits provide exemplary citations to the prior art references that teach or suggest elements of the Asserted Claims of the Asserted Patent. The references discussed in the Claim Chart Exhibits may disclose the elements of the Asserted Claims explicitly or inherently, or they may be relied upon to show the state of the art in the relevant time frame, including elements that were well-understood, routine, or conventional. To the extent that an element of an Asserted Claim is not shown in a chart, the Asserted Claims would have been obvious based on a combination of one or more other prior art references, as set forth below and in the Claim Chart Exhibits.

Moreover, nothing in the Claim Chart Exhibits should be construed as an admission that any identified reference does not disclose any claim limitation. The identified references may contain additional disclosures of a particular claim limitation, and Google reserves all rights to rely on other portions of the identified references to support its contentions. Persons of ordinary skill in the art generally read a prior art reference as a whole and in the context of other publications and literature. Google may rely on uncited portions of the prior art references, other prior art references incorporated into such references, other publications, and percipient and/or expert testimony to provide context and as aids to understanding and interpreting the portions of the cited prior art references. Disclosures relating to elements of dependent claims are disclosed in connection with the claims from which they depend, even though they are not repeated for each dependent claim.

Google may also rely on uncited portions of the prior art references, other publications, and expert testimony to establish that a person of ordinary skill in the art ("POSA") would have been motivated to modify or combine certain cited references and/or would have applied its or her general knowledge and common sense so as to render the claims obvious. Where Google cites to

a particular figure, table, chart, annex, or appendix in a prior art reference, the citation should be understood to encompass the caption and description of the figure, table, chart, annex, or appendix; any text relating to the figure, table, chart, annex, or appendix; and the figure, table, chart, annex, or appendix itself. Similarly, where a portion of text refers to a figure, chart, annex, appendix, or other part of a reference, the citation should be understood to include the figure, chart, annex, appendix, or other part of the reference as well.

The U.S. and foreign patents, publications, products and systems disclosed in the Claim Chart Exhibits qualify as prior art under various provisions of the Patent Act, including pre-AIA 35 U.S.C. §§ 102 and/or 103. Google may also rely on persons identified as named inventors of the patents and authors of the publications cited in the Claim Chart Exhibits, as well as individuals identified in any of the parties' initial disclosures and discovery responses, and others as they become identified through further discovery, as prior inventors, as persons of ordinary skill in the art, or as persons having knowledge of, or having previously used, publicly disclosed, published, offered for sale, or sold, the alleged inventions claimed in the Asserted Patents. Discovery has not been completed; claim construction has not yet occurred, and Google continues to investigate and analyze the prior art. Google reserves the right to supplement and/or amend these contentions based on the results of such investigation and analysis. Google further reserves the right to rely on any system described in any prior art publication(s) cited herein in addition to, or in place of, relying on the publications themselves.

Some of the disclosures cited in certain of the Claim Chart Exhibits are based on Google's understanding of how Plaintiff is interpreting the Asserted Claims for the purpose of its Infringement Contentions (to the extent Plaintiff's contentions can be understood). Google does not intend to and does not adopt Plaintiff's claim interpretations or concede that Plaintiff's claim

interpretations are correct. Nothing stated herein or in any Claim Chart Exhibit should be treated as an admission or suggestion that Google agrees with Plaintiff regarding either the scope of any of the Asserted Claims, or any express or implied claim constructions advanced by Plaintiff in its Infringement Contentions or anywhere else, or that any of Google's accused instrumentalities meets any limitation of the Asserted Claims. Nothing stated herein or in any Claim Chart Exhibit should be construed as an admission or waiver of any particular construction of any claim term. Nothing stated herein or in any Claim Chart Exhibit should be construed as a waiver of any argument available under 35 U.S.C. § 112. Google reserves all rights to challenge any of the Asserted Claims under 35 U.S.C. § 112, including by arguing that they are not supported by the written description, not enabled, indefinite, and/or do not set forth what the inventors regarded as the invention, notwithstanding the disclosure in any Claim Chart Exhibit corresponding to that claim. *See* Section VI (Invalidity Under 35 U.S.C. § 112), *infra*. Nothing stated herein or in any Claim Chart Exhibit should be construed as an admission or waiver with respect to the effective filing date of any of the Asserted Claims.

B. Exemplary Obviousness Combinations

The following charts provide exemplary combinations of prior art that renders the Asserted Claims obvious. However, all the Asserted Claims of the Asserted Patents are invalid as anticipated under 35 U.S.C. § 102 in view of each of the prior art references identified herein as specified in the Claim Chart Exhibits, which identify specific examples of where each limitation of the Asserted Claims is found in the prior art reference, and/or obvious under 35 U.S.C. § 103 in view of the state of the prior art alone, the admitted prior art described in the Invalidity Contentions, and/or in combination with the references and disclosures detailed in Tables 1–3 of the Invalidity Contentions as well as the prior art references identified herein as specified in the

Claim Chart Exhibits. As such, Google's inclusion of exemplary prior art references and combinations listed below does not preclude Google from identifying other invalidating combinations as appropriate.

1. Exemplary Obviousness Combinations for the '341 Patent

Exemplary obviousness combinations for the '341 patent include:

- Adolph 836 alone or in combination with one or more of the references in Exhibits A-02–A-18;
- Booth 682 alone or in combination with one or more of the references in Exhibits A-01 and A-3–A-18;
- Collier 069 alone or in combination with one or more of the references in Exhibits A-01–A-02 and A-04–A-18;
- Davies 135 alone or in combination with one or more of the references in Exhibits A-01–A-03 and A-05–A-18;
- Hayashida 502 alone or in combination with one or more of the references in Exhibits A-01–A-04 and A-06–A-18;
- Ito 740 alone or in combination with one or more of the references in Exhibits A-01–A-05 and A-07–A-18;
- Jin 726 alone or in combination with one or more of the references in Exhibits A-01–A-06 and A-08–A-18;
- Morita 983 alone or in combination with one or more of the references in Exhibits A-01–A-07 and A-09–A-18;
- Ueda 200 alone or in combination with one or more of the references in Exhibits A-01–A-08 and A-10–A-18;

- Watanabe 310 alone or in combination with one or more of the references in Exhibits A-01–A-09 and A-11–A-18;
- Wolfson 329 alone or in combination with one or more of the references in Exhibits A-01–A-10 and A-12–A-18;
- Wood alone or in combination with one or more of the references in Exhibits A-01–A-11 and A-13–A-18;
- Zhao alone or in combination with one or more of the references in Exhibits A-01–A-12 and A-14–A-18;
- KNA-DV2100 alone or in combination with one or more of the references in Exhibits A-01–A-13 and A-15–A-18;
- CARiN alone or in combination with one or more of the references in Exhibits A-01–A-14 and A-16–A-18;
- AVIC-9DVD alone or in combination with one or more of the references in Exhibits A-01–A-15 and A-17–A-18;
- CoPilot alone or in combination with one or more of the references in Exhibits A-01–A-16 and A-18; and/or
- TravTek alone or in combination with one or more of the references in Exhibits A-01–A-17.

2. Exemplary Obviousness Combinations for the '337 Patent

Exemplary obviousness combinations for the '337 patent include:

- Adolph 836 alone or in combination with one or more of the references in Exhibits B-02–B-21;

- Booth 682 alone or in combination with one or more of the references in Exhibits B-01 and B-03–B-21;
- Collier 069 alone or in combination with one or more of the references in Exhibits B-01–B-02 and B-04–B-21;
- Davies 135 alone or in combination with one or more of the references in Exhibits B-01–B-03 and B-05–B-21;
- Dickerson 730 alone or in combination with one or more of the references in Exhibits B-01–B-04 and B-06–B-21;
- Hamada 889 alone or in combination with one or more of the references in Exhibits B-01–B-05 and B-07–B-21;
- Hayashida 502 alone or in combination with one or more of the references in Exhibits B-01–B-06 and B-08–B-21;
- Ito 740 alone or in combination with one or more of the references in Exhibits B-01–B-07 and B-09–B-21;
- Jin 726 alone or in combination with one or more of the references in Exhibits B-01–B-08 and B-10–B-21;
- Morita 983 alone or in combination with one or more of the references in Exhibits B-01–B-09 and B-11–B-21;
- Ueda 200 alone or in combination with one or more of the references in Exhibits B-01–B-10 and B-12–B-21;
- Watanabe 310 alone or in combination with one or more of the references in Exhibits B-01–B-11 and B-13–B-21;

- Wendt 718 alone or in combination with one or more of the references in Exhibits B-01–B-12 and B-14–B-21;
- Wolfson 329 alone or in combination with one or more of the references in Exhibits B-01–B-13 and B-15–B-21;
- Wood alone or in combination with one or more of the references in Exhibits B-01–B-14 and B-16–B-21;
- Zhao alone or in combination with one or more of the references in Exhibits B-01–B-15 and B-17–B-21;
- KNA-DV2100 alone or in combination with one or more of the references in Exhibits B-01–B-16 and B-18–B-21;
- CARiN alone or in combination with one or more of the references in Exhibits B-01–B-17 and B-19–B-21;
- AVIC-9DVD alone or in combination with one or more of the references in Exhibits B-01–B-18 and B-20–B-21;
- CoPilot alone or in combination with one or more of the references in Exhibits B-01–B-19 and B-21; and/or
- TravTek alone or in combination with one or more of the references in Exhibits B-01–B-20.

3. Exemplary Obviousness Combinations for the '208 Patent

Exemplary obviousness combinations for the '208 patent include:

- Durocher 535 alone or in combination with one or more of the references in Exhibits C-02–C-12;

- Friedman 789 alone or in combination with one or more of the references in Exhibits C-01 and C-03–C-12;
- Hayashida 502 alone or in combination with one or more of the references in Exhibits C-01–C-02 and C-04–C-12;
- Reed 234 alone or in combination with one or more of the references in Exhibits C-01–C-03 and C-05–C-12;
- Tsuyuki 492 alone or in combination with one or more of the references in Exhibits C-01–C-04 and C-06–C-12;
- Yamashita 689 alone or in combination with one or more of the references in Exhibits C-01–C-05 and C-07–C-12;
- Zhao alone or in combination with one or more of the references in Exhibits C-01–C-06 and C-08–C-12;
- Garmin alone or in combination with one or more of the references in Exhibits C-01–C-07 and C-09–C-12;
- Magellan alone or in combination with one or more of the references in Exhibits C-01–C-08 and C-10–C-12;
- AVIC-9DVD alone or in combination with one or more of the references in Exhibits C-01–C-09 and C-11–C-12;
- CoPilot alone or in combination with one or more of the references in Exhibits C-01–C-10 and C-12; and/or
- TravTek alone or in combination with one or more of the references in Exhibits C-01–C-11.

4. Exemplary Obviousness Combinations for the '608 Patent

Exemplary obviousness combinations for the '608 patent include:

- Durocher 535 alone or in combination with one or more of the references in Exhibits D-02–D-12;
- Friedman 789 alone or in combination with one or more of the references in Exhibits D-01 and D-03–D-12;
- Hayashida 502 alone or in combination with one or more of the references in Exhibits D-01–D-02 and D-04–D-12;
- Reed 234 alone or in combination with one or more of the references in Exhibits D-01–D-03 and D-05–D-12;
- Tsuyuki 492 alone or in combination with one or more of the references in Exhibits D-01–D-04 and D-06–D-12;
- Yamashita 689 alone or in combination with one or more of the references in Exhibits D-01–D-05 and D-07–D-12;
- Zhao alone or in combination with one or more of the references in Exhibits D-01–D-06 and D-08–D-12;
- Garmin alone or in combination with one or more of the references in Exhibits D-01–D-07 and D-09–D-12;
- Magellan alone or in combination with one or more of the references in Exhibits D-01–D-08 and D-10–D-12;
- AVIC-9DVD alone or in combination with one or more of the references in Exhibits D-01–D-09 and D-11–D-12;

- CoPilot alone or in combination with one or more of the references in Exhibits D-01–D-10 and D-12; and/or
- TravTek alone or in combination with one or more of the references in Exhibits D-01–D-11.

5. Exemplary Obviousness Combinations for the '071 Patent

Exemplary obviousness combinations for the '071 patent include:

- Durocher 535 alone or in combination with one or more of the references in Exhibits E-02–E-12;
- Friedman 789 alone or in combination with one or more of the references in Exhibits E-01 and E-03–E-12;
- Hayashida 502 alone or in combination with one or more of the references in Exhibits E-01–E-02 and E-04–E-12;
- Reed 234 alone or in combination with one or more of the references in Exhibits E-01–E-03 and E-05–E-12;
- Tsuyuki 492 alone or in combination with one or more of the references in Exhibits E-01–E-04 and E-06–E-12;
- Yamashita 689 alone or in combination with one or more of the references in Exhibits E-01–E-05 and E-07–E-12;
- Zhao alone or in combination with one or more of the references in Exhibits E-01–E-06 and E-08–E-12;
- Garmin alone or in combination with one or more of the references in Exhibits E-01–E-07 and E-09–E-12;

- Magellan alone or in combination with one or more of the references in Exhibits E-01–E-08 and E-10–E-12;
- AVIC-9DVD alone or in combination with one or more of the references in Exhibits E-01–E-09 and E-11–E-12;
- CoPilot alone or in combination with one or more of the references in Exhibits E-01–E-10 and E-12; and/or
- TravTek alone or in combination with one or more of the references in Exhibits E-01–E-11.

