

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA, INC., and
GOOGLE LLC,

Petitioners

v.

RYAN HARDIN and ANDREW HILL,

Patent Owners.

Case IPR2022-01331

U.S. Patent No. 9,779,418

Petition for *Inter Partes* Review of

U.S. Patent No. 9,779,418

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PETITIONERS' EXHIBIT LIST

Exhibit No.	DESCRIPTION
1001	U.S. Patent No. 9,779,418
1002	File History of U.S. Patent No. 9,779,418 (Application No. 15/009,961)
1003	Declaration of David H. Williams
1004	Curriculum Vitae of David H. Williams
1005	U.S. Patent Publication No. US 2010/0279665 A1 (“ <i>Hardin</i> ’665”)
1006	U.S. Patent Publication No. US 2006/0116817 A1 (“ <i>Salmre</i> ”)
1007	U.S. Patent No. 8,433,296 (“the ’296 patent”)
1008	File History of U.S. Patent No. 8,433,296 (Application No. 12/434,094)
1009	U.S. Patent No. 8,977,247 (“the ’247 patent”)
1010	File History of U.S. Patent No. 8,977,247 (Application No. 13/856,392)
1011	U.S. Patent No. 9,286,625 (“the ’625 patent”)
1012	File History of U.S. Patent No. 9,286,625 (Application No. 14/608,285)
1013	U.S. Patent Publication No. US 2014/0279018 A1 (“the ’018 publication”)
1014	File History of U.S. Patent Application No. 14/292,204 (“the ’204 application”)
1015	USPTO Memo: Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, June 21, 2022
1016	Complaint – <i>Hardin et al. v. Samsung Elecs. Co., Ltd. et al.</i> , 2:21-cv-00290-JRG, ECF No. 1 (E.D. Tex. July 30, 2021)
1017	Return of Service – <i>Hardin et al. v. Samsung Elecs. Co., Ltd. et al.</i> , 2:21-cv-00290-JRG, ECF No. 4 (E.D. Tex. Aug. 9, 2021)
1018	United States District Courts – National Judicial Caseload Profile, https://www.uscourts.gov/sites/default/files/fcms_na_distprofile0331.2022.pdf (last visited July 26, 2022)
1019	Plaintiffs’ Objections And Response To Defendants’ Second Set Of Interrogatories To Plaintiff, <i>Hardin et al. v. Samsung Elecs. Co., Ltd. et al.</i> , 2:21-cv-00290-JRG, served July 1, 2022
1020	Geofencing, Techopedia,

Exhibit No.	DESCRIPTION
	https://www.techopedia.com/definition/14937/geofencing (last visited July 26, 2022)
1021	Jonathan P. Munson & Vineet K. Gupta, Location-Based Notification as a General-Purpose Service, Proceedings of the 2nd International Workshop on Mobile Commerce 40 (2002)
1022	What We Do, Locating What's Important To You, Cell-Loc, http://web.archive.org/web/20030411221815/http://cell-loc.com/what_locating.html (last visited July 26, 2022)
1023	Alan Cohen, Location, Location, Location, PC Mag., available at https://books.google.com/books?id=eIvagv988JgC&pg=PA82#v=onepage&q&f=false (last visited July 26, 2022)
1024	U.S. Patent No. 7,133,685
1025	U.S. Patent No. 7,164,986
1026	U.S. Patent No. 8,536,999
1027	U.S. Patent Publication No. US 2008/0094256 A1
1028	Plaintiffs' Claim Construction Brief – <i>Hardin et al. v. Samsung Elecs. Co., Ltd. et al.</i> , 2:21-cv-00290-JRG, ECF 58 (E.D. Tex. July 8, 2022)
1029	Defendants' Claim Construction Brief – <i>Hardin et al. v. Samsung Elecs. Co., Ltd. et al.</i> , 2:21-cv-00290-JRG, ECF 67 (E.D. Tex. July 25, 2022)
1030	U.S. Patent No. 8,010,134
1031	U.S. Patent No. 10,380,636
1032	Letter from Andrew Trask to Rex Mann, dated August 2, 2022

LISTING OF CHALLENGED CLAIMS

Reference	Claim Limitation
Claim 11	
[11.pre]	A mobile device comprising:
[11.a]	memory;
[11.b]	at least one processor operably coupled to the memory;
[11.c]	a location-determination component tangibly embodied in the mobile device for determining the mobile device's physical geographic location; and
[11.d]	at least one module stored in the memory and configured for execution by the at least one processor, wherein the at least one module comprises instructions for:
[11.e]	implementing, on the mobile device, at least one computer readable program instruction, made available for use by one or more distinct application programs operating on the mobile device, for receiving, from a particular one application program of the one or more distinct application programs during the particular one application program's execution on the mobile device, a request to reserve, for the particular one application program, at least one designated geographic area of interest for having a particular associated identifier exclusively provided for use by the particular one application program
[11.f]	after it is determined, by at least use of the at least one processor and of location information representing a physical geographic location of the mobile device as determined by the location-determination component, that the mobile device has at least entered the at least one designated geographic area of interest,
[11.g]	wherein the at least one computer readable program instruction comprises at least one input parameter for receiving, from the particular one application program, data representing a) the particular associated identifier as provided content associated with

	the at least one designated geographic area of interest and exclusively related to the particular one application program, and
[11.h]	b) a perimeter definition defining, with at least reference to longitude and latitude, the at least one designated geographic area of interest, and
[11.i]	wherein the one or more distinct application programs each comprises a system of executable coded instructions as programmed by at least one developer for execution on the mobile device;
[11.j]	receiving, using the at least one computer readable program instruction, from a first particular application program during its execution on the mobile device, a first request for a reservation for a first particular designated geographic area of interest for having a first particular associated identifier exclusively provided for use by the first particular application program after it is determined that the mobile device has at least entered the first particular designated geographic area of interest,
[11.k]	wherein the first request comprises data representing a) the first particular associated identifier, represented by a data string, as provided content by the first particular application program to be associated with the first particular designated geographic area of interest and exclusively related to the first particular application program, and
[11.l]	b) a first perimeter definition provided by the first particular application program, wherein the first perimeter definition comprises at least data representing a first latitude and longitude coordinate and a first radius value for defining the first particular designated geographic area of interest;
[11.m]	determining availability for the first particular designated geographic area of interest to be reserved for the first particular application program;
[11.n]	using the first perimeter definition in conjunction with the first particular associated identifier to establish the first particular

	designated geographic area of interest in the first request as an area reserved for first content related to the first particular application program and not an area reserved for first content related to other application programs,
[11.o]	wherein the first content related to the first particular application program comprises the first particular associated identifier;
[11.p]	storing, in the memory, in response to receiving the first request, after availability for the first particular designated geographic area of interest to be reserved for the first particular application program has been positively determined, an at least first record, for the first particular application program, associated with the first particular associated identifier and the first particular designated geographic area of interest, thereby designating the first particular application program as a first one of the one or more registered application programs on the mobile device, wherein the one or more registered application programs on the mobile device each consists of an application program designated for having a particular identifier, being associated with a particular reserved geographic area of interest, to be exclusively provided for use by said application program after it is determined, by at least use of the at least one processor and of the location information, that the mobile device has at least entered said particular reserved geographic area of interest;
[11.q]	receiving, using the at least one computer readable program instruction, from a second particular application program during its execution on the mobile device, a second request for a reservation for a second particular designated geographic area of interest for having a second particular associated identifier exclusively provided for use by the second particular application program after it is determined that the mobile device has at least entered the second particular designated geographic area of interest, wherein the second request comprises data representing a) the second particular associated identifier, represented by a data string, as provided content by the second particular application program to be associated with the second particular designated geographic area of interest and exclusively related to the second particular application program, and b) a second perimeter definition provided

	by the second particular application program, wherein the second perimeter definition comprises at least data representing a second latitude and longitude coordinate and a second radius value for defining the second particular designated geographic area of interest;
[11.r]	determining availability for the second particular designated geographic area of interest to be reserved for the second particular application program;
[11.s]	using the second perimeter definition in conjunction with the second particular associated identifier to establish the second particular designated geographic area of interest in the second request as an area reserved for second content related to the second particular application program and not an area reserved for second content related to other application programs, wherein the second content related to the second particular application program comprises the second particular associated identifier;
[11.t]	storing, in the memory, in response to receiving the second request, after availability for the second particular designated geographic area of interest to be reserved for the second particular application program has been positively determined, an at least second record, for the second particular application program, associated with the second particular associated identifier and the second particular designated geographic area of interest, thereby designating the second particular application program as a second one of the one or more registered application programs on the mobile device;
[11.u]	selecting the first particular associated identifier associated with the at least first record stored in the memory to be provided for use by the first one of the one or more registered application programs on the mobile device after it is determined, by at least use of the at least one processor, of the location information, and of the first particular designated geographic area of interest associated with the at least first record stored in the memory for the first one of the one or more registered application programs on the mobile device, that the mobile device has at least entered the first particular designated geographic area of interest associated with the at least

	first record stored in the memory and has remained therein for at least a first designated length of time;
[11.v]	selecting the second particular associated identifier associated with the at least second record stored in the memory to be provided for use by the second one of the one or more registered application programs on the mobile device after it is determined, by at least use of the at least one processor, of the location information, and of the second particular designated geographic area of interest associated with the at least second record stored in the memory for the second one of the one or more registered application programs on the mobile device, that the mobile device has at least entered the second particular designated geographic area of interest associated with the at least second record stored in the memory and has remained therein for at least a second designated length of time;
[11.w]	providing, to the first one of the one or more registered application programs on the mobile device, at least the first particular associated identifier from its selecting in response to receiving, from the first one of the one or more registered application programs on the mobile device, a request to receive content; and
[11.x]	providing, to the second one of the one or more registered application programs on the mobile device, at least the second particular associated identifier from its selecting in response to receiving, from the second one of the one or more registered application programs on the mobile device, a request to receive content.