6. Exemplary Obviousness Combinations for the '925 Patent

- Adolph 836 alone or in combination with one or more of the references in Exhibits F-02–F-16;
- Ayed 913 alone or in combination with one or more of the references in Exhibits F-01 and F-03–F-16;
- Bullock 349 alone or in combination with one or more of the references in Exhibits F-01–F-02 and F-04–F-16;
- Dickerson 730 alone or in combination with one or more of the references in Exhibits F-01–F-03 and F-05–F-16;
- Durocher 535 alone or in combination with one or more of the references in Exhibits F-01–F-04 and F-06–F-16;
- Irie 806 alone or in combination with one or more of the references in Exhibits F-01–F-05 and F-07–F-16;
- Penzias 676 alone or in combination with one or more of the references in Exhibits F-01–F-06 and F-08–F-16;

- Streit 824 alone or in combination with one or more of the references in Exhibits F-01–F-07 and F-09–F-16;
- Trask 919 alone or in combination with one or more of the references in Exhibits F-01–F-08 and F-10–F-16;
- Utsumi 655 alone or in combination with one or more of the references in Exhibits F-01–F-09 and F-11–F-16;
- Wendt 718 alone or in combination with one or more of the references in Exhibits F-01–F-10 and F-12–F-16;
- Yamashita 689 alone or in combination with one or more of the references in Exhibits F-01–F-11 and F-13–F-16;
- CARiN alone or in combination with one or more of the references in Exhibits F-01–F-12 and F-14–F-16;
- Toyota Electro-Multivision alone or in combination with one or more of the references in Exhibits F-01–F-13 and F-15–F-16;
- TravTek alone or in combination with one or more of the references in Exhibits F-01–F-14 and F-16;
- Navigation System alone or in combination with one or more of the references in Exhibits F-01–F-15.

C. Obviousness In Light of the State of the Art and Motivations to Combine

Each concept described and claimed in the Asserted Patents was known to those of skill in the art as available design choices for electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization

preferences; and real-time route sharing between devices. To the extent a factfinder determines that any primary prior art reference does not disclose one or more limitations of an Asserted Claim, the Asserted Claim is nevertheless obvious because the allegedly missing limitations contain nothing beyond ordinary improvements. The Asserted Claims merely combine known elements to achieve predictable results or choose between clear alternatives known to those of skill in the art, particularly in view of the state of the art as reflected in the relevant prior art. Moreover, as noted, it would have been obvious to a person of skill in the art at the time of the alleged invention of the Asserted Claims to combine any primary reference with any combination of other primary references or secondary references so as to practice the Asserted Claims. To the extent that Plaintiff argues that any concept claimed in the Asserted Claims is not disclosed in a primary reference, it would, at a minimum, have been obvious to adapt the primary reference to include the concept or combine it with other primary references or secondary references that disclose the concept.

The Supreme Court has held that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). “When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one.” *Id.* at 417. As the Supreme Court made clear, “[f]or the same reason, if a technique has been used to improve one device, and a POSA would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* Indeed, the rationale to combine or modify prior art references is significantly stronger when, as here, the references seek to solve the same problem,

come from the same field, and correspond well to each other. *See, e.g., In re Inland Steel Co.*, 265 F.3d 1354, 1362 (Fed. Cir. 2001).

To determine whether there is an apparent reason to combine the known elements in the fashion claimed by the patent at issue, a court can “look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art.” *KSR*, 550 U.S. at 418. For example, obviousness can be demonstrated by showing “there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *Id.* at 420. “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* Common sense also teaches that “familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.*

The Supreme Court in *KSR* held that a claimed invention can be obvious even if there is no explicit teaching, suggestion, or motivation for combining the prior art to produce that invention. In summary, the Court held in *KSR* that patents that are based on new combinations of elements or components already known in a technical field may be found to be obvious. *See generally KSR*, 127 S. Ct. 1727. Specifically, the Court in *KSR* rejected a rigid application of the “teaching, suggestion, or motivation [to combine]” test. *Id.* at 1741. “In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim.” *Id.* at 1741–42. “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner

claimed.” *Id.* at 1742. A key inquiry is whether the “improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 1740.

In view of the Supreme Court’s *KSR* decision, the PTO issued a set of Examination Guidelines. Examination Guidelines for Determining Obviousness Under 35 U.S.C. §103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex, Inc.*, 72 Fed. Reg. 57526 (Oct. 10, 2007). Those Guidelines summarized the *KSR* decision and identified various rationales for finding a claim obvious, including those based on other precedents. Those rationales may include:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57529. The above rationales likewise apply in rendering obvious the Asserted Claims of the Asserted Patents.

Further, the Federal Circuit has held that a motivation to combine references may be implicit for patents based on improvements:

[A]n implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the “improvement” is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even common-sensical—we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him capable of combining the prior art references.

DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1368 (Fed. Cir. 2006).

Additional evidence establishing that there would have been a motivation to modify and/or combine the prior art references identified above and herein includes the interrelated teachings of multiple prior art references; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the Asserted Claims; the existence of a known need or problem in the field of the endeavor at the time of the invention; and the background knowledge that would have been possessed by a person having ordinary skill in the art.

Furthermore, the prior art references identified in these contentions (*see* Tables 1, 2, 3, *supra*) explicitly or implicitly refer to other prior art references, share common authors or inventors, were published in the same journals, presented at the same conferences or meetings, submitted or proposed to standards development study groups or task groups with overlapping contributors, members, or attendees, and/or were developed at common companies, schools, or organizations, all of which would motivate one of skill in the art to combine them. These references are also within the field(s) of the Asserted Patents and are directed to similar subject matter or problems within the field(s). Additionally, any products, devices, or processes described

in the references existed and/or were invented before or during the period in which the alleged inventions were developed, providing further motivation to combine them.

A POSITA would also have been motivated to combine the different publications and patents that were authored by employees of a given company or assigned to the same assignee and/or related to the same subject matter. Additionally, a POSITA would have been motivated to combine different references that were authored, developed, or invented by the same individual(s) related to the same subject matter. The common inventors/authors/architects of the references demonstrate that they relate to continued work in a common field of effort and continued related developments in that field. A POSITA would, therefore, have been motivated to combine the references. Additionally, based on the teachings of the references and/or the knowledge of one of ordinary skill, a POSITA would have been motivated to combine different references from the same company. For example, a POSITA would have been motivated to combine prior art systems or products (*see* Table 3, *supra*) with any related or applicable patent or non-patent documentation or literature relating to that system or owned by the same entity, including for the reason that these materials are related.

Thus, the motivations to combine the teachings of the prior art references disclosed herein are found in the references themselves and: (1) the nature of the problem being solved, (2) the express, implied, and inherent teachings of the prior art, (3) the knowledge of persons of ordinary skill in the art, (4) the fact that the prior art is generally directed toward similar subject matter, problems, or goals, and (5) the predictable results obtained in combining the different elements of the prior art—e.g., using known techniques for electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between

location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices.

A POSITA at the time of the alleged invention(s) had reason to modify each reference listed and charted in Google's Claim Chart Exhibits or combine each reference with one or more of the other references and disclosures detailed in Tables 1–3 of these Invalidity Contentions as well as the other prior art references charted in the Claim Chart Exhibits in light of the knowledge of a person of ordinary skill at the time, including information in the prior art cited in these Invalidity Contentions. The motivations to combine identified in these Invalidity Contentions are exemplary and representative, and are not an exhaustive list of motivations to combine, nor potential combinations. The exemplary motivations to combine identified in these Invalidity Contentions are not required under the Court's orders or local rules, and further motivations and evidentiary support will be provided through, for example, claim construction, fact discovery (including third-party discovery), and expert discovery.

As an example of those reasons and motivations to combine, each cited prior art reference generally relates to electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices, and thus constitutes analogous art within the same field of endeavor. The prior art references depict, disclose, and discuss similar components, techniques, and systems for electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices, as claimed in the Asserted Patents. Thus, a POSITA would

have understood the teachings of the references to be applicable to one another. As addressed below, a POSITA also would have found it obvious to implement (i.e., obvious to try) such combinations to utilize these well-known techniques in electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices. *Id.*

Further, below are additional motivations to combine prior art for particular claimed ideas. The following discussions of specific claimed ideas are merely examples and are not limiting. For example, where a POSITA would have been motivated to combine references which together render obvious limitations from the independent claims, a POSITA would have also been motivated to combine said references in such a way as to render obvious various asserted dependent claims. The motivations identified with respect to any one Asserted Patent apply with equal force to any of the other Asserted Patents by virtue of their relationship and similarities. Moreover, the background and state of the art discussed below with respect to any one Asserted Patent apply with equal force, where applicable, to any of the other Asserted Patents by virtue of their relationship and similarities.

The following discussion of the prior art provides further support for Google's contentions. The motivations to combine discussed herein are exemplary and subject to further investigation and discovery, including fact discovery (including third-party discovery) and expert discovery. Further rationale and support for motivations to combine various types of references can be found in at least the common specification of the Asserted Patents, their prosecution histories, any related patents claiming priority to the same underlying applications and their prosecution histories, and the prior art identified above and in Tables 1–3 of the Invalidity Contentions.

1. The Asserted Claims Are Directed to Generic, Conventional, Routine, and Well-Known Concepts.

The Asserted Claims recite various combinations of features including: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices. *See* Compl. ¶¶ 21-56. Each of these features was individually well-known, routine, and conventional in the art well before April 10, 2002. And a POSITA would have been motivated to combine these features for numerous reasons that are expressly reflected in the prior art references. The following sections present non-exclusive and non-exhaustive arguments demonstrating that each claimed concept was well-known and that the combinations recited in the Asserted Claims are all anticipated and/or rendered obvious by the voluminous prior art. Google reserves the right to rely on any reference identified in Tables 1, 2, or 3 above, as well as any additional information gained through the normal course of discovery from any party and/or third party to this litigation, regardless of whether such reference is expressly identified below or in the Claim Chart Exhibits.

(a) Dynamic Route Computation Using Map Data Was a Generic, Conventional, Routine, and Well-Known Concept.

Plaintiff alleges that certain Asserted Claims are directed to the concept of “Dynamic Route Computation Using Map Data” and that this concept was purportedly novel at the time of invention. Compl. ¶¶ 21-31. Specifically, Plaintiff alleges that the Asserted Claims recite “computer-implemented methods that generate real-time routes along actual map networks, rather than just plotting raw coordinates,” including “determining a plurality of possible routes from the starting location to the destination location by performing a route computation ... using map data.” Compl. ¶ 21. Plaintiff further alleges that the Asserted Patents’ technique of “correlating each

received location to ‘a point on the network pathways of the map data nearest to the actual mobile device’s location’” was a “specialized algorithmic solution” that solved the “prior art problem of breadcrumb trails.” Compl. ¶ 26. Plaintiff also alleges that “real-time route management”—i.e., “modify[ing] or remov[ing] at least one of the ... possible routes based on ... a subsequent location of the mobile device” as the device travels (Compl. ¶¶ 29–30)—“was not conventional in the field” at the time. Compl. ¶ 31.