Claim 12	
[12.pre]	The mobile device of claim 11 wherein the at least one module further comprises instructions for:

[12.a]	displaying, on the mobile device via a graphical user interface tangibly embodied by the mobile device and via the first one of the one or more registered application programs on the mobile device, content related to the first particular designated geographic area of interest, after providing, to the first one of the one or more registered application programs on the mobile device, at least the first particular associated identifier from its selecting.
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Claim 13	
[13.pre]	The mobile device of claim 11 wherein the at least one module further comprises instructions for:
[13.a]	receiving, using the at least one computer readable program instruction, from a third particular application program during its execution on the mobile device, a third request for a reservation for a third particular designated geographic area of interest for having a third particular associated identifier exclusively provided for use by the third particular application program after it is determined that the mobile device, following a first designated start time and during a first designated duration of time, has at least entered the third particular designated geographic area of interest and has remained therein for at least a third designated length of time,
[13.b]	wherein the third request comprises data representing a) the third particular associated identifier, represented by a data string, as provided content by the third particular application program to be associated with the third particular designated geographic area of interest and exclusively related to the third particular application program,
[13.c]	b) a third perimeter definition provided by the third particular application program,
[13.d]	c) the third designated length of time, and d) the first designated duration of time;
[13.e]	determining availability for the third particular designated geographic area of interest to be reserved for the third particular

	application program;
[13.f]	using the third perimeter definition in conjunction with the third particular associated identifier to establish the third particular designated geographic area of interest in the third request as an area reserved for third content related to the third particular application program and not an area reserved for third content related to other application programs, wherein the third content related to the third particular application program comprises the third particular associated identifier;
[13.g]	storing, in the memory, in response to receiving the third request, after availability for the third particular designated geographic area of interest to be reserved for the third particular application program has been positively determined, an at least third record, for the third particular application program, associated with the third particular associated identifier and the third particular designated geographic area of interest, thereby designating the third particular application program as a third one of the one or more registered application programs on the mobile device;
[13.h]	selecting the third particular associated identifier associated with the at least third record stored in the memory to be provided for use by the third one of the one or more registered application programs on the mobile device after it is determined, by at least use of the at least one processor, of the location information, and of the third particular designated geographic area of interest associated with the at least third record stored in the memory for the third one of the one or more registered application programs on the mobile device, that the mobile device, following the first designated start time and during the first designated duration of time, has at least entered the third particular designated geographic area of interest associated with the at least third record stored in the memory and has remained therein for at least the third designated length of time; and
[13.i]	providing, to the third one of the one or more registered application programs on the mobile device, at least the third particular associated identifier from its selecting in response to receiving, from the third one of the one or more registered application

	programs on the mobile device, a request to receive content.
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Claim 14	
[14.pre]	The mobile device of claim 13
[14.a]	wherein the third request includes a data value representing the first designated start time.

Claim 15	
[15.pre]	The mobile device of claim 11 wherein the at least one module further comprises instructions for:
[15.a]	creating a first notification indicating that the mobile device has at least entered the first particular designated geographic area of interest associated with the at least first record stored in the memory; and
[15.b]	creating a second notification indicating that the mobile device has at least entered the second particular designated geographic area of interest associated with the at least second record stored in the memory.

Claim 16	
[16.pre]	The mobile device of claim 11 wherein the at least one module further comprises instructions for:
[16.a]	obtaining mobile device location information comprising at least one physical geographic location of the mobile device as determined by the location-determination component;
[16.b]	determining, by at least use of the at least one processor, of the mobile device location information, and of the first particular designated geographic area of interest associated with the at least first record stored in the memory for the first one of the one or more registered application programs on the mobile device, that

	the mobile device has at least entered the first particular designated geographic area of interest associated with the at least first record stored in the memory and has remained therein for at least the first designated length of time; and
[16.c]	determining, by at least use of the at least one processor, of the mobile device location information, and of the second particular designated geographic area of interest associated with the at least second record stored in the memory for the second one of the one or more registered application programs on the mobile device, that the mobile device has at least entered the second particular designated geographic area of interest associated with the at least second record stored in the memory and has remained therein for at least the second designated length of time.

Claim 17	
[17.pre]	The mobile device of claim 11 wherein the at least one module further comprises instructions for:
[17.a]	using a communications interface tangibly embodied by the mobile device to provide, to the mobile device, at least the second particular application program as received from the Internet from a content delivery platform for developer-provided application programs.

Claim 18	
[18.pre]	The mobile device of claim 11
[18.a]	wherein the first request includes a data value representing the first designated length of time and the second request includes a data value representing the second designated length of time.

I. INTRODUCTION

This Petition presents a compelling case of obviousness based on the broken priority chain of Patent 9,779,418 (“’418 patent”). As explained, although the ’418 patent purports to claim priority to an application filed in 2009, that application provides no written description support for a critical limitation found in every claim of the ’418 patent. Specifically, each independent claim requires “on a mobile device...receiving, from a particular one application program...a request to reserve” a geographic location. The 2009 application, however, discloses receiving such a request only from a “sponsor”—which is disclosed as an entirely separate entity not located on the mobile device.

An examiner of an intermediate application in the purported priority chain recognized precisely this issue. Following a claim amendment attempting to conflate the “application program” and the “sponsor,” the examiner rejected the claims based on, *inter alia*, §112. As the examiner pointed out, the specification contained no support for the notion of the “sponsor” and the “application program” being one and the same; rather, as the examiner explained, the application developer and sponsor are “two different parties.” (EX1014, 90-91.) Patent Owners (“POs”) never responded to that §112 rejection, and instead abandoned the application and pursued the subject matter in a later-filed application before a different examiner.

The inability of the '418 patent to claim priority to the 2009 application is fatal to the validity of its claims. The 2009 application was published in 2010 as *Hardin* '665—a patent publication with an identical specification as the '418 patent. The next application in the chain leading to the '418 patent, meanwhile, was not filed until 2013. Thus, because the '418 patent is not entitled to its 2009 priority date, *Hardin* '665 is necessarily prior art.

Unsurprisingly, *Hardin* '665 discloses nearly all of what the '418 patent claims. And the missing claim limitation—namely, receiving, on a mobile device, a request from an application program on the mobile device—is supplied expressly by *Salmre*, a 2006 patent publication. Together, *Hardin* '665 and *Salmre* present a compelling case for obviousness of the challenged claims.

Accordingly, Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Google LLC (“Petitioners”) request *inter partes* review (“IPR”) of claims 11-18 of the '418 patent.¹

II. GROUNDS FOR STANDING

Petitioners certify that the '418 patent is available for IPR, and that Petitioners are not barred or estopped from requesting this review of the challenged

¹ Together with two concurrently filed petitions, Petitioners request IPR of '418 patent claims 1-25.

claims. Petitioners file this Petition within one year of service of POs' complaint against Petitioners. (EX1017.)

III. STATEMENT OF PRECISE RELIEF REQUESTED

Petitioners respectfully request review and cancellation under 35 U.S.C. §311 of claims 11-18 in view of:

Prior Art
2010/0279665 (" <i>Hardin</i> '665"), published 11/4/2010; prior art under AIA 35 U.S.C. §102(a)(1) (EX1005)
2006/0116817 (" <i>Salmre</i> "), published 6/1/2006; prior art under AIA 35 U.S.C. §102(a)(1) (EX1006)

Ground	Claims	Basis
1	11-18	Obviousness based on <i>Hardin</i> '665 in view of <i>Salmre</i> .

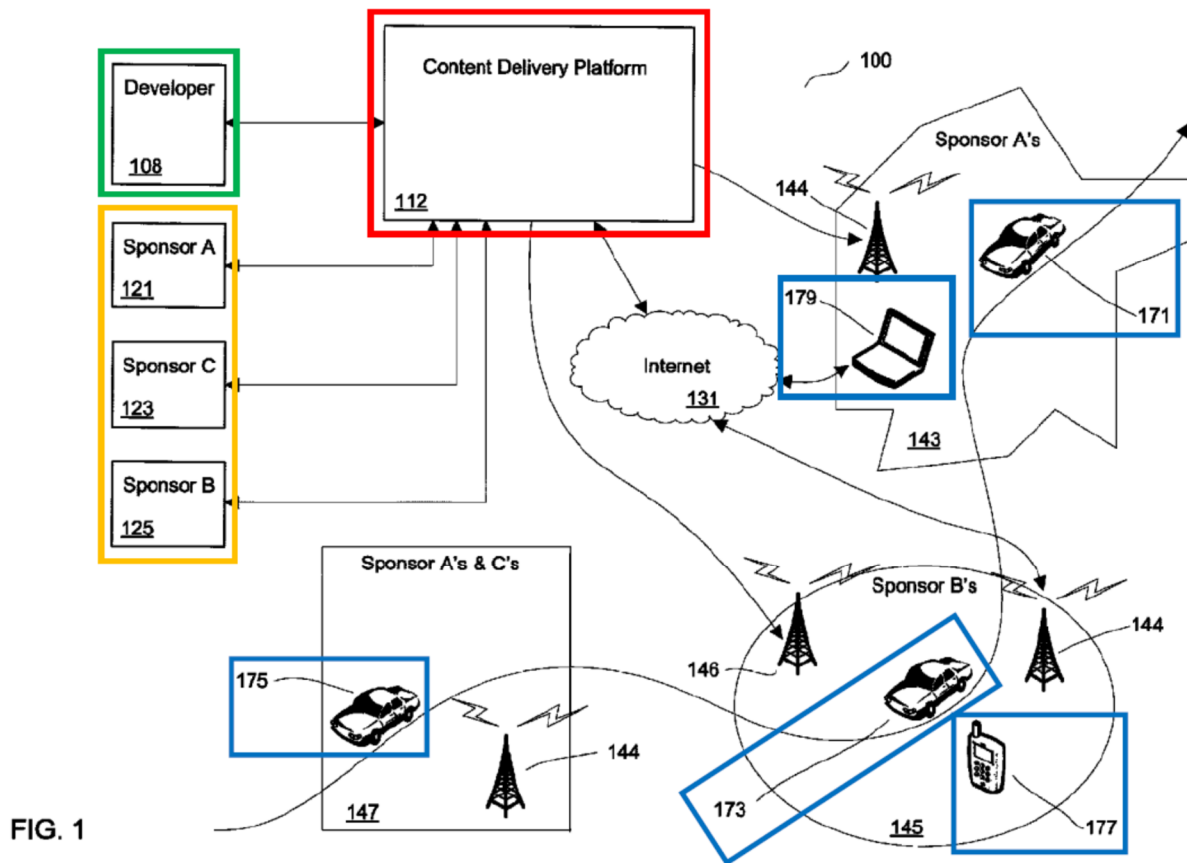
IV. OVERVIEW OF THE '418 PATENT

A. The Shared Specification

The '418 patent issued on 10/3/2017, from Application 15/009,961. (EX1001.) The '418 patent purports to claim priority through a series of applications to Application 12/434,094 ("'094 application") (which published as *Hardin* '665), filed 5/1/2009. (*Id.*) The '418 patent and each of the purported priority applications share the same specification. (EX1001; EX1007; EX1009; EX1011; EX1013.)