Plaintiff’s allegations are wrong. As demonstrated in the references listed in Tables 1-3, *supra*, including at least the specific references identified below, every one of these features was well-established in the prior art before April 2002. Indeed, the concepts of dynamically computing routes using digital map data—e.g., representing road networks as graphs with nodes (intersections) and links (road segments), applying shortest-path algorithms, etc.—and modifying or removing displayed routes based on actual location were pervasive in the prior art before April 2002. Numerous references demonstrate that this was well-established technology. The prior art is replete with examples, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Abe 521; Adolph 836; Agnew 573; Chen 023; Chen 179; Coffee 691; Collier 069; DeLorme 158; DeLorme 677; DeLorme 492; Drury 593; Drury 421; Drury 593; Drury 421; Durocher 535; Endo 905; Gunthorpe 029; Hiyokawa 888; Hoffberg 700; Hoffberg 472; Ito 278; Jin 107; Jin 179; Jin 683; Johnson 389; Johnson 565; Kadono 273; Kato 443; Knockeart 694; Knockeart 374; Knockeart 452; Knockeart 428; Kotzin 985; Kozak 685; Krull 637; Krull 615; Lau 828; Lee 213; Lee 253; Mannings 515; Mochizuki 305; Oberstein 553; Obradovich 382; Peterson 227; Pu 325; Reed 234; Rennard 123; Rennard 607; Smith 365; Turner 292; Wolfson 827; Yamashita 869; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1989 Schmandt, Synthetic Speech for Real Time Direction-Giving; 1991 Ishikawa, Map Navigation

Software of the Electro-Multivision of the '91 Toyota Soarer; 1991 Krage, The TravTek Driver Information System; 1991 Rilett, Simulating the TravTek Route Guidance Logic Using the Integration Traffic Model; 1991 Rillings, TravTek; 1991 Watling, The Modelling of Dynamic Route Guidance Systems; 1991 White, Car Navigation Systems; 1992 Transportation Research Record, No. 1408 - Intelligent Vehicle Highway Systems; 1993 Fleischman, A Preliminary Account of TravTek Route Guidance Use by Rental and Local Drivers; 1994 Blumentritt, TravTek System Architecture Evaluation; 1994 Peeta, System Optimal Dynamic Traffic Assignment in Congested Networks with Advanced Information Systems; 1995 DOT, Trav-Tek System Architecture Evaluation; 1995 Psaraftis, Dynamic Vehicle Routing_Status and Prospects; 1996 Inman, TravTek Evaluation Orlando Test Network Study; 1996 Inman, TravTek Evaluation Rental and Local User Study; 1996 Inman, TravTek Global Evaluation and Executive Summary; 1996 Perez, TravTek Evaluation Safety Study; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 1998 Blischke, Dynamic Route Guidance - Different Approaches to the System Concepts; 1998 Philips, CARiN 522-520 User Manual; 1999 Jaguar, Jaguar S-Type Navigation Handbook; 2000 Infiniti, 2000 I30-Q45 2001 QX4 Infiniti Navigation System Owner's Manual; 2001 Dixon, PDA GPS Navigation - TravRoute CoPilot; 2000 Larsen, The Dynamic Vehicle Routing Problem; 2001 Oh, Dynamic Route Guidance and Network Traffic; 2001 Pioneer, AVIC-9DVD Operation Manual; 2001 Wahle, A Dynamic Route Guidance System Based on Real Traffic Data; 2002 Llaneras, Inventory of In-Vehicle Technology Human Factors Design Characteristics; and 2001 TravRoute, CoPilot 2002 User's Guide.

(b) Predictive Positioning Between Location Updates Was a Generic, Conventional, Routine, and Well-Known Concept.

Plaintiff alleges that certain Asserted Claims are directed to “specific techniques for predictive positioning that improve how navigation systems display a moving device’s route in

real time.” (Compl. ¶ 32.) Specifically, Plaintiff alleges that the Asserted Patents predict a device’s position “based on ... at least one of a speed ... a heading ... a road speed limit ... and a turn restriction” and draw “a partial route of travel ... from the first position to the second position” between actual GPS updates. (Compl. ¶¶ 32–34.) Plaintiff further alleges that the patents implement a conditional update algorithm that “only corrects it by snapping the displayed route to the correct network pathway” when the “predicted position was [in]accurate,” thereby “reducing visual jitter and computational load.” (Compl. ¶ 35.) Finally, Plaintiff alleges the Asserted Patents synchronize on-screen movement to “the actual update interval” to address “irregular GPS update rates.” (Compl. ¶¶ 36–38.)

Again, Plaintiff’s allegations of purported novelty are wrong. As demonstrated in the references listed in Tables 1-3, *supra*, including at least the specific references identified below, every one of these techniques was well-known before April 2002. The prior art is replete with numerous examples, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Booth 682; Davies 135; Davies 338; Drury 593; Drury 421 ; Dupray 861; Knockeart 694; Knockeart 374; Knockeart 428; Mohi 200; Shimizu 353; Streit 824; Wolfson 827; Wolfson 329; 1988 Krakiwsky, A Kalman Filter for Integrating Dead Reckoning, Map Matching and GPS Positioning; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1991 White, Car Navigation Systems; 1994 Blumentritt, TravTek System Architecture Evaluation; 1994 Scott, Increased Accuracy of Motor Vehicle Position Estimation by Utilising Map Data, Vehicle Dynamics, and Other Information Sources; 1996 Bernstein, An Introduction to Map Matching for Personal Navigation Assistants; 1996 Jo, A Map Matching Method with the Innovation of the Kalman Filtering; 1996 Kim, Node Based Map Matching Algorithm for Car Navigation System; 1997 Zhao, Vehicle Location and Navigation Systems;

1997 Abbott, Land-Vehicle Navigation Systems_An Examination of the Influence of Individual Navigation Aids on System Performance; 1999 Bevy, Evaluation of a Blended Dead Reckoning and Carrier Phase Differential GPS System for Control of an Off-Road Vehicle; 1999 Kealy, Land Vehicle Navigation in the Urban Canyon - A Kalman Filter Solution using Integrated GPS, GLONASS and Dead Reckoning; 2000 Stephen, Development of a Multi-Sensor GNSS Based Vehicle Navigation System; 2001 Grewal, Global Positioning Systems, Inertial Navigation, and Integration; 2001 Taylor, Road Reduction Filtering for GPS-GIS Navigation; and 2001 Wood, Dead Reckoning Keeps GPS In Line.

(c) Multiple Route Alternatives with Travel Time Estimates Was a Generic, Conventional, Routine, and Well-Known Concept.

Plaintiff alleges that certain Asserted Claims innovate by “determining ‘a plurality of possible routes’ between the start and destination and, for each, obtaining or determining a travel time estimate,” displayed concurrently. (Compl. ¶ 42.) Plaintiff alleges that “[i]n early GPS navigation, users typically were guided along a single primary route” and that “the claimed invention automatically computes and updates multiple routes and travel times in parallel.” (Compl. ¶ 43.) Plaintiff further alleges the Asserted Patents predict “alternate routes at upcoming forks or junctions.” (Compl. ¶ 43.)

Again, Plaintiff’s allegations of purported novelty are wrong. As demonstrated in the references listed in Tables 1-3, *supra*, including at least the specific references identified below, every one of these techniques was well-known before April 2002. The prior art is replete with numerous examples, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Adolph 836; Childs 093; DeLorme 492; DeLorme 158; DeLorme 677; Drury 421; Drury 593; Grube 874; Hayashida 502; Hiyokawa 888; Jin 107; Knockeart 374; Knockeart 694; Knockeart 452; Knockeart 428; Kozak 685; Krull 637; Mochizuki 305; Nimura

753; Ohler 188; Peterson 227; Petzold 508; Reed 234; Tsuyuki 276; Yamashita 869; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1991 Rilett, Simulating the TravTek Route Guidance Logic Using the Integration Traffic Model; 1991 Watling, The Modelling of Dynamic Route Guidance Systems; 1992 Paelke, Development of a Traffic Information System Driver Interface; 1992 Transportation Research Record, No. 1408 - Intelligent Vehicle Highway Systems; 1994 Blumentritt, TravTek System Architecture Evaluation; 1995 DOT, Trav-Tek System Architecture Evaluation; 1996 DeLorme, AAA Map'n'Go 2.0 for Windows User's Manual; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 2000 Infiniti, 2000 I30-Q45 2001 QX4 Infiniti Navigation System Owner's Manual; 2001 Oh, Dynamic Route Guidance and Network Traffic; 2001 Pioneer, AVIC-9DVD Operation Manual; 2001 Wahle, A Dynamic Route Guidance System Based on Real Traffic Data; 2002 Kenwood, KNA-DV2100 Instruction Manual; and 2001 TravRoute, CoPilot 2002 User's Guide.

(d) Route Optimization Based on User Preferences Was a Generic, Conventional, Routine, and Well-Known Concept.

Plaintiff alleges that certain Asserted Claims disclose route optimization incorporating “a ‘route optimization goal’ or ‘road preference’ as input” to produce “a customized route,” including preferences for “fastest route,” “shortest route,” and avoiding “highways,” “toll roads,” “roads that are open to truck traffic,” and “arterial roads.” (Compl. ¶¶ 48–51.) Plaintiff further alleges that the Asserted Patents disclose, for the first time in history, the use of “dynamic route estimation calculations” based on “traffic congestion data” and adapt to “mode of travel” (motor vehicle, bicycle, foot). (Compl. ¶¶ 49–50.) Plaintiff alleges that “[t]raditional navigation systems often defaulted to fastest or shortest route without dynamically switching based on user preference profiles.” (Compl. ¶ 51.)

Again, Plaintiff's allegations of purported novelty are wrong. As demonstrated in the references listed in Tables 1-3, *supra*, including at least the specific references identified below, every one of these techniques was well-known before April 2002. The prior art is replete with numerous examples, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Childs 093; DeLorme 158; DeLorme 677; DeLorme 492; Knockeart 694; Knockeart 374; Kotzin 985; Kozak 685; Krull 615; Ohler 188; Wolfson 827; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1991 Watling, The Modelling of Dynamic Route Guidance Systems; 1993 Fleischman, A Preliminary Account of TravTek Route Guidance Use by Rental and Local Drivers; 1994 Blumentritt, TravTek System Architecture Evaluation; 1995 DOT, Trav-Tek System Architecture Evaluation; 1996 DeLorme, AAA Map'n'Go 2.0 for Windows User's Manual; 1996 Inman, TravTek Evaluation Rental and Local User Study; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 1998 Clarion, AutoPC 310C Owner's Manual; 1999 Jaguar, Jaguar S-Type Navigation Handbook; 2000 Blaupunkt, TravelPilot DX-N Operating Instructions; 2000 DeLorme, Street Atlas USA 7.0 User Guide; 2000 Infiniti, 2000 I30-Q45 2001 QX4 Infiniti Navigation System Owner's Manual; 2001 Garmin, StreetPilot III Portable GPS with Auto-Routing and Voice - Owner's Manual and Reference Guide; 2001 Oh, Dynamic Route Guidance and Network Traffic; 2001 Pioneer, AVIC-9DVD Operation Manual; 2001 Wahle, A Dynamic Route Guidance System Based on Real Traffic Data; 2002 DeLorme, XMap Handheld Street Atlas USA Edition - User Guide; 2002 Kenwood, KNA-DV2100 Instruction Manual; and 2002 TravRoute, CoPilot 2002 User's Guide.

(e) Real-Time Route Sharing Between Devices Was a Generic, Conventional, Routine, and Well-Known Concept.

Plaintiff alleges that certain Asserted Claims are directed to a “multi-device navigation scenario” where “one mobile device’s travel is tracked and displayed simultaneously on a second device's map in real-time.” (Compl. ¶ 52.) Specifically, Plaintiff alleges that “as the first device travels, its real-time location updates are used to calculate a route of travel along the road network, and ‘third data representing points along the route’ is transmitted to a second mobile device,” which then “provides a GUI with a map showing the road network and a representation of the first device's route.” (Compl. ¶¶ 52–53.) Plaintiff claims this involves multiple architectures including “peer-to-peer,” “peer-to-server,” “server-to-peer,” and “local storage intermediary” connections (Compl. ¶ 53, citing 208 patent, cls. 5–6), and that “coordinated map rendering on two separate screens” was “a new combination of computer behaviors.” (Compl. ¶ 56.)

Again, Plaintiff’s allegations of purported novelty are wrong. As demonstrated in the references listed in Tables 1-3, *supra*, including at least the specific references identified below, every one of these techniques was well-known before April 2002. The prior art is replete with numerous examples, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Booth 682; Chern 854; Dupray 861; Dupray 591; Fan 576; Grube 874; Hoffbert 472; Johnson 389; Johnson 565; Mathews 625; Mohi 200; Moore 210; Obradovich 382; Obradovich 627; Obradovich 595; Obradovich 364; Poulin 453; Reed 234; Saint-Hilaire 503; Sandhu 733; Wolfson 827; 1989 Perlstein, Automatic Vehicle Location Systems; 1991 Krage, The TravTek Driver Information System; 1991 Rillings, TravTek; 1994 Blumentritt, TravTek System Architecture Evaluation; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 1998 Blischke, Dynamic Route Guidance - Different Approaches to the System Concepts; 1999 Garmin, NavTalk - Owner's Manual and Reference

Guide; 2000 Garmin, NavTalk PILOT - Pilot's Guide & Reference; 2001 Benefon, Benefon ESC! Owner's Manual; 2001 Oh, Dynamic Route Guidance and Network Traffic; and 2002 Benefon, Benefon ESC! Owner's Manual.

2. A POSITA Would Have Been Motivated to Combine These Known Features.

A POSITA in April 2002 would have been motivated to combine the above-described features for multiple reasons that are expressly reflected in the prior art references. Plaintiff's contention that the combination of these features was a “new combination of computer behaviors, functioning together to achieve capabilities that did not exist in prior systems” (Compl. ¶ 56) is contradicted by the prior art, which repeatedly and expressly combined these very features in response to well-understood industry needs and technological imperatives.

As noted, the motivations to combine identified in these Invalidity Contentions are exemplary and representative, and are not an exhaustive list of motivations to combine, nor potential combinations. The exemplary motivations to combine identified in these Invalidity Contentions are not required under the Court's orders or local rules, and further motivations and evidentiary support will be provided through, for example, claim construction, fact discovery (including third-party discovery), and expert discovery.

(a) The Prior Art Already Combined the Claimed Features.

For example, the prior art expressly recognized the desirability of integrating dynamic route computation on mobile devices via wireless communication networks. By April 2002, the art recognized three fundamental obstacles to providing real-time navigation on mobile devices: (1) limited memory that made it impractical to store large geographic databases locally; (2) insufficient processing power for processor-intensive route computation; and (3) GPS inaccuracy that made raw satellite coordinates unreliable for turn-by-turn guidance. These

recognized problems created a motivation to combine server-based route computation with wireless data delivery—the core architecture design the Asserted Patents purport to claim. The prior art is replete with numerous examples expressly identifying these motivations, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.:* Chen 023; Childs 093; Durocher 535; Jin 683; Jin 179; Mathews 625; Rennard 123; Turner 292.

Additionally, for example, the prior art expressly combined real-time route sharing with navigation and route guidance to achieve known benefits. The prior art also recognized that knowing where fleet members or associates were located—and where they were headed—was beneficial for coordination, safety, and operational efficiency. Thus, a POSITA would have had a known, powerful motivation to combine location tracking with route sharing between devices. The prior art is replete with numerous examples expressly identifying these motivations, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.:* Booth 682; Chern 854; Coffee 691; Dupray 861; Dupray 591; Fan 576; Grube 874; Hoffbert 472; Johnson 389; Johnson 565; Mathews 625; Mohi 200; Moore 210; Obradovich 382; Obradovich 627; Obradovich 595; Obradovich 364; Poulin 453; Reed 234; Saint-Hilaire 503; Sandhu 733; Wolfson 827; 1989 Perlstein, Automatic Vehicle Location Systems; 1991 Krage, The TravTek Driver Information System; 1991 Rillings, TravTek; 1994 Blumentritt, TravTek System Architecture Evaluation; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 1998 Blischke, Dynamic Route Guidance - Different Approaches to the System Concepts; 1999 Garmin, NavTalk - Owner's Manual and Reference Guide; 2000 Garmin, NavTalk PILOT - Pilot's Guide & Reference; 2001 Benefon, Benefon ESC! Owner's Manual; 2001 Oh, Dynamic Route Guidance and Network Traffic; and 2002 Benefon, Benefon ESC! Owner's Manual.

Additionally, for example, the prior art expressly recognized the need for improved position accuracy through dead reckoning, Kalman filtering, and map matching. Contrary to Plaintiff's assertion that predictive positioning using "metrics" such as "speed, heading, road speed limit, and turn restriction" to "display[] a position that advances smoothly" was "not a well-understood or routine practice" (Compl. ¶¶ 32, 38-39), multiple references expressly identified the known inadequacy of raw GPS positions and the well-understood motivation to combine dead reckoning, Kalman filtering, and map matching to address this problem for smoother location monitoring and display. The prior art is replete with numerous examples expressly identifying these motivations, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Booth 682; Davies 135; Davies 338; Drury 593; Drury 421 ; Dupray 861; Knockeart 694; Knockeart 374; Knockeart 428; Mohi 200; Shimizu 353; Streit 824; Wolfson 827; Wolfson 329; 1988 Krakiwsky, A Kalman Filter for Integrating Dead Reckoning, Map Matching and GPS Positioning; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1991 White, Car Navigation Systems; 1994 Blumentritt, TravTek System Architecture Evaluation; 1994 Scott, Increased Accuracy of Motor Vehicle Position Estimation by Utilising Map Data, Vehicle Dynamics, and Other Information Sources; 1996 Bernstein, An Introduction to Map Matching for Personal Navigation Assistants; 1996 Jo, A Map Matching Method with the Innovation of the Kalman Filtering; 1996 Kim, Node Based Map Matching Algorithm for Car Navigation System; 1997 Zhao, Vehicle Location and Navigation Systems; 1997 Abbott, Land-Vehicle Navigation Systems_An Examination of the Influence of Individual Navigation Aids on System Performance; 1999 Bevly, Evaluation of a Blended Dead Reckoning and Carrier Phase Differential GPS System for Control of an Off-Road Vehicle; 1999 Kealy, Land Vehicle Navigation in the Urban Canyon - A Kalman Filter Solution using Integrated GPS, GLONASS and Dead Reckoning; 2000 Stephen,

Development of a Multi-Sensor GNSS Based Vehicle Navigation System; 2001 Grewal, Global Positioning Systems, Inertial Navigation, and Integration; 2001 Taylor, Road Reduction Filtering for GPS-GIS Navigation; and 2001 Wood, Dead Reckoning Keeps GPS In Line.

Additionally, for example, the prior art expressly combined dynamic rerouting with real-time traffic data and location tracking to achieve known benefits. Plaintiff's claim that "real-time route management" including "clearing a route that is no longer relevant" and "proactively updat[ing] the road network routing GUI in real-time" was "not conventional" (Compl. ¶¶ 30–31) is contradicted by the prior art, which recognized that route deviations and changing traffic conditions were inevitable and that dynamic recalculation was essential for useful navigation. The prior art is replete with numerous examples expressly identifying these motivations, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.*: Abe 521; Adolph 836; Agnew 573; Chen 023; Chen 179; Coffee 691; Collier 069; DeLorme 158; DeLorme 677; DeLorme 492; Drury 593; Drury 421; Drury 593; Drury 421; Durocher 535; Endo 905; Gunthorpe 029; Hiyokawa 888; Hoffberg 700; Hoffberg 472; Ito 278; Jin 107; Jin 179; Jin 683; Johnson 389; Johnson 565; Kadono 273; Kato 443; Knockeart 694; Knockeart 374; Knockeart 452; Knockeart 428; Kotzin 985; Kozak 685; Krull 637; Krull 615; Lau 828; Lee 213; Lee 253; Mannings 515; Mochizuki 305; Oberstein 553; Obradovich 382; Peterson 227; Pu 325; Reed 234; Rennard 123; Rennard 607; Smith 365; Turner 292; Wolfson 827; Yamashita 869; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1989 Schmandt, Synthetic Speech for Real Time Direction-Giving; 1991 Ishikawa, Map Navigation Software of the Electro-Multivision of the '91 Toyota Soarer; 1991 Krage, The TravTek Driver Information System; 1991 Rilett, Simulating the TravTek Route Guidance Logic Using the Integration Traffic Model; 1991 Rillings, TravTek; 1991 Watling, The Modelling of Dynamic Route Guidance Systems; 1991

White, Car Navigation Systems; 1992 Transportation Research Record, No. 1408 - Intelligent Vehicle Highway Systems; 1993 Fleischman, A Preliminary Account of TravTek Route Guidance Use by Rental and Local Drivers; 1994 Blumentritt, TravTek System Architecture Evaluation; 1994 Peeta, System Optimal Dynamic Traffic Assignment in Congested Networks with Advanced Information Systems; 1995 DOT, Trav-Tek System Architecture Evaluation; 1995 Psaraftis, Dynamic Vehicle Routing_Status and Prospects; 1996 Inman, TravTek Evaluation Orlando Test Network Study; 1996 Inman, TravTek Evaluation Rental and Local User Study; 1996 Inman, TravTek Global Evaluation and Executive Summary; 1996 Perez, TravTek Evaluation Safety Study; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 1998 Blischke, Dynamic Route Guidance - Different Approaches to the System Concepts; 1998 Philips, CARiN 522-520 User Manual; 1999 Jaguar, Jaguar S-Type Navigation Handbook; 2000 Infiniti, 2000 I30-Q45 2001 QX4 Infiniti Navigation System Owner's Manual; 2001 Dixon, PDA GPS Navigation - TravRoute CoPilot; 2000 Larsen, The Dynamic Vehicle Routing Problem; 2001 Oh, Dynamic Route Guidance and Network Traffic; 2001 Pioneer, AVIC-9DVD Operation Manual; 2001 Wahle, A Dynamic Route Guidance System Based on Real Traffic Data; 2002 Llaneras, Inventory of In-Vehicle Technology Human Factors Design Characteristics; and 2001 TravRoute, CoPilot 2002 User's Guide.

Additionally, for example, the prior art expressly combined multiple route alternatives with user preference-based optimization and dynamic adjustment to achieve known benefits. Plaintiff's claim that "conventional navigation apps ... would typically either re-route only after the original route was completely abandoned or simply show a single route at a time" (Compl. ¶ 30) is contradicted by references that expressly recognized the limitations of single-route guidance and disclosed systems providing and dynamically managing multiple route alternatives. The prior art

is replete with numerous examples expressly identifying these motivations, and the specific examples listed below are merely a sampling of the full breadth of prior art. *See, e.g.:* Adolph 836; Childs 093; DeLorme 492; DeLorme 158; DeLorme 677; Drury 421; Drury 593; Durocher 535; Grube 874; Hayashida 502; Hiyokawa 888; Jin 107; Knockeart 374; Knockeart 694; Knockeart 452; Knockeart 428; Kozak 685; Krull 637; Mochizuki 305; Nimura 753; Ohler 188; Peterson 227; Petzold 508; Reed 234; Tsuyuki 276; Yamashita 869; 1989 Davis, Back Seat Driver_Voice Assisted Automobile Navigation; 1991 Rilett, Simulating the TravTek Route Guidance Logic Using the Integration Traffic Model; 1991 Watling, The Modelling of Dynamic Route Guidance Systems; 1992 Paelke, Development of a Traffic Information System Driver Interface; 1992 Transportation Research Record, No. 1408 - Intelligent Vehicle Highway Systems; 1994 Blumentritt, TravTek System Architecture Evaluation; 1995 DOT, Trav-Tek System Architecture Evaluation; 1996 DeLorme, AAA Map'n'Go 2.0 for Windows User's Manual; 1996 Van Aerde, TravTek Evaluation Modeling Study; 1997 Zhao, Vehicle Location and Navigation Systems; 2000 Infiniti, 2000 I30-Q45 2001 QX4 Infiniti Navigation System Owner's Manual; 2001 Oh, Dynamic Route Guidance and Network Traffic; 2001 Pioneer, AVIC-9DVD Operation Manual; 2001 Wahle, A Dynamic Route Guidance System Based on Real Traffic Data; 2002 Kenwood, KNA-DV2100 Instruction Manual; and 2001 TravRoute, CoPilot 2002 User's Guide.

(b) The Motivation to Combine These Features Was Driven by Well-Recognized Market Needs.

Beyond the express teachings of individual references, the broader market context as of April 2002 provided powerful additional motivation to combine these features. The prior art reflects that several converging forces drove the integration of dynamic route computation, predictive positioning, multiple route alternatives, user preferences, and real-time route sharing.

The FCC E-911 mandate created urgent demand for mobile location technology. Multiple references note that “[r]ecent government regulations have highlighted the need for wireless carriers to provide” location-identifying capability in mobile devices. (Jin 179, col. 1, ll. 60–67; Jin 726, ¶ 0008.) The FCC’s requirement that wireless carriers be able to locate 911 callers drove massive investment in mobile positioning technology, making GPS-equipped handsets and network-based location increasingly available as a platform on which navigation applications could be built.

GPS-enabled mobile phones were proliferating by 2002, and GPS receivers were being integrated into mobile handsets for regulatory compliance and consumer services. “GPS-based navigation systems ... provid[ing] turn-by-turn directions and other information wirelessly to vehicle operators” were known (Lau 828, col. 1, ll. 25–55), and “GPS devices provid[ing] local processing for directing” drivers and “[m]ating automated location finding systems with internet travel direction services” were already known (Johnson 565, col. 3, ll. 26–31). The availability of GPS-equipped mobile devices with wireless connectivity was the enabling platform that made server-based navigation practical.

Consumer navigation systems were already commercially deployed. The 2002 Llaneras inventory documented that multiple commercial GPS navigation products were available as of February 2002, including, by way of example, the Garmin StreetPilot III with auto-routing and voice guidance, the Hertz NeverLost system for rental vehicles, and the DestinAtor by PowerLOC Technologies for PDAs. (2002 Llaneras, Table 2.) The Garmin StreetPilot III Manual documented route preferences for faster time, shorter distance, vehicle type selection, and road avoidance settings—confirming that the features Plaintiff claims as novel were already in commercial products. The prior art is replete with numerous examples of commercial products with these

functionalities (*see* Table 3, *supra*), and the specific examples listed here are merely a sampling of the full breadth of prior art.

Fleet management and AVL were mature commercial industries. The academic and industry literature extensively documented that Automatic Vehicle Location (AVL) systems—involving GPS-equipped vehicles sharing their positions wirelessly with central systems for tracking and coordination—were commercially mature by the mid-1990s. The “State of the Art in Automatic Vehicle Location Systems” (University of Wisconsin, 1998) comprehensively documented this maturity. (Lau 828, p. 6.) The Dupray patents cite fleet management publications by II Morrow, Inc. on “Fleet Management Solutions with GPS Technology” (1995) and HighwayMaster systems (1993–1995). (Dupray 861, p. 11.)