The specification describes a system that uses a centralized “content delivery platform” for registering applications on a mobile device for content delivery. (EX1001, Abstract.) The operator of the content delivery platform establishes geographic areas, which a sponsor can reserve via the content delivery platform for delivery of content associated with that sponsor to a particular application on the mobile device. (*Id.*, Abstract, 1:56-60.) When the mobile device enters a sponsor’s reserved geographic area, the content delivery platform delivers that sponsor’s content to the application on the mobile device. (*Id.*, Abstract, 1:64-67.) According to the specification, “sponsors” can (i) reserve geographic areas, and (ii) provide “advertisements or other content controlled by the sponsor” to the content delivery platform for later delivery to mobile devices. (*See, e.g.*, EX1001, 3:3-8, 9:5-7.)

Figure 1 of the ’418 patent illustrates the architecture of the system originally disclosed in the ’094 application (and published as *Hardin* ’665), including a content delivery platform (in red), a developer (in green), sponsors (in yellow), and mobile devices (in blue):



(*Id.*, FIG. 1 (annotated).) The specification explains:

System 100 can provide for exclusive delivery of advertising or other content to registered applications running on mobile devices located within a particular proximity to a reserved geographic area.... Content delivery platform 112 receives a request from developer platform 108 to register a program or other application for use on mobile devices. Content delivery platform 112 can use the registered application program to provide

selected content to mobile devices.

(*Id.*, 3:9-21; *see also id.*, 9:50-61, 9:66-10:2.) The specification explains that a sponsor can reserve geographic areas by sending requests to the content delivery platform:

Sponsor A 121, sponsor C 123, or sponsor B 125 can reserve an exclusive interest in a particular geographic area by sending a request to content delivery platform 112.... The request can also include time limitations, limitations based on the length of time a mobile device remains within a given geographic area, or other desired limitations.

(*Id.*, 3:32-43; *see also id.*, FIG. 4 (“Receive ***Sponsor’s request*** for selected area”), 2:21-30 (“the content delivery system reserves exclusive interests in geographic areas for particular sponsors based on ***the sponsors’ requests***”), 2:65-3:8 (“***Sponsors can reserve*** an exclusive interest, or in some embodiments a semi-exclusive interest, in a geographic area....”), 3:22-31 (“a geographical area ***reserved by one or more of the sponsors.***”), 8:62-65 (“a method 400 for allowing ***sponsors to reserve*** particular geographic areas”), 9:5-7 (“These geographic areas are areas ***the sponsor wishes to reserve.***...”), 9:28-43 (“***a sponsor’s request*** for a

selected area is received”).)² The specification further explains that “the sponsor can establish perimeters defining geographic areas” or the geographic areas may be predefined. (*Id.*, 9:3-27.)

The architecture described in the specification includes “sponsors” that communicate with content delivery platform 112. (*Id.*, 3:32-43.) Each sponsor can reserve with the content delivery platform geographic areas for content delivery to mobile devices when the device “physically enters or remains within the sponsor’s reserved area for a desired length of time.” (*Id.*, 4:5-5:21, 9:44-61; *see also id.*, 2:9-20.) The delivered content can include advertisements, still images, animations, videos, audio, alphanumeric identifiers, or other content. (*Id.*)

Importantly, nothing in the specification indicates that the geographic area is reserved by an application running on the mobile device. (EX1003, ¶¶68, 101-106.) Indeed, there is no reference to any entity other than a sponsor reserving a geographic area. (*Id.*) That is, there is no disclosure of a registered application running on a mobile device requesting to reserve a geographic area.

Figure 2 depicts a user of registered application 231 located within a first sponsor’s reserved area 207 and an object of interest 233 located in a second sponsor’s reserved area 205:

² All **bold/italics/underline** added unless noted.

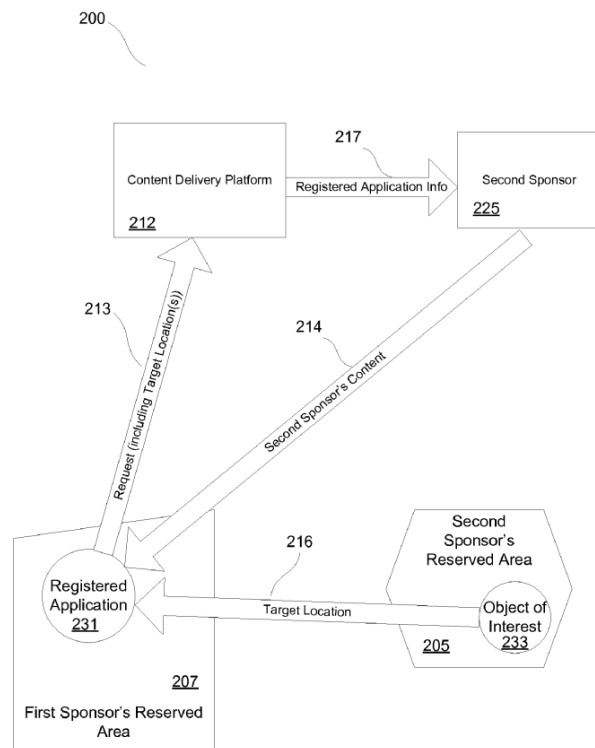


FIG. 2

(EX1001, FIG. 2, 5:43-47.) Although Figure 2 shows that registered application 231 sends “request 213” to content delivery platform 212, request 213 is a request for content, not a request to reserve a geographic area. (*Id.*, 5:62-6:27; *see also id.*, 1:60-64, 11:46-49.) Further, request 213 may include “information indicating the location of object of interest 233, a request for content, information indicating the location of registered application 231, information indicating the identity of the registered application 231, and a previously received request identifier.” (*Id.*, 5:64-6:3.) Nothing in the specification discloses that an application program can request to reserve a geographic area. (EX1003, ¶¶70, 102-104.)

In addition, the specification describes the content delivery platform as a

separate component that is remote from the mobile device. (EX1001, 11:60-12:13 (“**[T]he mobile device can forward information** associated with a target location **to the content delivery platform**, or **the content delivery server** can obtain location information from a third party application or device...or otherwise.”); *see also id.*, FIGs. 1-3, 3:22-26 (“**a registered application program is provided to mobile devices by** developer platform 108, **content delivery platform 112...**”), 11:38-41 (“a method of **interaction between a mobile device and a content providing platform**”), 11:58-60 (“[A] session can be initiated between **the application on the mobile device, and the content delivery platform.**”).) For example, the specification explains that the content delivery platform communicates with multiple mobile devices (and therefore cannot be hosted on the mobile devices). (*Id.*, FIG. 3, 7:4-27; *see also id.*, 9:62-10:11 (“[M]ultiple devices may execute copies of the same registered application...and multiple different registered applications may be executed on multiple devices.”).) The specification also explains that the content delivery platform communicates with mobile devices via the internet and communication towers. (*Id.*, FIG. 1, 3:44-4:4 (“System 100 can include a network, for example Internet 131, through which content delivery platform 112, can communicate to other networked devices; and communication towers 144....”); *see also id.*, Claims 9 (“using a communications interface tangibly embodied by the mobile device **to provide, to the mobile device**, at least

the second particular application program as received *from the Internet from a content delivery platform* for developer-provided application programs”), 17, 24.) POSAs would have understood that if the content delivery platform was on the same mobile device as the registered application, then it would not need to communicate with the mobile device via the internet or communication towers. (EX1003, ¶¶109-111.)

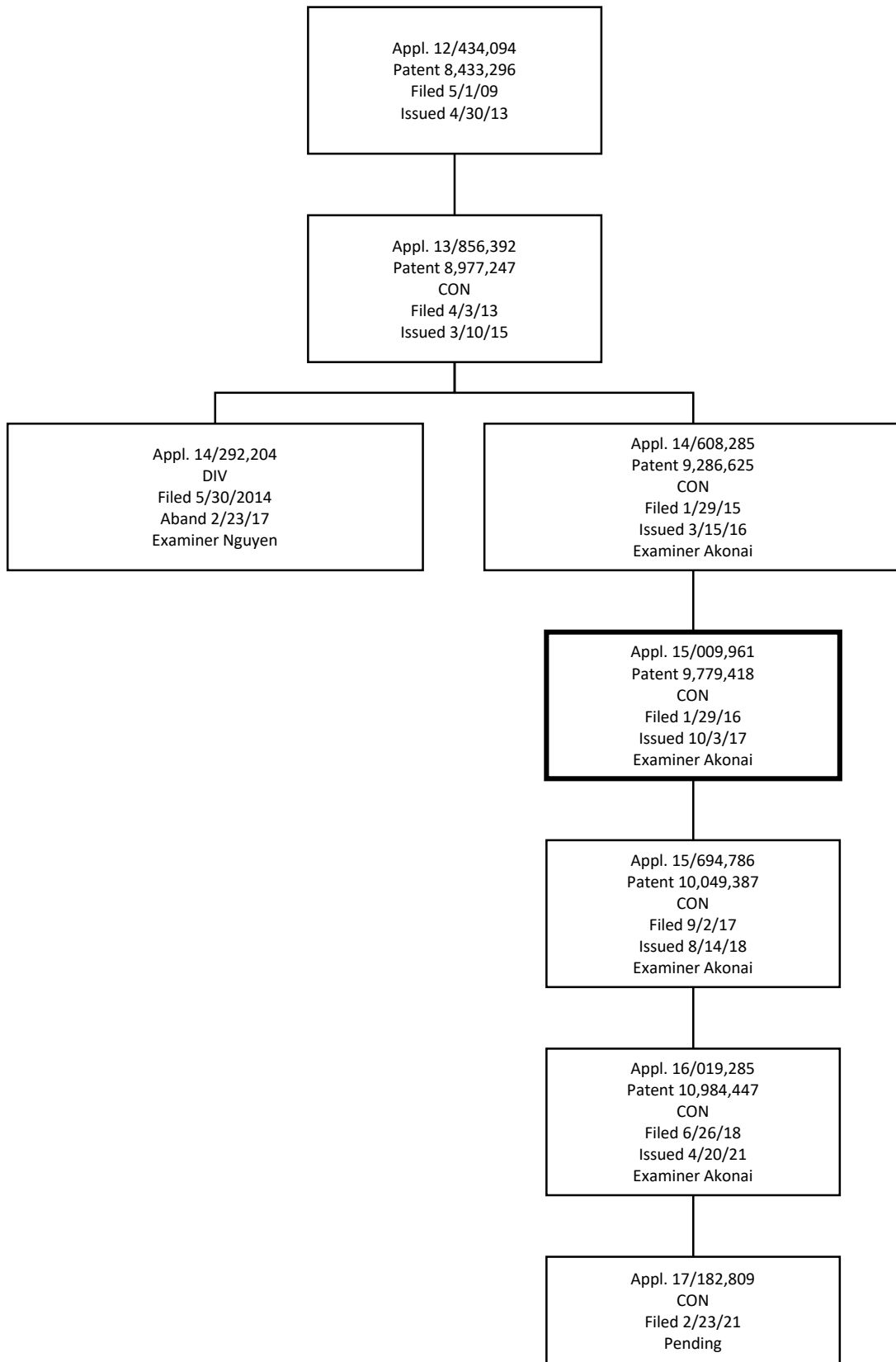
Indeed, the specification explains that the content delivery platform “may be implemented in a processing system executing a set of instructions stored in memory, or on a removable computer readable medium,” such as that shown in Figure 7. (EX1001, 12:61-13:9; *see also id.*, FIG. 7, 2:31-37.) POSAs would have understood that such a generic statement, especially when made in the context of the entire specification, does not provide any teaching that the content delivery platform is implemented on a mobile device. (EX1003, ¶112.) Moreover, the specification explains that the content delivery platform can be implemented in hardware and/or software. (EX1001, 13:35-44.) Nothing in the specification discloses a content delivery platform implemented on the same mobile device as the registered application programs. (EX1003, ¶¶107-114.)

B. Prosecution History

To demonstrate why the ’418 patent’s priority date is no earlier than 1/29/2015, and not the 5/1/2009 filing date of its ultimate parent application, a

discussion of the prosecution histories of the application chain is necessary. The '418 patent was filed on 1/29/2016, as Application 15/009,961 ("'961 application"). (EX1001, Cover.) The '418 patent was filed as a continuation of Application 14/608,285 ("'285 application"), which was filed 1/29/2015 and issued as Patent 9,286,625 (EX1011) ("'625 patent"). (EX1002, 11.) The '625 patent was filed as a continuation of Application 13/856,392 ("'392 application"), which was filed 4/3/2013 and issued as Patent 8,977,247 (EX1009) ("'247 patent"). (*Id.*) The '247 patent was filed as a continuation of the '094 application, which was filed 5/1/2009, published as *Hardin* '665 on 11/4/2010, and issued as Patent 8,433,296 (EX1007) ("'296 patent"). (*Id.*) In addition, Application 14/292,204 ("'204 application") was filed as a division of the '392 application, but was later abandoned. (EX1013.) This is the '418 patent's family tree³:

³ Petitioners have also filed IPR petitions challenging the child applications of the '418 patent.



1. The '094 Application

The first application in the chain, the '094 application, was filed 5/1/2009 and published as *Hardin* '665 on 11/4/2010. As-filed claim 1 recited, *inter alia*, “reserving respective ones of the plurality of geographic areas for delivery of content associated with respective ones of a plurality of sponsors.” (EX1008, 37.) As-filed independent claims 8 and 15 included similar limitations. (*Id.*, 38-40.) Thus, the as-filed independent claims of the '094 application did not recite which entity (*e.g.*, sponsors, application programs) submits requests to reserve geographic areas. As-filed dependent claims 5, 12, and 19, however, recited “**receiving, from a sponsor**, a request to obtain an interest in a selected one of the plurality of geographic areas.” (*Id.*, 38-41.)

When the '094 application later issued as the '296 patent, claim 1 recited “**receiving, from a sponsor**, a request to obtain an interest in a selected one of the plurality of geographic areas.” (EX1007.) Similarly, independent claims 6 and 11 recite an “instruction to **receive, from a sponsor**, a request to obtain an interest in a selected one of the plurality of geographic areas.” (*Id.*) The claims do not recite receiving, **from an application program**, a request to reserve or obtain an interest in a geographic area. (EX1003, ¶¶74-79.)

2. The '392 Application

The next application in the chain, the '392 application, was filed on 4/3/2013

and issued as the '247 patent. Like the '094 application, the as-filed independent claims of the '392 application did not specify the entity submitting requests to reserve a geographic area. (EX1010, 26-30.) In contrast, certain dependent claims recited “**receiving, from a sponsor**, a request to obtain an interest in a selected one of the plurality of geographic areas.” (*Id.*)

In response to a rejection, POs amended claim 1 to recite, *inter alia*, “receiving” such requests “**from one or more sponsors.**” (*Id.*, 114-15.) POs also amended certain dependent claims to recite “the one or more sponsors **is at least one of the one or more instances of the application program.**” (*Id.*, 116, 119-20, 123.) POs argued that this added language in the dependent claims “finds support in the specification...at least at paragraphs 0019, 0067 and 0068.” (*Id.*, 131.) However, these paragraphs do not disclose that sponsors can be application programs or identify the entity submitting the reservation request. (*Id.*, 8, 24; EX1003, ¶¶81-82, 106.)

In a later office action, the examiner determined that the amended claims were directed to a non-elected invention and withdrew the claims. (EX1010, 150-51.) POs subsequently amended the independent claims to recite “receiving” the reservation request “**from the one or more of the registered application**

programs,”⁴ and the ’247 patent issued. (*Id.*, 155-65.)

3. The ’204 Application

On 5/30/2014, POs filed the ’204 application as a division of the ’392 application. As-filed claim 1 recited, *inter alia*, “**receiving, from one or more sponsors**, at least one request to obtain an interest in a designated geographic area.” (EX1014, 49.) The other independent claims included similar limitations. (*Id.*, 51-54.) Certain dependent claims recited “wherein the one or more **sponsors is at least one of the one or more instances of the application program.**” (*Id.*, 50, 53, 55.)

The examiner (Examiner Nguyen) rejected all pending claims on several grounds, including under §112. (*Id.*, 84-102.) In particular, the examiner rejected dependent claims reciting “wherein the one or more sponsors is at least one of the one or more instances of the application program” because “[t]he scope of this limitation is indefinite/unclear because it appears to be inconsistent meaning [*sic*] with the Applicant’s specification.” (*Id.*, 90.) As the examiner explained, the specification does not describe a sponsor being an application program:

[P]aras 0019-0020 mainly indicates application program

⁴ POs also refiled the withdrawn claims as the ’204 application. (*See infra* Section 0.)

is merely software that is running on the mobile devices, applicant program is registered by the Applicant developer/Applicant platform 108 but not the Sponsors, and ***the Applicant developer 108 and Sponsors are two different parties.*** Para 0020 mainly indicates sponsor requests for delivery of content to mobile devices running any application program..... ***These paras do not indicate “wherein the one or more sponsors is at least one of the one or more instances of the application program”*** as recited in these claims. Further, it is so unclear how the one or more sponsors/advertisers is one of the application program (merely software that is running on the user mobile devices)? ***The Examiner has reviewed the rest of the Applicant’s specification*** and has ***found no indication*** of “wherein the one or more sponsors is at least one of the one or more instances of the application program”.

(*Id.*, 90-91; EX1003, ¶¶87-88.)

POs did not reply to this office action and the '204 application went abandoned. (EX1014, 122.)

4. The '285 Application

The '285 application, which issued as the '625 patent, was filed on 1/29/2015. As-filed claim 1 recited that “a request to obtain an interest in the designated geographic area” is received “***from the registered application program.***” (EX1012, 47.) The other independent claims included similar limitations. (*Id.*, 50-52.) This limitation—which is found in every issued claim of the '625 patent—is not disclosed by the specification or by the as-filed claims of the '094 and '392 applications. Thus, the '625 patent claims are not entitled to either the '094 or '392 application's filing date. (EX1003, ¶¶90-91.)

In addition, dependent claim 9 includes essentially the same limitation as the '204 application's dependent claims that were rejected on §112 grounds by Examiner Nguyen; namely, “wherein the ***registered application program is the at least one of the one or more sponsors.***” (EX1012, 48; *see also* EX1014, 50, 53, 55 (reciting “wherein the one or more sponsors is at least one of the one or more instances of the application program”).) Examiner Akonai, however, failed to reject this claim under §112 and erroneously allowed it in the '625 patent. (EX1011, Claim 9; EX1003, ¶92.)

Moreover, dependent claims 17 and 18 recited “wherein receiving the request to obtain the interest in the designated geographic area includes receiving the request on a mobile device” and “wherein the registered application program is

being executed on the mobile device.” (EX1011, Claims 17-18.) These limitations are not disclosed by the specification or by the as-filed claims of the ’094 and ’392 applications. Thus, the issued claims of the ’625 patent are not entitled to the filing date of either the ’094 or ’392 application. (EX1003, ¶93.)

5. The ’961 Application

The ’961 application issued as the ’418 patent challenged in this Petition. Similar to as-filed claim 1 of the ’285 application, as-filed claim 1 of the ’961 application recited that “a request to obtain an interest in the designated geographic area” is received “from the registered application program.” (EX1002, 45.) Again, this is not disclosed by the specification or by the as-filed claims of the ’094 and ’392 applications. (EX1003, ¶¶94-95.)