Government-funded research programs had already deployed and evaluated integrated systems. The TravTek system (1992–1993) demonstrated real-time navigation with dynamic rerouting in 100 specially-equipped vehicles in Orlando, Florida, with comprehensive government evaluation. (1996 Inman, TravTek Evaluation Rental and Local User Study, pp. 1–5.) The 1993 Paelke article documented the ADVANCE program involving up to 5,000 vehicles with route guidance and real-time traffic probe capabilities. (Paelke 1993, pp. 1–5.) The 1993 Fleischman article documented how rental and local drivers interacted with GPS route guidance in a real-world deployment. (1993 Fleischman, A Preliminary Account of TravTek Route Guidance Use by Rental and Local Drivers, pp. 120–122.) The 1991 Rillings article described the integration of navigation, real-time traffic updates, route guidance, and motorist services. (1991 Rillings, TravTek, pp. 729–732.) These government-funded programs demonstrated the feasibility and desirability of combining all the claimed features years before the Asserted Patents’ priority date.

The consumer desire for personalized navigation was well-documented. The TravTek evaluation found that 87% of rental users selected the “fastest” route method, while others selected “avoid Interstates” or “avoid toll roads”—confirming that users wanted and used preference-based route optimization. (1996 Inman, TravTek Evaluation Rental and Local User Study, pp. 61–63.) The Garmin StreetPilot III offered eight vehicle types and multiple avoidance settings. The DeLorme references offered road type preferences, speed adjustments, and scenic route options. These commercially validated market needs were widely known and well-understood.

Each of these market forces independently motivated the combination of the claimed features, and together they created an overwhelming imperative for any POSITA to integrate these technologies, as myriad prior artisans already were doing by 2002.

(c) The Claimed Combinations Required No More Than the Application of Known Techniques to Achieve Predictable Results.

Each electronic navigation feature Plaintiff identifies—dynamic route computation using map data, predictive positioning between location updates, multiple route alternatives with travel time estimates, route optimization based on user preferences, and real-time route sharing between devices—was individually well-known and widely deployed before April 2002. The combination of these features required no inventive leap; it merely involved applying known techniques to achieve predictable results. Under *KSR*, a combination of familiar elements according to known methods yields predictable results and is therefore obvious. *See* § III.C.1, *supra*.

Critically, the prior art does not merely show these features in isolation. Rather, the prior art establishes that these techniques were routinely combined in the same systems, confirming that their integration yielded no unexpected synergy. The prior art routinely combined all five features in working systems—and did so for well-understood, expressly articulated reasons. *See*

§ III.C.2.a, *supra*. The Asserted Patents’ combination of these same features is nothing more than the predictable use of prior art elements according to their established functions. Plaintiff’s assertion that an “adequate solution ... eluded those skilled in the art” (Compl. ¶ 60) is belied by the overwhelming body of prior art that, individually and in combination, disclosed every feature claimed.

D. Lack of Secondary Indicia of Nonobviousness

Google is not aware of any evidence that would tend to establish any secondary considerations of non-obviousness. This lack of evidence further renders the Asserted Claims obvious. Proving any such secondary considerations is Plaintiff’s burden. *See, e.g., ZUP, LLC v. Nach Mfg., Inc.*, 896 F.3d 1365, 1373 (Fed. Cir. 2018) (“[A] patentee bears the burden of production with respect to evidence of secondary considerations of nonobviousness.”). Plaintiff has not, and cannot, establish secondary considerations of nonobviousness. Accordingly, Google reserves all rights regarding its full contention in this respect until after Plaintiff completes its final and binding disclosure of any such evidence and contentions. In the meantime, Google notes the complete lack of any such evidence in the record.

With regard to the “commercial success” factor, Plaintiff has not shown any commercial success of the alleged inventions of the Asserted Patents, including of the “MapMessengerTM” product that is identified in the Asserted Patents’ specifications. Plaintiff’s Complaint does not mention any commercial products or services. Plaintiff has not presented any evidence of commercial sales. Furthermore, Plaintiff has failed to establish any nexus between the alleged invention and any alleged commercial success. *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006). Commercial success cannot be based on unclaimed features or those known in the art. *Id.*

While Plaintiff has not shown any actual commercial success, it also has not articulated any nexus between any alleged commercial success and any claimed feature that is unknown in the art. As set forth in these Invalidity Contentions, the Asserted Claims do not include any novel elements, but are, at best, an obvious combination of existing solutions for electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices, thus precluding any showing of commercial success based on claimed novel features.

Alleged Commercial Success Via Licensing. Plaintiff has presented no evidence of commercial success via a licensing program.

Long-felt But Unresolved Needs. Plaintiff has presented no evidence of any long felt and unresolved need. To the contrary, the prior art discloses myriad solutions to resolve the purported problem(s) identified in the Asserted Patents with regard to electronic navigation systems and/or methods with functionalities such as: dynamic route computation using map data; predictive positioning between location updates; multiple route alternatives with travel time estimates; route optimization preferences; and real-time route sharing between devices. The Asserted Claims do not disclose any novel solutions; instead, they are directed to solutions that already existed in the prior art. *See Geo. M. Martin Co. v. Alliance Machine Sys. Int'l*, 618 F.3d 1294, 1304–05 (Fed. Cir. 2010) (rejecting secondary-consideration evidence where the supposed need had already “been met by prior art machines”).

No Industry Praise. There is also no evidence of industry praise for the alleged invention of the Asserted Patents or any functionality that allegedly practices the Asserted Patents. To the extent any praise is related to any functionality that allegedly practices the Asserted

Patents, that praise is not due to the allegedly novel features of the Asserted Patents, but instead only to features present in the prior art, which is not a sufficient nexus to be relevant to the question of industry praise for purposes of obviousness. *See Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328 (Fed. Cir. 2008). For secondary-considerations evidence to be relevant to obviousness, it must have a clear “nexus” to the claimed invention. *Ormco, Inc. v. Align Tech., Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006); *see also Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1385 (Fed. Cir. 2015) (rejecting evidence lacking a nexus to “what is both claimed and novel in the claim”). Praise of Google Maps is not praise of the Asserted Patents.

Unexpected Results. No evidence of any such unexpected results is known or has been presented. As discussed above, the concepts contained in the Asserted Claims were already combined in the same manner as in the Asserted Patents. Those prior art systems, as referenced above and in the Claim Chart Exhibits, disclosed the same combination of elements, and the same result of that combination, that is recited in each Asserted Claim. Thus, there were no unexpected results that arose from combining the well-known elements in the Asserted Claims.

Failure of Others. No evidence of any such failure is known. To the contrary, the vast volume of prior art suggests that others successfully implemented the solutions purportedly covered by the Asserted Claims.

Skepticism by Experts. To Google’s knowledge, no expert or POSITA at the time of the alleged inventions expressed skepticism about implementing the alleged inventions. Such skepticism would have been unfounded, in any event, in light of the great weight of prior art already implementing the alleged inventions.

Teaching Away by Others. No evidence of any such teaching is known. Any purported teaching away would have been unfounded, in any event, in light of the great weight of prior art already implementing the alleged inventions.

Recognition of a Problem. As discussed above, the industry recognized the alleged problems to be solved and had already discussed multiple solutions that implemented the same features listed in the Asserted Claims.

Copying of the Alleged Invention by Competitors. No credible evidence of any such copying is known. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1366 (Fed. Cir. 2001) (allegedly copied feature must be an embodiment of the patented claims).

In sum, Google is not aware of any credible evidence of secondary considerations that would favor a finding of validity.

IV. DOUBLE PATENTING

At least some, if not all, Asserted Claims are invalid due to statutory double patenting and/or obviousness-type double patenting. It is well-settled that a patent applicant is entitled to only one patent for its invention. 35 U.S.C. § 101 (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain *a patent* therefore, subject to the conditions and requirements of this title.” (emphasis added)); *see also Miller v. Eagle Mfg. Co.*, 151 U.S. 186, 198 (1894) (“[N]o patent can issue for an invention actually covered by a former patent, especially to the same patentee [I]t must distinctly appear that the invention covered by the later patent was a separate invention, distinctly different and independent from that covered by the first patent; in other words, it must be something substantially different from that comprehended in the first patent. It must consist in

something more than a mere distinction of the breadth or scope of the claims of each patent. If the case comes within the first or second above classes, the second patent is absolutely void.”).

There are two forms of double patenting: statutory double patenting and obviousness-type double patenting.

[D]ouble patenting rejections usually take one or both of two forms, namely, the ‘same invention’ type ‘double patenting’ identifiable with the statutory provision 35 U.S.C. § 101, saying that an inventor may obtain a patent, interpreted as meaning only one patent; and the ‘obviousness’ type ‘double patenting,’ a judicially-created doctrine grounded in public policy rather than statute and primarily intended to prevent prolongation of monopoly by prohibiting claims in a second patent not patentably distinguishing from claims of a first patent.

Application of Thorington, 418 F.2d 528, 534 (C.C.P.A. 1969); *Sun Pharm. Indus., Ltd. v. Eli Lilly & Co.*, 611 F.3d 1381, 1384 (Fed. Cir. 2010) (“The proscription against double patenting takes two forms: (1) statutory double patenting, which stems from 35 U.S.C. § 101 and prohibits a later patent from covering the same invention, i.e., identical subject matter, as an earlier patent, and (2) obviousness-type double patenting, which is a judicially created doctrine that prevents a later patent from covering a slight variation of an earlier patented invention.”).

Statutory double patenting precludes multiple patents on the same invention. *See* 35 U.S.C. § 101. “A good test, and probably the only objective test, for ‘same invention,’ is whether one of the claims could be literally infringed without literally infringing the other. If it could be, the claims do not define identically the same invention.” *Application of Vogel*, 422 F.2d 438, 441 (C.C.P.A. 1970) (citing *Application of Eckel*, 393 F.2d 848 (C.C.P.A. 1968)).

Obviousness-type double patenting has two separate and independent rationales, as the Federal Circuit has explained:

There are two justifications for obviousness-type double patenting. The first is “to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the extension is brought about.” *Van Ornum*, 686 F.2d at 943-44 (quotation and citation omitted). The second rationale is to prevent multiple infringement suits by

different assignees asserting essentially the same patented invention. *Fallaux*, 564 F.3d at 1319 (recognizing that “harassment by multiple assignees” provides “a second justification for obviousness-type double patenting”); *see also* Chisum on Patents § 9.04[2][b][ii] (“The possibility of multiple suits against an infringer by assignees of related patents has long been recognized as one of the concerns behind the doctrine of double patenting.”).

In re Hubbell, 709 F.3d 1140, 1145 (Fed. Cir. 2013).

Analyzing obviousness-type double patenting is a two-step process. First, the differences between the claims of the patent being used as a reference and the claims at issue are identified. *Georgia-Pacific v. US Gypsum*, 195 F.3d 1322, 1326 (Fed. Cir. 1999) (“[A]nalysis of the claims at issue is the first step in determining if the second invention is merely an obvious variation of the first Because these two claims are so similar, we must look to see if there is anything to distinguish claim 1 of the ’989 patent from claim 1 of the ’569 patent. There are two differences between these claims.”), *amended on rehearing*, 204 F.3d 1359 (Fed. Cir. 2000). Second, whether those differences raise a patentable distinction must be determined. *Id.* at 1328 (finding that “[t]hese differences are not sufficient to render the claims patentably distinct”). “A later patent claim ‘is not patentably distinct from an earlier claim if the later claim is obvious over, or anticipated by, the earlier claim.’” *Hubbell*, 709 F.3d at 1145 (*quoting Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001)). Where the recited claims at issue are not explicitly disclosed in the claims of the patent being used as a reference, Google may rely on the knowledge of a POSITA, admitted prior art, or disclosure in the prior art references relied upon by Google.

Here, Plaintiff implicitly conceded, via terminal disclaimers, that the claims of the ’341 patent are not patentably distinct from those of U.S. Patent Nos. 7,565,155, 7,881,730, 8,095,152, 8,577,390, 9,354,069, and 9,607,346. Plaintiff also implicitly conceded, via terminal disclaimers, that the claims of the ’337 patent are not patentably distinct from those of the ’341 patent and U.S. Patent Nos. 7,565,155, 7,881,730, 8,095,152, 8,577,390, 9,354,069, 9,607,346,

and 9,921,077. Plaintiff also implicitly conceded, via terminal disclaimers, that the claims of the '208 patent are not patentably distinct from those of the '341 patent, the '337 patent, and U.S. Patent Nos. 7,565,155, 7,881,730, 8,095,152, 8,577,390, 9,354,069, 9,607,346, and 9,921,077. Plaintiff also implicitly conceded, via terminal disclaimers, that the claims of the '071 patent are not patentably distinct from those of the '208 patent and U.S. Patent No. 9,354,069. Plaintiff also implicitly conceded, via terminal disclaimers, that the claims of the '925 patent are not patentably distinct from those of U.S. Patent Nos. 9,921,077 and 10,502,583. Accordingly, some or all of the Asserted Claims are invalid for statutory double patenting and/or obviousness-type double patenting. *See, e.g., Gilead Scis., Inc. v. Natco Pharma Ltd.*, 753 F.3d 1208, 1217 (Fed. Cir. 2014); *In re Collect, LLC*, 81 F.4th 1216 (Fed. Cir. 2023).