In a preliminary amendment, POs cancelled claims 1-20 and added new claims 21-40. (EX1002, 86-115.) The examiner then rejected all pending claims on several grounds, including §112. (*Id.*, 129-33.) POs subsequently amended the claims, which the examiner allowed. (*Id.*, 167-202; *id.*, 229-31.) Each of the ’418 patent’s independent claims recite, *inter alia*:

implementing, on a mobile device, at least one computer readable program instruction, made available for use by one or more distinct application programs operating on the mobile device, for **receiving, from a**

particular one application program...a request to

reserve, for the particular one application program, at

least one designated geographic area of interest.

(EX1001, Claims 1, 11, 19.) These limitations are not disclosed by the specification or by the as-filed claims of the '094 and '392 applications. Thus, the claims of the '418 patent are not entitled to the filing date of either the '094 or '392 application. (EX1003, ¶¶96-97.)

V. OVERVIEW OF THE PRIOR ART REFERENCES

A. *Hardin* '665

As explained in more detail above (*see supra* Section IV.A), *Hardin* '665 is the 1/4/2010 publication of the '094 application and has the same specification as the '418 patent challenged in this Petition.

B. *Salmre*

Salmre was filed 11/26/2004 and published 6/1/2006. (EX1006, Cover.) *Salmre* generally discloses a system that includes a location manager accessible by multiple location-aware applications residing on a mobile device. (*Id.*, ¶¶[0046], [0052].) The location manager receives location information for the mobile device and abstracts the location information into location events. (*Id.*, ¶[0016].) The location-aware applications can register with the location manager to receive location events based on the relation of the mobile device to an area of interest,

such as entering or leaving the area of interest. (*Id.*, ¶¶[0021], [0038].) *Salmre* discloses that these areas of interest may be predefined or may be defined by the user. (*Id.*, ¶¶[0032], [0037].) Upon occurrence of the predefined location event, the location manager will notify the location-aware application, and the location-aware application can execute an event driven code routine. (*Id.*, ¶[0021].)

VI. LEVEL OF ORDINARY SKILL IN THE ART

As explained by Mr. Williams, a person of ordinary skill in the art (“POSA”) as of either 5/1/2009 or 1/29/2015 would have had at least a bachelor’s degree in computer science or a comparable field of study and at least five years of professional experience in mobile or location-based computing or other relevant academic experience. (EX1003, ¶¶38-41.)

VII. CLAIM CONSTRUCTION

Petitioners are unaware of any “prior claim construction determination” related to the ’418 patent. *See* 37 C.F.R. §42.100(b). As of the filing of this Petition, the Samsung Petitioners and POs have briefed but not yet argued their claim construction positions before the District Court. (*See* EX1028; EX1029.) Although Petitioners have taken the position in Court that several claim terms are indefinite, solely for purposes of this proceeding Petitioners adopt POs’ position that each such term should receive its plain and ordinary meaning. Accordingly, and because *Hardin* ’665 contains the identical disclosure as the specification of

the challenged '418 patent, Petitioners believe that no express claim constructions are necessary, and the claims should be given their plain and ordinary meaning in this proceeding.⁵ *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

VIII. DETAILED EXPLANATION OF GROUNDS

A. The '418 Patent Claims Are Not Supported by the Disclosure of the '094 or '392 Application

The Board can consider the challenged claims' priority date. *See SAP Am., Inc. v. Lakshmi Arunachalam*, IPR2014-00414, Paper 24, 22 (PTAB Aug. 17, 2015); *Indivior UK Ltd. v. Dr. Reddy's Lab's S.A.*, 18 F.4th 1323, 1328-30 (Fed. Cir. 2021). A claim of priority to an earlier application is valid only if the earlier application, *inter alia*, provides adequate written description for the claims pursuant to §112. 35 U.S.C. §120; *Anascope, Ltd. v. Nintendo of Am., Inc.*, 601 F.3d 1333, 1335 (Fed. Cir. 2010). Thus, "the critical inquiry is whether the applicant has provided a description that 'in a definite way identifies the claimed invention' in sufficient detail that a person of ordinary skill would understand that the inventor was in possession of it at the time of filing." *Alcon Rsch. Ltd. v. Barr*

⁵ Petitioners reserve all rights to raise claim construction arguments in any litigation.

Lab'ys, Inc., 745 F.3d 1180, 1190-91 (Fed. Cir. 2014). “It is not sufficient for purposes of the written description requirement of §112 that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose. Each application in the chain must describe the claimed features.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).

Claims 11-18 of the '418 patent recite new matter that is not present in either the '094 or '392 applications. (EX1003, ¶99.) The '094 application, which published as *Hardin* '665 and shares the same specification as the '418 patent, is the earliest filed application in the '418 patent priority claim. However, neither the '094 nor the '392 application disclose receiving a reservation request made by an application program running on a mobile device or receiving the reservation request on the mobile device. (*Id.*, ¶114.) There was no support for those limitations until at least the 1/29/2015 filing of the '285 application; therefore, that is the earliest possible date to which '418 patent claims 11-18 may claim priority.

Independent claim 11 recites “***receiving, from a*** particular one ***application program***...a request to reserve, for the particular one application program, at least one designated geographic area of interest.” (EX1001.) In other words, the claims require the application program to make the request to reserve a geographic area of interest. (EX1003, ¶100.) As explained above (*see supra* Section IV.A), the

shared specification only discloses a system in which sponsors can make reservation requests. (EX1001, FIG. 4, 2:21-24, 3:3-8, 3:22-43, 8:62-65, 9:5-7, 9:28-43; EX1003, ¶¶101-102.) The specification neither discloses a system in which an application program—or any entity other than a sponsor—can send a reservation request, nor suggests that an application program could be a sponsor, nor suggests that a sponsor can be on the mobile device. (EX1003, ¶¶101-106.)

Indeed, a USPTO examiner already found that the specification did not disclose that an application program could be a sponsor. As explained above (*see supra* Section 0), the independent claims of the '204 application recited “receiving, from one or more sponsors, at least one request to obtain an interest in a designated geographic area,” and certain dependent claims recited “wherein the one or more sponsors is at least one of the one or more instances of the application program.” (EX1014, 49-55.) The examiner rejected the dependent limitation because “[t]he scope of this limitation is indefinite/unclear because it appears to be inconsistent meaning [*sic*] with the Applicant’s specification.” (*Id.*, 90.) Referring to paragraphs [0019]-[0021] of the specification, the examiner explained that “[t]hese paras do not indicate ‘*wherein the one or more sponsors is at least one of the one or more instances of the application program*’ as recited in these claims” and that the examiner “**has reviewed the rest of the Applicant’s specification and has found no indication** of ‘*wherein the one or more sponsors is at least one of the*

one or more instances of the application program.” (*Id.*, 90-91.) Thus, the examiner found that there was no support for this limitation. (EX1003, ¶¶87-88.)

Moreover, when POs originally added this limitation while prosecuting the ’392 application (*see supra* Section IV.B.2), POs claimed that the limitation was supported by paragraphs [0019], [0067], and [0068] of the specification. (EX1010, 172.) None of these paragraphs disclose a system in which an application program can send a reservation request or suggest that an application program could be a sponsor. (EX1003, ¶¶82, 105-106.) As just explained, an examiner already found that paragraph [0019] does not support this limitation and, more broadly, that there is no support anywhere in the specification. (EX1014, 90-91; EX1003, ¶¶87-88, 105-106.) In addition, paragraph [0067] merely explains that the invention can be implemented in hardware and/or software and paragraph [0068] generally describes the meaning of computer-usable or computer readable media. (EX1002, 43-44; EX1003, ¶¶82, 106.)

Independent claim 11 also recites “***implementing, on the mobile device***, at least one computer readable program instruction...for receiving, from a particular one application program...during the particular one application program’s execution on the mobile device, a request to reserve...at least one designated geographic area of interest.” (EX1001.) Thus, the reservation request must be received on the same mobile device as the application that sent it or, in other

words, the content delivery platform must run on the same mobile device as the application program making the reservation request. (EX1003, ¶107.) But, as explained above (*see supra* Section IV.A), the specification only discloses a system in which the content delivery platform is separate from the mobile device. (EX1001, FIGs. 1-3, 3:22-26, 11:38-41, 11:58-60, 12:4-13; EX1003, ¶108.) There is no disclosure of a system in which the content delivery platform runs on the mobile device. (EX1003, ¶¶107-114.) Indeed, the specification explains that the content delivery platform must communicate with a mobile device via the internet or communication towers (EX1001, FIG. 1, 3:44-4:4, Claims 9, 17, 24) and that the content delivery platform may register applications on multiple different mobile devices (*id.*, 7:4-27, 9:62-10:11). (EX1003, ¶¶109-110.)

During prosecution of the '418 patent, POs amended the independent claims to recite “implementing, on a mobile device, at least one computer readable program instruction” for receiving a reservation request. (EX1002, 167, 179-80, 191.) POs asserted that this limitation was supported by paragraphs [0022], [0064], and [0067] of the specification. (*Id.*, 212.) Paragraph [0022] generally describes how the content delivery platform communicates with mobile devices and the types of devices with which the content delivery platform can communicate. (*Id.*, 23-24; EX1003, ¶113.) Paragraph [0064] generally explains that the content delivery platform may be “implemented in a processing system

executing a set of instructions stored in memory.” (EX1002, 42; EX1003, ¶113.) And paragraph [0067] explains that the invention can be implemented in hardware and/or software. (EX1002, 43; EX1003, ¶113.) None of these paragraphs disclose that the content delivery platform may be implemented on the same mobile device as the registered application program. (EX1003, ¶113.)

In the co-pending district court litigation, POs identified certain excerpts from the shared specification as allegedly describing these limitations. (EX1019, 6-9.) Each of these excerpts are discussed above and, as explained, they only describe a system in which a remote content delivery platform receives reservation requests from sponsors for delivery of content to a mobile device. (*See supra* Section IV.A.) There is no disclosure in these excerpts, or anywhere in the specification, of a content delivery system on a mobile device that receives reservation requests from an application program running on the same mobile device. (EX1003, ¶¶64-72, 98-114.) Accordingly, the ’094 and ’392 applications’ specification do not support ’418 patent claims 11-18.

B. The ’418 Patent’s Priority Date

According to the Federal Circuit, when a continuation application is filed with a claim having limitations not supported by earlier-filed applications from which the application claims priority, the continuation application does not receive the benefit of the earlier application’s filing date. *Reiffin v. Microsoft Corp.*, 214

F.3d 1342, 1346 (Fed. Cir. 2000). Thus, the effective filing date of the '285 application is its 1/29/2015 filing date, which is also the earliest application to which the '418 patent arguably can claim priority. Note that POs have the burden of proving entitlement to a priority date earlier than the filing date. *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305-06 (Fed. Cir. 2008).

As discussed, the '285 application, with as-filed claims 1, 19, and 20, is the first application in the '418 patent's priority claim that arguably disclosed receiving reservation requests from a "registered application program" and receiving the reservation request on the same mobile device as the registered application. (See *supra* Section **Error! Reference source not found.**) Thus, the '285 application is the earliest application that arguably supports all of the limitations of the '418 patent claims and, therefore, for purposes of this Petition, the effective filing date of the '418 patent is no earlier than 1/29/2015. (EX1003, ¶99); see *Anascape*, 601 F.3d at 1337-40; *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1160 (Fed. Cir. 1998).

C. *Hardin* '665 in View of *Salmre* Renders Claims 11-18 Obvious

Petitioners respectfully submit that *Hardin* '665 in view of *Salmre* renders claims 11-18 obvious under 35 U.S.C. §103. (EX1003, ¶116 (claim chart).)

Because the disclosure of *Hardin* '665 and the specification of the '418 patent are identical, many of the entries in the chart provide the corresponding

disclosure. Indeed, POs have already taken the position that the claims are fully supported by the '418 patent specification, which has the same disclosure as *Hardin* '665. (EX1002, 53-58 (claiming benefit under 35 U.S.C. §120, which requires sufficient disclosure under §112(a)), 205-16 (“[T]he present invention as recited in...any/all claims...complies with the written description requirement.”)); *see also Constant v. Advanced Micro-Devices, Inc.*, 848 F.3d 1560, 1569 (Fed. Cir. 1988) (patentee’s “own admission during prosecution...is strong evidence” against patentee’s subsequent, contrary position.). Notwithstanding POs’ assertions, this chart details *Hardin* '665’s relevant disclosures as well as those in *Salmre*. As will be seen, *Hardin* '665 discloses “application programs” on mobile devices, but neither discloses “application programs” on mobile devices that can **reserve geographic areas**, nor that the content delivery platform (and its functionality) can be implemented on the same mobile device as the application program.

As shown in the claim chart, *Salmre* discloses a system that includes a location manager on a mobile device that may be accessed by multiple location-aware applications on the mobile device (which corresponds to the claimed “application programs”). (EX1006, ¶¶[0046], [0052].) These applications can register with the location manager to receive location events based on the relation of the mobile device to an area of interest. (*Id.*, ¶[0021].) *Salmre* discloses that applications on mobile devices register for location events. (*Id.*) *Salmre*

reinforces this teaching by describing that users may select areas of interest using applications running on mobile devices. (*Id.*, ¶[0032].) Moreover, *Salmre* discloses that the location manager (which corresponds to the functionality of *Hardin* '665's content delivery platform) resides on the same mobile device as the location-aware applications. (*Id.*, ¶¶[0046], [0052].).

'418 Patent	<i>Hardin</i> '665/ <i>Salmre</i>
Claim 11	
[11.pre]	<p>If limiting, <i>Hardin</i> '665 teaches [11.pre]:</p> <p>EX1005, ¶¶[0019] (“a registered application program is provided to mobile devices by developer platform 108”), [0021] (“Content delivery platform 112 can use this communication infrastructure to communicate with various computing devices, including.... It should be noted that the term ‘mobile device’ can include all computing devices as listed above that can communicate with content delivery platform 112....”), [0056] (“a method of interaction between a mobile device and a content providing platform”).</p>
[11.a]	<p><i>Hardin</i> '665 teaches [11.a]:</p> <p>EX1005, ¶¶[0009] (“a system that includes memory”), [0063] (“a processing system executing a set of instructions stored in memory”), [0064] (“Processing system 700 includes random access memory (RAM) 720; read-only memory (ROM) 715....”), Claim 8 (“[a] system comprising: memory”), FIG. 7.</p>
[11.b]	<p><i>Hardin</i> '665 teaches [11.b]:</p> <p>Various embodiments can be implemented as a system that includes memory, a communications interface, and a processor that cooperate to store and</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>execute a program of instructions....</p> <p>EX1005, ¶[0009].</p> <p>Processing system 700 includes <i>one or more central processing units, such as CPU A 705 and CPU B 707, which may be conventional microprocessors</i></p> <p>EX1005, ¶[0063]; <i>see also</i> EX1005, Claim 8 (“at least one processor operably coupled to the memory”).</p>
[11.c]	<p><i>Hardin '665</i> teaches [11.c]:</p> <p>[T]he location of mobile devices, or another target location, can be determined using various suitable methods. For example, <i>a mobile device running a registered application can provide location information to content delivery platform 112 in the form of latitude or longitude coordinates, raw or processed GPS data, or other location information received and recorded by either the device itself</i> or another device. In some embodiments, a target location, e.g. the location of a mobile device, can be determined based on signals received from cellular transmission towers, satellites....</p> <p>EX1005, ¶[0024].</p> <p><i>[A] determination is made as to whether the application sending the request for content has a target location that is located within a sponsor’s reserved geographic area.</i> In some embodiments, the target location may be the location of the device.</p> <p>EX1005, ¶[0051]; <i>see also</i> EX1005, FIG. 5 (“Is Target Location in a Sponsor’s reserved Area?”).</p>

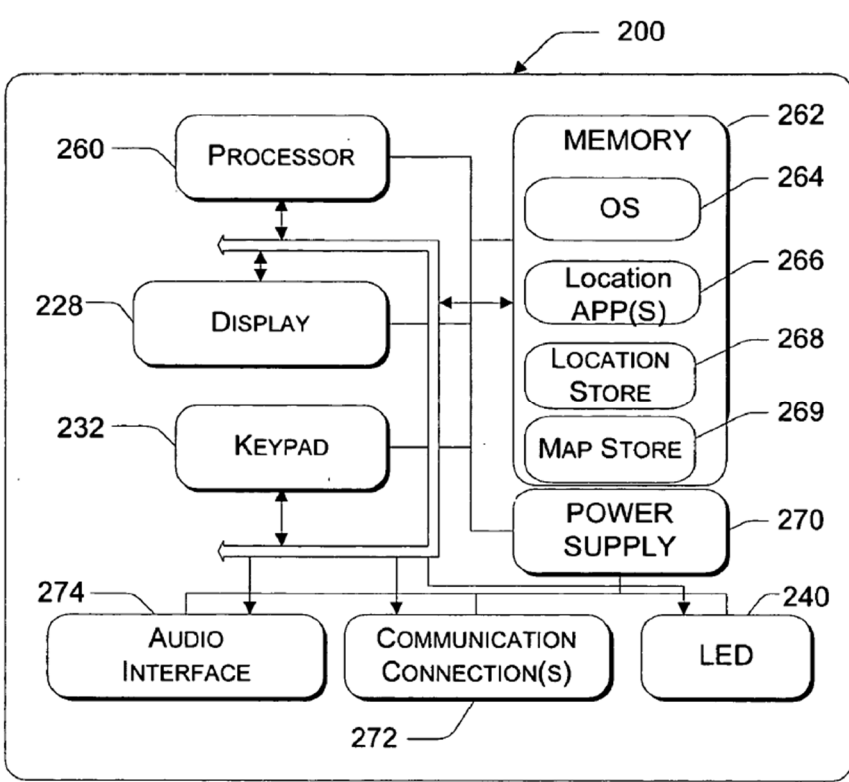
'418 Patent	<i>Hardin '665/Salmre</i>
[11.d]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [11.d] obvious:</p> <p><i>Hardin '665</i> teaches a <u>content delivery platform</u> (not the recited <i>mobile device</i>) <i>comprising...at least one module stored in the memory and configured for execution by the at least one processor...</i>:</p> <p style="padding-left: 40px;">Various embodiments can be implemented as <i>a system that includes memory</i>, a communications interface, <i>and a processor that cooperate to store and execute a program of instructions....</i></p> <p>EX1005, ¶[0009].</p> <p style="padding-left: 40px;">The methods and processes discussed previously...may be implemented in <i>a processing system executing a set of instructions stored in memory</i>, or on a removable computer readable medium.</p> <p>EX1005, ¶[0063]; <i>see also</i> EX1005, FIG. 7, ¶¶[0050] (“multiple different registered applications may be executed on a single mobile device”), [0061] (“[U]sing the request identifier can allow individualized content to be delivered to <i>different registered applications</i> which may or may not be <i>running on the same mobile device.</i>”), [0066]-[0067] (“instruction execution system”), Claim 8 (“the processor configured to execute a program of instructions”).</p> <p>While <i>Hardin '665</i> does not teach implementing the claimed module comprising instructions on the mobile device, it would have been obvious to modify <i>Hardin '665</i> to implement the module comprising instructions on the mobile device such as <i>Salmre</i>’s location manager:</p>