Moreover, upon information and belief, one or more terminal disclaimers filed with respect to one or more Asserted Patents is invalid for lack of common ownership. *See, e.g., In re Fallaux*, 564 F.3d 1313, 1319 (Fed. Cir. 2009) (“[T]here is a second justification for obviousness-type double patenting—harassment by multiple assignees. The harassment justification for obviousness-type double patenting is particularly pertinent [where] patents are not commonly owned. If the ... patents were commonly owned, the terminal disclaimer filed in this case would have been effective to overcome the double patenting rejection. We note that this defect was of the applicant’s creation as through assignment it allowed ownership of the applications to be divided among different entities.”).

V. INVALIDITY UNDER 35 U.S.C. § 112

As detailed below, certain of the Asserted Claims lack written description or enablement, are indefinite, and/or fail to claim what the inventors regard as the invention under provisions of 35 U.S.C. § 112. The § 112 Invalidity Contentions set forth below are subject to revision and

amendment pursuant to Federal Rule of Civil Procedure 26(e) and the Orders of record in this matter to the extent appropriate in light of, without limitation, information provided by Plaintiff concerning its infringement allegations, further investigation and discovery, the Court's constructions of the claims at issue, positions taken by Plaintiff in this action or any other proceeding, review and analysis of expert witnesses, and/or as other circumstances warrant.

A. Lack of Enablement/Written Description

35 U.S.C. § 112(a) requires that the specification contain a written description of the invention. “[T]he hallmark of written description is disclosure.” *Bos. Sci. Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1361–62 (Fed. Cir. 2011) (citation omitted) (alteration in original). The test for whether a specification adequately describes an invention is “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc); *Bos. Sci.*, 647 F.3d at 1362. “Adequate written description means that the applicant, in the specification, must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought, it or she was in possession of the [claimed] invention.’” *Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1379 (Fed. Cir. 2009). It is well-settled that “one cannot disclose a forest in the original application, and then later pick a tree out of the forest and say here is my invention.” *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1326 (Fed. Cir. 2000). Rather, the specification must provide some guides or “blaze marks” that disclose the claimed invention “specifically, as something appellants actually invented.” *Ariad*, 598 F.3d at 1348.

In addition, the enablement requirement of § 112 requires that the patent specification teach a skilled artisan how to “make and use” the claimed invention, which the Federal Circuit has held

requires teaching “those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)). “The scope of the claims must be less than or equal to the scope of the enablement.” *Nat’l Recovery Tech., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1196 (Fed. Cir. 1999).

Google also incorporates by reference and reserves the right to rely on the § 112 contentions served on Plaintiff by the defendant(s) in other cases, including in the Other Plaintiff Cases.

1. Enablement/Written Description Contentions for the ’341 Patent

Google reserves the right to argue that the claims of the ’341 patent, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff takes in this case or other cases, fail to reasonably convey to one of ordinary skill that the inventor(s) had possession of the subject matter of the invention and/or fail to enable a person of ordinary skill to make and use the invention as claimed for at least the following reasons:

- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “dynamically predict and display a route of travel” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of

“providing the mobile computing apparatus with the map data” (and all limitations for which this limitation serves as antecedent support) (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the map a second position of the mobile computing apparatus, the second position being predicted by the at least one processor based on the first one of the plurality of position updates and one or more metrics associated with the mobile computing apparatus, the one or metrics including at least one of a speed of the mobile computing apparatus, a heading of the mobile computing apparatus, a road speed limit, and a turn restriction” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the map a partial route of travel of the mobile computing apparatus from the first position to the second position predicted by the at least one processor based on the first one of the plurality of position updates and the one or more metrics associated with the mobile computing apparatus” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “update the display on the map of the second position of the mobile computing apparatus and the partial route of travel of the mobile computing apparatus from the first position to the second position when the second one of the plurality of position updates indicates that the display on the map of the second position of the mobile apparatus does not coincide with a location identified by the second one of the plurality of position updates” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the updated display of the partial route of travel corresponds a time interval associated with the first one of the plurality of position updates and the second one of the plurality of position updates” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 13 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the map data is provided to the mobile computing apparatus from at least one server over a wireless network” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 14 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “display on the mobile computing apparatus indications of a plurality of possible routes to the destination location based on the one or more metrics” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 14 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the mobile computing apparatus an indication of the one or more metrics” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 14 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “as the mobile computing apparatus travels towards the destination location, update the display of the indication of the one or more metrics” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

2. Enablement/Written Description Contentions for the '337 Patent

Google reserves the right to argue that the claims of the '337 patent, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff has taken in this case or other cases, fail to reasonably convey to one of ordinary skill that the inventor(s) had possession of the subject matter of the invention and/or fail to enable a person of ordinary skill to make and use the invention as claimed for at least the following reasons:

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “receive map data and store the map data in the memory” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the map a second position of the mobile computing apparatus, the second position being predicted based on the first position data and one or more metrics associated with the mobile computing apparatus, the one or metrics including at least one of a speed of the mobile computing apparatus, a heading of the mobile computing apparatus, a road speed limit, and a turn restriction” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the map a partial route of travel of the mobile computing apparatus from the first position to the second position based on the first position data and the one or more metrics associated with the mobile computing apparatus” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “update the display on the map of the second position of the mobile computing apparatus and the partial route of travel of the mobile computing apparatus from the first position to the second position when the second position data indicates that the display on the map of the second position of the mobile apparatus does not coincide with a location identified by the second position data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the mobile computing apparatus indications of a plurality of possible routes to the destination location based on the one or more metrics” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the mobile computing apparatus an indication of the one or more metrics” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “as the mobile computing apparatus travels towards the destination location, update the

display of the indication of the one or more metrics” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 4 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “receive, from a server, first data comprising a plurality of location updates associated with a plurality of transportation provider mobile devices, each of the plurality of transportation provider mobile devices corresponding to a respective one of a plurality of transportation providers and each of the plurality of location updates representing a location of a respective one of the plurality of transportation providers at a particular time” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 4 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “receiving an indication of a preferred transportation provider from among the plurality of transportation providers to provide transportation for the customer, the preferred transportation provider being determined by the server based on the first data and the second data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 4 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of

“cause the display to display on the map generated from the map data, each of the plurality of indicators corresponding to a current position of a respective one of the plurality of transportation providers based on a respective one of the plurality of location updates” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

3. Enablement/Written Description Contentions for the '208 Patent

Google reserves the right to argue that the claims of the '208 patent, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff has taken in this case or other cases, fail to reasonably convey to one of ordinary skill that the inventor(s) had possession of the subject matter of the invention and/or fail to enable a person of ordinary skill to make and use the invention as claimed for at least the following reasons:

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the starting location being in reference to map data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the destination location being in reference to the map data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “determining a plurality of possible routes from the starting location to the destination location by performing a route computation between the starting location and the destination location using map data, the plurality of possible routes being in reference to the map data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “obtaining a travel time to the destination location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “causing the mobile computing device to at least one of (a) display on the map a new possible route from a current location of the mobile computing device to the destination location and (b) remove a previously displayed possible route from the starting location to the current location of the mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 4 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “determining the plurality of possible routes between the starting location and the destination location by performing the route computation using the one or more route preferences” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

4. Enablement/Written Description Contentions for the '608 Patent

Google reserves the right to argue that the claims of the '608 patent, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff has taken in this case or other cases, fail to reasonably convey to one of ordinary skill that the inventor(s) had possession of the subject matter of the invention and/or fail to enable a person of ordinary skill to make and use the invention as claimed for at least the following reasons:

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the starting location for the mobile computing device being in reference to first map data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the destination location being in reference to second map data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “calculating a first route from the starting location to the destination location, wherein the calculating of the first route from the starting location to the destination location includes calculating the first route according to one or more route preferences, the one or more route preferences including a route optimization goal, or a road preference, or a route optimization goal and a road preference” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “calculate one or more alternate routes from the first estimated location of the mobile computing device to the destination location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “cause the mobile computing device to display on the map the one or more alternate routes” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “cause the mobile computing device to display an indication on the map of the first estimated location of the mobile computing device in relation to the one or more alternate routes” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “cause the mobile computing device to remove from the display on the map at least a portion of the one or more alternate routes previously displayed on the map, or at least a portion of the first route, or at least a portion of the one or more alternate routes previously displayed on the map and at least a portion of the first route” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the starting location of the mobile computing device is derived from a user input” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of

“the calculating of the first route from the starting location to the destination location is based at least in part on a mode of travel associated with the mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 4 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “The electronic navigation method of claim 4, wherein the mode of travel includes at least one of: (i) motor vehicle travel; (ii) bicycle travel; and (iii) foot travel” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 6 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “calculating the first route such that the first route includes a user defined waypoint location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 7 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the road preference is selected from one or more of the following: (i) a preference for or against traveling along routes which include highways; (ii) a preference for or against traveling along routes which include toll roads; (iii) a preference for or against traveling

along routes which include roads that are open to truck traffic; and (iv) a preference for or against traveling along routes which include arterial roads” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 8 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “based at least in part on one or more dynamic route estimation calculations” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the one or more dynamic route estimation calculations are based at least in part on traffic congestion data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 11 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the road type data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 14 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of

“enabling a user of the mobile computing device to share a second estimated location of the mobile computing device with a second computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “a second estimated location of the mobile computing device is shared with a second mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the claimed sharing of the second estimated locations using the recited criteria, in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the second estimated location of the mobile computing device is routed from the mobile computing device through a wireless connection to a wireless base station, and wherein the second estimated location is further routed from the wireless base station to the second mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the second estimated location of the mobile computing device is routed from the mobile computing device through a wireless connection to a wireless base station, and wherein the second estimated location is further routed from the wireless base station to a remote server” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “discrete inferred location packets associated with the second estimated location of the mobile computing device are transmitted from a server positioning device gateway to an XML router” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the XML router further transmits the discrete inferred location packets via an Internet connection to one or more of the following devices, (a) a stationary computing device, (b) a mobile computing device whose position is associated with, or described by, the discrete inferred location packets, and (c) a mobile computing device whose position is not associated with, or described by, the discrete inferred location packets” (and all

limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the second estimated location of the mobile computing device is stored locally” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “ the second estimated location of the mobile computing device is stored locally and is transferred to one or more of the following devices, (a) a stationary computing device, (b) a mobile computing device whose location is associated with, or described by, the second estimated location, and (c) a mobile computing device whose location is not associated with, or described by, the second estimated location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the second estimated location of the mobile computing device is stored locally and is further transferred to an online server system” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 16 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “enabling a user of the mobile computing device to share, with a second computing device, a second estimated location of the mobile computing device, an inferred length of travel time from the second estimated location of the mobile computing device to the destination location, or an estimated time of arrival at the destination location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 17 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “enabling a user of the mobile computing device to share, with a second mobile computing device, a second estimated location of the mobile computing device, an inferred length of travel time from the second estimated location of the mobile computing device to the destination location, or an estimated time of arrival at the destination location using one or more of the following” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 17 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “wherein the position of the mobile computing device is stored locally” (and all

limitations for which this limitation serves as antecedent support) in the context of what is claimed.