'418 Patent	Hardin '665/Salmre
	<div data-bbox="483 296 1333 1056"> <pre> graph TD 200[200] subgraph Device 260[260 PROCESSOR] <--> 228[228 DISPLAY] 260 <--> 232[232 KEYPAD] 260 <--> 262[262 MEMORY] 262 --- 264[264 OS] 262 --- 266[266 Location APP(S)] 262 --- 268[268 Location STORE] 262 --- 269[269 MAP STORE] 262 --- 270[270 POWER SUPPLY] 274[274 AUDIO INTERFACE] 240[240 COMMUNICATION CONNECTION(S)] 240[240 LED] 272[272] 274 --- 272 240 --- 272 240 --- 272 272 --- 260 272 --- 262 end </pre> </div> <p>EX1006, FIG. 2 (depicting mobile computing device 200 as including processor 260, memory 262, location-aware applications 266, and location store 268).</p> <p>Location manager 320 is configured to receive location information from on or off device location sources (325(1-N)) and abstract the location information into location events that are provided to location aware application 330.</p> <p>EX1006, ¶[0016]; see also EX1006, Claims 1-2, FIG. 3, ¶¶[0018], [0021].</p> <p><i>One or more location aware applications (266) reside on mobile computing device 200 and are programmed to perform instructions relating to location based applications....</i> Mobile computing device 200 may also include volatile and nonvolatile</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>storage within memory 262. <i>Memory 262 also includes location data store 268 that is used to store location based information and map store 269 that is used to map based information.</i> Location store 268 is a global facility for storing location that may be used by all location aware applications (266) on the device.</p> <p>EX1006, ¶[0046]; <i>see also</i> EX1006, FIG. 8, ¶¶[0045], [0052].</p> <p>As explained <i>infra</i> Section IX, POSAs would have been motivated to look to <i>Salmre</i> to improve upon the system disclosed in <i>Hardin '665</i>. Thus, <i>Hardin '665</i> in view of <i>Salmre</i> teaches [11.d].</p>
[11.e]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [11.e] obvious:</p> <p><i>Hardin '665</i> teaches <i>implementing...at least one computer readable program instruction, made available for use by one or more distinct application programs operating on the mobile device:</i></p> <p>Various embodiments can be implemented as a system that includes memory, a communications interface, and a processor that cooperate to store and execute a program of instructions implementing various methods and techniques described herein. Furthermore, some embodiments can be implemented as a computer readable medium tangibly embodying a program of instructions.</p> <p>EX1005, ¶[0009].</p> <p>Some embodiments may be realized as a computer program product, and may be implemented as a computer-usable or computer-readable medium embodying program code for use by, or in</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>connection with, a computer, a processor, or other suitable instruction execution system.</p> <p>EX1005, ¶[0066]; <i>see also</i> EX1005, ¶¶[0021], [0050] (“multiple different registered applications may be executed on a single mobile device”), [0061] (“[U]sing the request identifier can allow individualized content to be delivered to <i>different registered applications</i> which may or may not be <i>running on the same mobile device.</i>”), [0063], [0067].</p> <p><i>Hardin '665</i> teaches receiving, <u>from a sponsor</u>, a request to reserve a geographic area of interest for having a particular associated identifier exclusively provided for use by the application:</p> <p><i>Sponsor A 121, sponsor C 123, or sponsor B 125 can reserve an exclusive interest in a particular geographic area by sending a request to content delivery platform 112.</i></p> <p>EX1005, ¶[0020]; <i>see also</i> EX1005, Claims 5 (“receiving, from a sponsor, a request to obtain an interest in a selected one of the plurality of geographic areas”), 12, 19.</p> <p><i>[T]he content delivery system reserves exclusive interests in geographic areas for particular sponsors <u>based on the sponsors’ requests</u>, and store a record of that interest.</i></p> <p>EX1005, ¶[0008]; <i>see also</i> EX1005, FIG. 4 (“Receive Sponsor’s request for selected area”), ¶¶[0017] (“Sponsors can reserve an exclusive interest...in a geographic area....”), [0019] (“a geographical area reserved by one or more of the sponsors”), [0044] (“a method 400 for allowing sponsors to reserve particular geographic areas”), [0047] (“a sponsor’s request for a selected area is received”).</p>

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	<p><i>Hardin '665</i> also teaches receiving, from an application program, a request <u>for content</u>:</p> <p><i>The content delivery platform can receive a request from a registered application program for content to be displayed on a mobile device....</i></p> <p>EX1005, ¶[0005]; <i>see also</i> EX1005, Claims 1 (“receiving, from the application program, a request for content”), 8, 15, FIG. 5 (“Receive request for Content from Device executing Application”), ¶¶[0030] (“registered application 231 can send a request 213 to content delivery platform 212. The request can include...a request for content...”), [0050] (“a request for content can be received from a device running a registered application”).</p> <p><i>Hardin '665</i> further teaches <i>a particular associated identifier exclusively provided for use by the particular one application program</i>:</p> <p>[T]he content delivery platform can record a request identifier associated with a received request, and provide the request identifier to the mobile device to assist in tracking future actions relating to the request for content.</p> <p>EX1005, ¶[0006]; <i>see also</i> EX1005, FIG. 6 (“Platform records Request Identifier in Platform Database”), ¶¶[0030], [0049] (“A sponsor can provide content for delivery to mobile devices.... This content can include...alphanumeric identifiers....”), [0059] (“the content delivery platform records the request from the registered application in a request identifier in the platform database”), [0060] (“the content delivery platform can deliver the request identifier to the requesting application along with the requested content”), [0061] (“using the request identifier can allow individualized content to be delivered to different registered applications”), Claims 2 (“recording a request identifier associated with the request; and providing the request identifier to</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>the mobile device”), 9, 16.</p> <p>While <i>Hardin '665</i> does not teach implementing the computer readable program instruction on the claimed mobile device or receiving a reservation request from an application program, it would have been obvious to modify <i>Hardin '665</i> to implement the computer readable program instruction on the mobile device such as <i>Salmre's</i> location manager and to receive a reservation request from an application program as taught by <i>Salmre</i>:</p> <p>POSAs would understand that <i>Salmre</i> discloses a system in which location-aware applications running on a mobile device can register with a location manager on the same device to receive location events based on the relation of the mobile device to a geographic area of interest. That is, the location manager receives, from the location-aware application, a request to reserve, for that application, a particular geographic area of interest. (EX1003, [11.e].)</p>  <pre> graph TD subgraph 200 [200] 260[PROCESSOR] <--> 228[DISPLAY] 260 <--> 232[KEYPAD] 260 <--> 262[MEMORY] 262 --> 264[OS] 262 --> 266[Location APP(S)] 262 --> 268[LOCATION STORE] 262 --> 269[MAP STORE] 262 <--> 270[POWER SUPPLY] 260 <--> 272[272] 228 <--> 272 232 <--> 272 262 <--> 272 270 <--> 272 end 272 --> 274[AUDIO INTERFACE] 272 --> 240a[COMMUNICATION CONNECTION(S)] 272 --> 240b[LED] </pre>

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	<p>EX1006, FIG. 2 (depicting mobile computing device 200 as including both location-aware applications 266 and location store 268).</p> <p>Once the location data is received, location manager 320 determines if any location event is triggered that relates to application 330. Instead of only being able to provide raw location data from the location sources to application 330, <i>location manager 320 provides location events upon the occurrence of an item having some logical relationship with an area of interest, such as entering or leaving an area of interest.</i></p> <p>EX1006, ¶[0018]; <i>see also</i> EX1006, Claims 1-2, FIG. 3, ¶[0016].</p> <p>Instead of an application having to interpret the raw location data, <i>application 330 registers for location events based on the relation of the item to areas of interest.</i> Upon the occurrence of the predefined location event, location manager 320 notifies application 330.</p> <p>EX1006, ¶[0021].</p> <p>The areas of interest are defined based on the needs of the location aware application.... Some areas of interest may be selected by the developer, while other <i>areas of interest may be selected by a user. For example, many applications, such as the example described above, are configured after the application is provided to the user. In the above example, a parent may select the areas of interest.</i></p> <p>EX1006, ¶[0032].</p>

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	<p>POSAs would understand <i>Salmre</i>'s description of a user using a location-aware application to define an area of interest for that application as disclosing reserving a geographic area of interest for an application by sending a reservation request via the application. (EX1003, [11.e].)</p> <p><i>One or more location aware applications (266) reside on mobile computing device 200 and are programmed to perform instructions relating to location based applications.... Mobile computing device 200 may also include volatile and nonvolatile storage within memory 262. Memory 262 also includes location data store 268 that is used to store location based information and map store 269 that is used to map based information.</i> Location store 268 is a global facility for storing location that may be used by all location aware applications (266) on the device.</p> <p>EX1006, ¶[0046]; <i>see also</i> EX1006, FIG. 8, ¶¶[0045], [0052].</p> <p>As explained <i>infra</i> Section IX, POSAs would have been motivated to look to <i>Salmre</i> to improve upon the system disclosed in <i>Hardin '665</i>. Thus, <i>Hardin '665</i> in view of <i>Salmre</i> teaches [11.e].</p>
[11.f]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [11.f] obvious.</p> <p><i>Hardin '665</i> teaches this limitation except it teaches determining that the mobile device has entered a geographic area of interest by using a processor tangibly embodied by the <u>content delivery platform</u>, not the recited mobile device (EX1003, [11.f]):</p> <p>[T]he location of mobile devices, or another target location, can be determined using various suitable methods. For example, <i>a mobile device running a registered application can provide location</i></p>

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	<p><i>information to content delivery platform 112 in the form of latitude or longitude coordinates, raw or processed GPS data, or other location information received and recorded by either the device itself or another device.</i></p> <p>EX1005, ¶[0024]; <i>see also</i> EX1005, ¶¶[0020], [0049] (“the content received from the sponsor can be stored for later delivery to registered applications running on mobile devices...when the mobile device or target location physically enters or remains within the sponsor’s reserved area for a desired length of time”).</p> <p>[A] <i>determination is made as to whether the application</i> sending the request for content has a target location that is located within a sponsor’s reserved geographic area. In some embodiments, the target location may be the location of the device.... [I]f the target location is located within a sponsor’s reserved area, content from the corresponding sponsor can be chosen for delivery to the mobile device.</p> <p>EX1005, ¶[0051]; <i>see also</i> EX1005, FIG. 5 (“Is Target Location in a Sponsor’s reserved Area?”).</p> <p>While <i>Hardin '665</i> does not teach determining that the mobile device has entered a geographic area of interest by using a processor tangibly embodied by the mobile device, it would have been obvious to modify <i>Hardin '665</i> to implement the content delivery platform on the mobile device and make such a determination using the mobile device’s processor as taught by <i>Salmre</i>:</p>