5. Enablement/Written Description Contentions for the '071 Patent

Google reserves the right to argue that the claims of the '071 patent, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff has taken in this case or other cases, fail to reasonably convey to one of ordinary skill that the inventor(s) had possession of the subject matter of the invention and/or fail to enable a person of ordinary skill to make and use the invention as claimed for at least the following reasons:

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “determining a plurality of possible routes from the starting location to the destination location by performing a route computation between the starting location and the destination location using map data, the plurality of possible routes being in reference to the map data” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on a map generated using the map data the plurality of possible routes” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display the travel time to the destination for at least one of the plurality of possible routes along which the mobile computing device is traveling” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the map indications of the plurality of locations of the mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “modify or remove at least one of the plurality of possible routes based on the map data and a subsequent location of the mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 1 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “display on the map an indication of the modification or the removal of the at least one of

the possible routes” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “causing the mobile computing device to display on the map an indication of one or more metrics associated with the mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 3 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “as the mobile computing device travels along the one of the plurality of possible routes, causing the mobile computing device to display on the map an updated indication of the one or more metrics associated with the mobile computing device” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 6 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the route computation is based at least in part on one or more dynamic route estimation calculations” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 7 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “the route computation is based at least in part on one or more predictive route calculations” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

6. Enablement/Written Description Contentions for the '925 Patent

Google reserves the right to argue that the claims of the '925 patent, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff has taken in this case or other cases, fail to reasonably convey to one of ordinary skill that the inventor(s) had possession of the subject matter of the invention and/or fail to enable a person of ordinary skill to make and use the invention as claimed for at least the following reasons:

- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “dynamically calculating and displaying multiple travel routes for a mobile device and for tracking the mobile device along the multiple travel routes, the method performed by a navigation system including the mobile device and one or more servers” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the GUI enabling a user of the mobile device to specify a destination location” (and all

limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “automatically calculating, using map data, the destination location and at least the first location update, a first possible route of travel of the mobile device from the first location towards the destination location and a second possible route of travel of the mobile device from the first location towards the destination location, the first possible route of travel including a first roadway intersection and the second route of travel including the first roadway intersection” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “causing the GUI to display a graphical representation of a map together with a graphical representation of the first possible route of travel and a graphical representation of the second possible route of travel on segments of roadways of the graphical representation of the map” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of

“automatically calculating, using the map data and at least the first location update and the second location update, a first estimated route of travel of the mobile device from the first location to the second location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “determining whether the first estimated route of travel includes the first roadway intersection, whether the first possible route of travel includes the second location, and whether the second possible route of travel includes the second location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “if the first estimated route of travel is determined to include the first roadway intersection, the first possible route of travel is determined to include the second location, and the second possible route of travel is determined to not include the second location, automatically causing the GUI to continue to display the graphical representation of the map together with the graphical representation of the first possible route of travel and automatically causing the GUI to no longer display the graphical representation of the second possible route of travel” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “if the first estimated route of travel is determined to include the first roadway intersection, the first possible route of travel is determined to not include the second location, and the second possible route of travel is determined to include the second location, automatically causing the GUI to continue to display the graphical representation of the map together with the graphical representation of the second possible route of travel and automatically causing the GUI to no longer display the graphical representation of the first possible route of travel” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “automatically calculating, using map data, the destination location and at least the second location update, a third possible route of travel of the mobile device from the second location towards the destination location and a fourth possible route of travel of the mobile device from the second location towards the destination location, the second possible route of travel including a second roadway intersection and the third route of travel including the first roadway intersection” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not

contain an adequate written description and/or enabling disclosure of the full scope of “causing the GUI to display the graphical representation of the map together with a graphical representation of the third possible route of travel and a graphical representation of the fourth possible route of travel on segments of roadways of the graphical representation of the map” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “automatically calculating, using the map data and at least the second location update and the third location update, a second estimated route of travel of the mobile device from the second location to the third location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “determining whether the second estimated route of travel includes the second roadway intersection, whether the third possible route of travel includes the third location, and whether the fourth possible route of travel includes the third location” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “if

the second estimated route of travel is determined to include the second roadway intersection, the third possible route of travel is determined to include the third location, and the fourth possible route of travel is determined to not include the third location, automatically causing the GUI to continue to display the graphical representation of the map together with the graphical representation of the third possible route of travel and automatically causing the GUI to no longer display the graphical representation of the fourth possible route of travel” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 9 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “if the second estimated route of travel is determined to include the second roadway intersection, the third possible route of travel is determined to not include the third location, and the fourth possible route of travel is determined to include the third location, automatically causing the GUI to continue to display the graphical representation of the map together with the graphical representation of the fourth possible route of travel and automatically causing the GUI to no longer display the graphical representation of the third possible route of travel” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 14 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “the first estimated route of travel is an actual route traveled by the mobile device from

the first location to the second location along a known network of road paths and the second estimated route of travel is an actual route traveled by the mobile device from the second location to the third location along the known network of road paths” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “a preferred service provider” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.
- Claim 15 and any claims dependent therefrom are invalid for failure to satisfy the requirements of pre-AIA 35 U.S.C. § 112, ¶ 1, because the specification as filed does not contain an adequate written description and/or enabling disclosure of the full scope of “designating, based on a determined distance between the preferred service provider and the destination location, a determined estimated time of arrival at the destination location of the preferred service provider, and a vehicle type of the preferred service provider, one of a plurality of available service providers as the preferred service provider to provide a service for a customer” (and all limitations for which this limitation serves as antecedent support) in the context of what is claimed.

* * *

Therefore, the Asserted Claims are invalid for lacking sufficient written description and/or an enabling disclosure.

B. Indefiniteness

Claims are indefinite under pre-AIA 35 U.S.C. § 112, ¶ 2, when they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 898–99 (2014). To the extent an asserted apparatus claim includes both apparatus and method limitations, that claim is invalid for indefiniteness under pre-AIA § 112, ¶ 2 because it fails to identify or notify the public of what constitutes direct infringement. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). Section 112, ¶ 2 also requires that the claimed subject matter be what the inventor or a joint inventor “regards as his invention.” “Where it would be apparent to one of skill in the art, based on the specification, that the invention set forth in a claim is not what the patentee regarded as its invention, we must hold that claim invalid under § 112, paragraph 2.” *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1349 (Fed. Cir. 2002).

Google expressly reserves the right to amend its Invalidity Contentions to pursue invalidity based on additional bases for indefiniteness as the case proceeds and after claim construction occurs, or in view of positions taken by Plaintiff regarding invalidity or infringement. Google also reserves the right to argue that the limitations of the Asserted Claims listed below, when read in light of the specification, prosecution history, and/or claim construction, infringement, and validity positions that Plaintiff has taken in this case or other cases, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. For instance, the written description does not use phrases that appear in these limitations, the claim language lacks antecedent basis, and/or the claim language, as phrased and read in context of other claim limitations, does not inform those skilled in the art about the scope of the invention with reasonable certainty. As one of ordinary skill would not understand the metes and bounds of the claims in

which these limitations appear, each of the identified claims is invalid as indefinite pursuant to pre-AIA 35 U.S.C. § 112, ¶ 2.

Google notes that detailed arguments as to indefiniteness, if any, will be presented in the claim construction meet-and-confer and briefing processes. Google reserves the right to withdraw, modify, or refine any indefiniteness positions as the case progresses, including in light of the Court's claim construction, subsequent factual or expert discovery, or evolving positions taken by Plaintiff. Nothing herein should be construed as a waiver of Google's ability to assert or retract indefiniteness arguments to ensure consistency with its positions across various stages of this proceeding. For claim terms that are indefinite at their boundaries, Google contends that these claims are nevertheless invalid under §§ 102 and/or 103 because the prior art discloses the relevant subject matter that is undisputedly within the scope of these claims.

The following limitations render one or more Asserted Claims invalid as indefinite under pre-AIA 35 U.S.C. § 112, ¶ 2:

- “display on the map a partial route of travel of the mobile computing apparatus from the first position to the second position ***predicted by the at least one processor based on the first one of the plurality of position updates and the one or more metrics associated with the mobile computing apparatus***” ('341 patent, claim 11 (emphasis added) and any claims dependent therefrom), at least because a relevant artisan could not determine with reasonable certainty what the bolded and italicized phrase (or portions of it) modifies (for example, does it, or portions of it, modify “the second position” or the “display ... of a partial route of travel” or something else);
- “display on the map a partial route of travel of the mobile computing apparatus from the first position to the second position ***based on the first position data and the one***

or more metrics associated with the mobile computing apparatus” (’337 patent, claim 1 (emphasis added) and any claims dependent therefrom), at least because a relevant artisan could not determine with reasonable certainty what the bolded and italicized phrase (or portions of it) modifies (for example, does it, or portions of it, modify “the second position” or the “display ... of a partial route of travel” or something else);

- “receiving a starting location associated with a mobile computing device, the starting location being in reference to *map data*; receiving a destination location, the destination location being in reference to *the map data*; determining a plurality of possible routes from the starting location to the destination location by performing a route computation between the starting location and the destination location using *map data*, the plurality of possible routes being in reference to *the map data*; ... (ii) causing the mobile computing device to display on a map generated using *the map data* (a) the plurality of possible routes, (b) the travel time to the destination for at least one of the plurality of possible routes along which the mobile computing device is traveling, and (c) an indication of the plurality of locations of the mobile computing device” (’208 patent, claim 1 (emphasis added) and any claims dependent therefrom), at least because there is more than one possible antecedent for “the map data.” See MPEP 2173.05(e).

VI. SUBJECT-MATTER ELIGIBILITY

The Asserted Claims also are invalid pursuant to 35 U.S.C. § 101 because they are directed to patent-ineligible subject matter and lack any inventive concept. Section 101 of the Patent Act defines the type of subject matter that is patent-eligible. 35 U.S.C. § 101. The Supreme Court has

long interpreted § 101 to hold that “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). These basic principles are excluded from patent eligibility because they are the very “building blocks of human ingenuity,” *id.*, and should be “free to all men and reserved exclusively to none,” *Mayo Collaborative Services. v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 71 (2012). The Supreme Court’s *Alice* test sets forth a two-part standard for assessing subject-matter eligibility, as discussed below.

These subject-matter eligibility contentions are subject to revision and amendment pursuant to Federal Rule of Civil Procedure 26(e) and the Orders in this matter to the extent appropriate in light of, without limitation, further investigation and discovery, the Court’s construction of the claims at issue, positions taken by Plaintiff in this action or any other proceeding, the review and analysis of expert witnesses, and/or as other circumstances warrant.

In support of its subject-matter eligibility contentions, Google relies on the prior art identified in Section II (Identification of Relevant Prior Art), *supra*. Google reserves the right to rely on percipient and/or expert testimony to supplement, summarize, and/or explain the state of the industry, and what was considered well understood, routine, and conventional, at the time the earliest applications to which the Asserted Patents claim priority were filed. Any such witnesses will be disclosed pursuant to the Federal Rules of Civil Procedure and any Order entered in this case for initial, additional, and expert disclosures.

A. The Asserted Claims Are Directed to Abstract Ideas (*Alice* Step 1).

At step one, the court must determine whether the claims are “directed to” patent-ineligible subject matter, such as an abstract idea. *Alice*, 573 U.S. at 217. In deciding whether a claim is “directed to” an abstract idea, the court must look at the “focus of the claimed advance over the

prior art to determine if the claim’s character as a whole is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (internal quotation marks omitted).

Limiting the claims directed to an abstract idea to a particular “technological environment” or “field of use” does “not render the claims any less abstract.” *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1373 (Fed. Cir. 2017) (citing *Affinity Labs*, 838 F.3d at 1259) (holding that claims applying abstract idea to particular field of use, namely mass transit, were not patent eligible); *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 768 (Fed. Cir. 2019), *cert. denied*, 140 S. Ct. 983 (2020) (limiting abstract idea of “communication over a network for interacting with a device” to electric vehicle charging stations did not make claims patent eligible)); *see also Alice*, 573 U.S. at 222 (“the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment” (alteration in original)).

Result-oriented claim language, without more—as the Asserted Claims recite here—is a tell-tale sign of abstractness. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (claims abstract where they were “so result-focused, so functional, as to effectively cover any solution to an identified problem”); *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343-45 (Fed. Cir. 2018) (claims abstract where they “were drafted in such a result-oriented way that they amounted to encompassing the ‘principle in the abstract’ no matter how implemented”); *Intell. Ventures I LLC v. Cap. One Fin. Corp.*, 850 F.3d 1332, 1342 (Fed. Cir. 2017) (claims abstract where they “provide[d] only a result-oriented solution, with insufficient detail for how a computer accomplishes it”); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1244 (Fed. Cir. 2016) (claim abstract if it “merely describes an ‘effect or result dissociated from any method by which

[it] is accomplished” (alteration in original) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015)).

Another reliable test for abstractness is whether the claims recite elements that “can be performed in the human mind, or by a human using a pen and paper.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011). The Federal Circuit has made it clear: claims directed to “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, a[re] essentially mental processes within the abstract-idea category.” *In re Rosenberg*, 813 F. App’x 594, 596 (Fed. Cir. 2020) (quoting *Elec. Power Grp.*, 830 F.3d at 1354). It also has “explained that claims focused on ‘collecting information, analyzing it, and displaying certain results of the collection and analysis’ are directed to an abstract idea.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (quoting *Elec. Power Grp.*, 830 F.3d at 1353). “‘Information as such is an intangible,’ hence abstract, and ‘collecting information, including when limited to particular content (which does not change its character as information), is within the realm of abstract ideas.’” *Id.* (quoting *Elec. Power Grp.*, 830 F.3d at 1353). “And ‘merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.’” *Id.* (quoting *Elec. Power Grp.*, 830 F.3d at 1354).

Here, the Asserted Claims of the Asserted Patents are invalid under 35 U.S.C. § 101. At *Alice* step one, the Asserted Claims are directed to the abstract ideas of, for example, (1) dynamic route computation using map data; (2) predictive positioning between location updates; (3) multiple route alternatives with travel time estimates; (4) route optimization preferences; and/or (5) real-time route sharing between devices. *See* Compl. ¶¶ 21-56. They employ purely

functional claim language to recite abstract goals, not specific ones, while purporting to claim longstanding systems and methods for organizing fundamental and basic human activity.

Myriad courts, including the Federal Circuit, have repeatedly held similar claims abstract. *See, e.g., Brit. Telecommunications PLC v. IAC/InterActiveCorp*, 813 F. App'x 584, 587 (Fed. Cir. 2020) (holding that “providing lists of location-specific information sources to users based on their location” is an abstract idea and noting that the Court has “previously held that tailoring the provision of information to a user’s characteristics, such as location, is an abstract idea” (citing *Intell. Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016))); *Concaten, Inc. v. Ameritrak Fleet Sols., LLC*, 131 F. Supp. 3d 1166, 1172, 1175 (D. Colo. 2015), *aff'd*, 669 F. App'x 571 (Fed. Cir. 2016), *cert. denied*, 581 U.S. 919 (2017) (holding that “collecting information from a vehicle and transmitting that information over a network” is an abstract idea, and that “determining an instruction for a snow plow based on road conditions and vehicle locations” is abstract because it involves “taking steps routinely performed by humans ... and applying them on a computer through unexplained ‘processing’ of data”); *PerDiemCo LLC v. NexTraq LLC*, 720 F. Supp. 3d 1365, 1175 (N.D. Ga. 2024), *aff'd*, 2026 WL 1379782 (Fed. Cir. 2026) (holding that claims were “directed to the abstract idea of collecting, analyzing, and distributing information from geotracking devices”); *Automated Tracking Sols., LLC v. Coca-Cola Co.*, 223 F. Supp. 3d 1278, 1288-90 (N.D. Ga. 2016), *aff'd*, 723 F. App'x 989 (Fed. Cir. 2018) (holding that claims were “directed to the abstract idea of ‘locating, identifying, and/or tracking objects’”); *Weisner v. Google LLC*, 51 F.4th 1073, 1082 (Fed. Cir. 2022) (holding that claims “creating and/or using physical location histories” were directed to the abstract idea of “creating a digital travel log”); *Move, Inc. v. Real Est. All. Ltd.*, 721 F. App'x 950, 954-55 (Fed. Cir. 2018)

(holding that “a method for collecting and organizing information about available real estate properties and displaying this information on a digital map that can be manipulated by the user” was abstract because the claims were “aspirational in nature and devoid of any implementation details or technical description”); *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766, 773 (Fed. Cir. 2019) (holding that claims involved “the abstract idea of communicating requests to a remote server and receiving communications from that server, i.e., communication over a network” and were “directed to the abstract idea of communication over a network for device interaction”); *Cascades Branding Innovation LLC v. Aldi, Inc.*, 728 F. Supp. 3d 917, 928 (N.D. Ill. 2024), *aff’d*, 2025 WL 2731321 (Fed. Cir. Sept. 25, 2025) (holding that a claim directed to “collecting geographic information about the location of a device and nearby stores or businesses offering certain products, and displaying that information to the user” was abstract and “directly comparable to the types of asserted patents that have been consistently deemed abstract ideas at step one of the *Alice* test, because it relates merely to the collection, analysis, and display of data or information on a map”); *Location Based Servs., LLC v. Niantic, Inc.*, 295 F. Supp. 3d 1031, 1047-48 (N.D. Cal. 2017), *aff’d*, 742 F. App’x 506 (Fed. Cir. 2018) (holding that “a method for: (1) receiving a request for a specific map, (2) determining information about the requested locations based on rules associated with the location, and (3) communicating on the map whether a person may or may not enter the location based on those rules” was abstract and merely “directed to the receipt, processing, and display of data”); *Sanderling Mgmt. Ltd. v. Snap Inc.*, 65 F.4th 698, 703 (Fed. Cir. 2023) (holding that “providing information ... based on meeting a condition” by “matching a GPS location indication with a geographic location” is an abstract idea); *Geoscope Techs. Pte. Ltd. v. Google LLC*, 2025 WL 1276235, at *2 (Fed. Cir. May 2, 2025) (holding that claims directed to “determining the location of a mobile device by collecting data about known

locations (such as information about the properties of signals transmitted by different cell towers), organizing that data in a database, and then comparing that data to measurements from the mobile device” recited an abstract process of collecting, comparing, and reporting information); *Maxell, Ltd v. Apple Inc.*, 2020 WL 8269548, at *7-8 (E.D. Tex. Nov. 11, 2020) (holding that “presenting navigation and location information to a walking user” is an “abstract idea” because “[t]he concept of exchanging data and location information between two devices ... ‘is a well-understood, fundamental concept. And devices that receive location and route information for navigational purposes and display route guidance have been held abstract.”); *Rothschild Location Techs. LLC v. Geotab USA, Inc.*, 2016 WL 3584195, at *2, 5-6 (E.D. Tex. Jan. 4, 2016) (holding that a “processing module configured to ... determine route guidance based on the location of the first positional information device and the received address” and “a display module for displaying the route guidance” were abstract ideas); *Silver State Intell. Techs. v. Facebook Inc.*, 314 F. Supp. 3d 1041, 1046-47 (N.D. Cal. 2018) (holding that claims were “directed to the abstract idea of storing and selectively sharing location-based information,” which “is a relatively simple and abstract idea, one which can be carried out using a pen and paper”); *BlackBerry Ltd. v. Facebook, Inc.*, 487 F. Supp. 3d 870, 907-08 (C.D. Cal. 2019) (holding that claims were “drawn to the abstract idea of locating and mapping activity of interest” and noting that “simply represent[ing] some other mobile device’s activity” “is, in essence a natural phenomenon” because “[t]hat mobile device activity would be occurring whether or not it is tracked or noticed by another mobile device, and the other mobile device played no role in its occurrence”); *Route Guidance Sys. LLC v. INRIX, Inc.*, 2021 WL 24705, *3-6 (D. Del. Jan. 4, 2021) (holding that claim reciting “[a] route guidance system for guiding a driver of a vehicle to a desired destination on a road network” was abstract because it was directed “not to an improvement in route guidance technology, but rather to a

general way of providing navigation data to remote drivers using computers”); *IPA Techs., Inc. v. Amazon.com, Inc.*, 307 F. Supp. 3d 356, 359, 363-69 (D. Del. 2018) (holding the claims “directed to navigating an electronic data source by means of spoken language” were abstract); *CalAmp Wireless Networks Corp. v. ORBCOMM, Inc.*, 233 F. Supp. 3d 509, 512 (E.D. Va. 2017) (holding “obtaining a current time and a current position of [a] device” is an abstract idea); *Peschke Map Techs. LLC v. Rouse Props. Inc.*, 168 F. Supp. 3d 881, 887-89 (E.D. Va. 2016) (holding that “an electronic map navigation system that enables a user to locate a particular store through the use of location and layout information and that provides a link to a description page containing information about the store,” as well as “the ability to zoom in and out of larger or smaller geographic areas depicted on these maps,” were abstract ideas that merely “addresse[d] a problem ‘known from the pre-Internet world’: navigating through maps and locating information about structures appearing on those maps”); *DriverDo, LLC v. Soc. Auto Transp., Inc.*, 787 F. Supp. 3d 153, 169, 187 (E.D. Va. 2024) (holding challenged claims were “directed to the abstract idea of scheduling a trip, possibly including a task to be performed along the way,” and other claims were “directed to the abstract idea of allocating a driver and a license for a trip,” which “all relate to coordinating drivers to move a car from one location to another, which is a well-known process in the automobile business and a decades-old method of organizing human activity”); *Encyclopaedia Britannica, Inc. v. Dickstein Shapiro LLP*, 128 F. Supp. 3d 103, 112-13 (D.D.C. 2015) *aff’d*, 653 F. App’x 764 (D.C. Cir. 2016), *cert. denied*, 580 U.S. 920 (2016) (holding that “the steps of (1) displaying a map on a display screen and changing the portion of the map being displayed in response to user input, (2) displaying ‘place indicators’ on the map indicating the location of a place and the availability of associated text information and then displaying the associated input in response to user input (allowing users to look up information about places marked on a map),

and (3) providing ‘text search’ and ‘text browse’ features that allow a user to select a place and then display the portion of the map showing the location of that place (or find a place on a map)” were “essentially variations of activities humans have performed for thousands of years using paper maps and other reference works, and are thus abstract ideas”); *Jewel Pathway LLC v. Polar Electro Inc.*, 556 F. Supp. 3d 335, 342-343 (S.D.N.Y. 2021) (holding that the claimed steps of “(1) receiving location data, (2) determining a path from the location data, (3) superimposing the path on a map, and (4) packaging that map for a display on a device ... describe the same pattern that the Federal Circuit has consistently held to constitute an abstract idea that is not patent eligible.”); *Four Winds Interactive LLC v. 22 Miles, Inc.*, 2017 WL 4334074, at *7-9 (D. Colo. Mar. 28, 2017 (holding abstract the claimed steps of “1. accessing a map file ... ; 2. displaying a programming interface on a display device ... configured to allow a system manager to create and enter customized instructional phrases ... ; 3. receiving the customized instructional phrases programmed by the system manager using the programming interface; 4. storing the customized instructional phrases in the database ... ; 5. displaying a map on a display for a user; 6. allowing a user to select an ending map location; 7. calculating a travel route between a starting map location and the user selected ending map location ... ; 8. retrieving from the database one or more customized instructional phrases ... ; and 9. displaying the customized instructional phrases to the user in an order corresponding to the compiled sequence of map locations.”)).

The specific abstract concepts and cases asserted here are merely exemplary. Google reserves the right to rely on any additional relevant precedent that demonstrates the Asserted Claims are directed to abstract concepts ineligible for patenting under Section 101.

B. The Asserted Claims Lack an Inventive Concept (*Alice* Step 2).

Under *Alice* step two, the court must determine whether the patent claims include an “inventive concept” that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.” *Alice*, 573 U.S. at 217-18 (internal quotation marks omitted). The inventive concept must be truly inventive; it is not sufficient to include “well-understood, routine, conventional” features. *Mayo*, 566 U.S. at 79-80. For example, merely reciting conventional computer elements “cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Alice*, 573 U.S. at 223. Moreover, “generic functional language” to achieve purported solutions to technical problems, without “any requirements for *how* the desired result is achieved” will not suffice for an inventive concept. *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (citation omitted). Indeed, where patent claims recite purely functional abstract goals, the critical step-two inquiry is whether the patents teach “any requirements for *how* the desired result is achieved” that could be seen as novel. *Elec. Power*, 830 F.3d at 1355. Claims directed to abstract processes like collecting and analyzing information might survive step two if, for example, the patents disclose a novel source of information, a novel technique for analyzing information that generates new data, or a sort of inventive programming that “transform[s] the otherwise-abstract processes of information collection and analysis.” *See id.* But where “[n]othing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology,” the claims fail step two and are invalid under § 101. *Id.*; *see Alice*, 573 U.S. at 223 (“[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”).

Here, the Asserted Claims lack an inventive concept sufficient to transform the claimed abstract idea(s) into a patent-eligible invention because each claim limitation recites routine electronic-navigation functionalities that were well-understood and conventional before the earliest priority date, which could be performed with “off-the-shelf, conventional computer, network, and display technology.” *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016); *Two-Way Media*, 874 F.3d at 1339 (“Nothing in the claims or their constructions ... requires anything other than conventional computer and network components operating according to their ordinary functions.”). Indeed, the Asserted Patents make clear that each purported invention can be performed by a “general ... operating system in conjunction with a personal computer or server,” and “is not limited to a typical personal computer, but may also be utilized with other computing systems, such as handheld devices, mobile laptop computers, wireless phones, in-vehicle navigation systems, programmable consumer electronics, mainframe computers, distributed computer systems, etc., and the like.” *See, e.g.*, ’341 patent 10:31-42; *see also id.* at 11:52-54 (“The same, or another client, such as a stationary computing device 108 (i.e., a personal computer) is also connected 109 to the Internet 111.”), 12:47-50 (“For instance, a personal computer 108 can request to view estimated route information through a web server application 118 that interfaces to the server system's 125 database 124.”). Nothing in the Asserted Claims, either individually or as an ordered combination, “transform[s] the nature of the claim[s] into a patent-eligible application of the abstract idea.” *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, 60 F.4th 1349, 1358 (Fed. Cir. 2023). Ultimately, the Asserted Claims simply describe an ordinary combination of generic components or steps for (1) dynamic route computation using map data; (2) predictive positioning between location updates; (3) multiple route alternatives with travel time estimates; (4) route optimization preferences; and/or (5) real-time route sharing

between devices—abstract processes that were well-known at the time of the Asserted Patents. *See also, e.g., §§ III.C, VI.A, supra.*

VII. DOCUMENT PRODUCTION

Pursuant to the Scheduling Order in this action, Google is producing with these Invalidity Contentions prior art referenced in the Invalidity Contentions bearing the following Bates numbers: GOOG-BLUESTONE-PA-00000001 – GOOG-BLUESTONE-PA-00026250. Google also incorporates by reference, as if fully set forth herein, all prior art references identified in the Other Plaintiff Cases, as well as in any other post-issuance review by the U.S. Patent and Trademark Office of any Asserted Patent or patent owned by Plaintiff and covering subject matter that overlaps in whole or in part with the Asserted Patents.

Google reserves the right to supplement its production of documents as the case progresses, including, but not limited to, producing or making additional documents or source code available for inspection. Google also reserves the right to seek third-party discovery relevant to the accused instrumentalities and prior art, including the production of documents and source code from Google’s non-party suppliers, once fact discovery opens in this case.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document (and accompanying claim chart exhibits) was served by electronic mail to all counsel of record who are deemed to have consented to electronic service in accordance with Local Rule CV-5. I declare under penalty of perjury that the foregoing is true and correct.

Dated: June 24, 2026

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