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	<div data-bbox="483 300 1333 1056"> <pre> graph TD 200[200] 260[260 PROCESSOR] <--> 228[228 DISPLAY] 260 <--> 232[232 KEYPAD] 260 <--> 262[262 MEMORY] 260 <--> 270[270 POWER SUPPLY] 260 <--> 272[272] 228 <--> 272 232 <--> 272 262 <--> 272 270 <--> 272 272 <--> 274[274 AUDIO INTERFACE] 272 <--> 240[240 COMMUNICATION CONNECTION(S)] 272 <--> 240[240 LED] 262 --- 264[264 OS] 262 --- 266[266 Location APP(S)] 262 --- 268[268 Location STORE] 262 --- 269[269 MAP STORE] </pre> </div> <p>EX1006, FIG. 2 (depicting mobile computing device 200 as including processor 260 and location store 268); see also EX1006, ¶¶[0045] (“[m]obile computing device 200 includes processor 260”), [0046].</p> <p>Location manager 320 is configured to receive location information from on or off device location sources (325(1-N)) and abstract the location information into location events that are provided to location aware application 330.</p> <p>EX1006, ¶[0016].</p> <p>Once the location data is received, <i>location manager 320 determines if any location event is triggered</i> that relates to application 330. Instead of only being able to provide raw location data from the location sources to application 330, <i>location manager 320</i></p>

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	<p><i>provides location events upon the occurrence of an item having some logical relationship with an area of interest, such as entering or leaving an area of interest.</i></p> <p>EX1006, ¶[0018]; see also EX1006, Claims 6, 14, 16-17, 22, 24.</p> <p><i>Instead of an application having to interpret the raw location data, application 330 registers for location events</i> based on the relation of the item to areas of interest. Upon the occurrence of the predefined location event, location manager 320 notifies application 330.</p> <p>EX1006, ¶[0021].</p> <p>More than one location aware application [822] may be included on [mobile] device 820. Attached to mobile device [820] are N location sources (821(1-N)). <i>These location sources, both on and off-device, as described above, provide location data to location application 822. Location store 824 includes location information that may be accessed by all of the location aware applications on device 820.</i></p> <p>EX1006, ¶[0052]; see also EX1006, FIG. 8.</p> <p>As explained <i>infra</i> Section IX, POSAs would have been motivated to look to <i>Salmre</i> to improve upon the system disclosed in <i>Hardin '665</i>. Thus, <i>Hardin '665</i> in view of <i>Salmre</i> teaches [11.f].</p>
[11.g]	<p><i>Hardin '665</i> teaches [11.g]:</p> <p>[T]he content delivery platform can record a request identifier associated with a received request, and</p>

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	<p>provide the request identifier to the mobile device to assist in tracking future actions relating to the request for content.</p> <p>EX1005, ¶[0006]; <i>see also</i> EX1005, FIG. 6 (“Platform records Request Identifier in Platform Database”; “Platform delivers Content and Request Identifier to Requesting Application”), ¶¶[0030], [0049] (“A sponsor can provide content for delivery to mobile devices.... This content can include...alphanumeric identifiers....”), [0059] (“the content delivery platform records the request from the registered application in a request identifier in the platform database”), [0060] (“the content delivery platform can deliver the request identifier to the requesting application along with the requested content”), [0061] (“using the request identifier can allow individualized content to be delivered to different registered applications”), Claims 2 (“recording a request identifier associated with the request; and providing the request identifier to the mobile device”), 9, 16.</p> <p>[I]f an area selected for exclusive or semi-exclusive content delivery is available, the selected geographic area can be reserved for the sponsor.</p> <p>EX1005, ¶[0048]; <i>see also</i> EX1005, ¶¶[0008] (“exclusive interests”), [0020] (“Sponsor[s]...can reserve an exclusive interest in a particular geographic area by sending a request....”), [0026], [0044]-[0045] (“an area that may be reserved specifically for content related to a particular advertiser or sponsor”).</p>
[11.h]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [11.h] obvious.</p> <p><i>Hardin '665</i> teaches wherein the at least one computer readable program instruction comprises at least one input parameter for receiving, from <u>the sponsor</u> (not the recited application program), data representing...a perimeter definition...:</p> <p>Turning next to sponsor A and sponsor C’s reserved</p>

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	<p>geographic area 147, note that the perimeter is a square, rectangle or similarly shaped. In some embodiments, <i>the perimeter may be defined entirely by longitude and latitude lines and/or coordinates that constitute an area.</i> In other embodiments, sponsor A and sponsor C's reserved geographic area 147 can be <i>partially bounded by a longitude or latitude line</i>, a road, river, railway, county, state, parish, city, locality, or other desired boundary. In some embodiments, the perimeter of a sponsor A and sponsor C's reserved geographic area 147 can be defined by <i>a combination of longitude or latitude lines</i>, with one or more remaining boundaries defined based on radius or diameter.</p> <p>EX1005, ¶[0027]; <i>see also</i> EX1005, ¶[0025] ("sponsor B's reserved geographic area 145 can be an ellipse, circle, oval, or other geometric shape that can be determined, at least in part, <i>based on a radius</i>").</p> <p><i>[T]he sponsor can establish perimeters defining geographic areas</i> of exclusive or semi-exclusive control.</p> <p>EX1005, ¶[0044].</p> <p>The perimeters established can be based on map features, such as streets, rivers, landmarks, or any of the other various map features. <i>The perimeters can also be defined by latitude and longitude, or various geometric constructs having a given relative position to either a point location, a map location, a physical address, or otherwise.</i> Some embodiments allow for establishing perimeters defining areas based on a combination of the various types of constructs. So, for example, <i>latitude, longitude and map features may be used to establish the reserved</i></p>

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	<p>area, or a combination of coordinates and geometric constructs can be used in conjunction with other suitable boundary identifiers to establish an area that may be reserved specifically for content related to a particular advertiser or sponsor.</p> <p>EX1005, ¶[0045].</p> <p>While <i>Hardin '665</i> does not teach receiving data representing a perimeter definition from an <i>application program</i>, it would have been obvious to modify <i>Hardin '665</i> to receive data representing a perimeter definition from an application program as taught by <i>Salmre</i>:</p> <p>The areas of interest are defined based on the needs of the location aware application. For example, suppose the location aware application being developed determines when a child leaves their school and returns home.... Some areas of interest may be selected by the developer, while other areas of interest may be selected by a user. For example, many applications, such as the example described above, are configured after the application is provided to the user. In the above example, a parent may select the areas of interest.</p> <p>EX1006, ¶[0032]; see also EX1006, ¶¶[0016], [0018], [0021].</p> <p>According to one embodiment of the invention, the developer uses a set of predefined shapes to designate the areas of interest. The user may also select a point on the map and then provide a radius to extend from that point to be the area of interest. The area of interest may also be set using latitude and longitude coordinates.</p> <p>EX1006, ¶[0037].</p>

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	<p>As explained <i>infra</i> Section IX, POSAs would have been motivated to look to <i>Salmre</i> to improve upon the procedures described in <i>Hardin '665</i>. Thus, <i>Hardin '665</i> in view of <i>Salmre</i> teaches [11.h].</p>
[11.i]	<p><i>Hardin '665</i> teaches [11.i]:</p> <p>Various embodiments can be implemented as a system that includes memory, a communications interface, and a processor that cooperate to store and execute a program of instructions implementing various methods and techniques described herein. Furthermore, some embodiments can be implemented as a computer readable medium tangibly embodying a program of instructions.</p> <p>EX1005, ¶[0009].</p> <p>[A] method 500 of registering an application program for use in conjunction with a content delivery platform is illustrated according to various embodiments of the present disclosure.... [A]n application can be registered on a content delivery platform in response to a request by a developer, for example developer 108....</p> <p>EX1005, ¶[0050]; <i>see also</i> EX1005, ¶¶[0019] (“a registered application program is provided to mobile devices by developer platform 108”), [0021].</p> <p>Some embodiments may be realized as a computer program product, and may be implemented as a computer-usable or computer-readable medium embodying program code for use by, or in connection with, a computer, a processor, or other suitable instruction execution system.</p>

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	EX1005, ¶[0066]; <i>see also</i> EX1005, ¶¶[0053], [0063], [0067].
[11.j]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [11.j] obvious. See elements [11.e]-[11.f] and Section IX. (EX1003, [11.j].)
[11.k]	See element [11.g]. (EX1003, [11.k].)
[11.l]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [11.l] obvious. See element [11.h] and Section IX. (EX1003, [11.l].)
[11.m]	<i>Hardin '665</i> teaches [11.m]: [A] sponsor's request for a selected area is received. As illustrated by block 409, <i>a check is made to determine if the selected area, or a portion of the selected area, has already been reserved by another sponsor. If the area selected by the sponsor is already owned or is otherwise unavailable, method 400 may return to block 407, and the sponsor can choose another area.</i> EX1005, ¶[0047]; <i>see also</i> EX1005, FIG. 4 ("Selected area occupied by another?"; "Reserve Geographic Area Selected by Sponsor"). [I]f an area selected for exclusive or semi-exclusive content delivery is available, the selected geographic area can be reserved for the sponsor. EX1005, ¶[0048].
[11.n]	<i>Hardin '665</i> teaches [11.n]:

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	<p data-bbox="509 344 1308 512"><i>[T]he content delivery system reserves exclusive interests in geographic areas for particular sponsors based on the sponsors' requests, and store a record of that interest.</i></p> <p data-bbox="415 558 683 596">EX1005, ¶[0008].</p> <p data-bbox="509 642 1308 1020"><i>Sponsor A 121, sponsor C 123, or sponsor B 125 can reserve an exclusive interest in a particular geographic area</i> by sending a request to content delivery platform 112. In some embodiments, <i>the request can be for exclusive delivery of content</i> to mobile devices running any registered application within given geographic areas, <i>or for content to be delivered to particular registered applications</i> based on a target location.</p> <p data-bbox="415 1066 683 1104">EX1005, ¶[0020].</p> <p data-bbox="509 1150 1308 1444"><i>[C]ontent delivery platform 112 can prevent content from sponsor A 121 and sponsor C 123 from being delivered to a mobile device carried by second motor vehicle 173 and wireless device 177, because both motor vehicle 173 and wireless device 177 are located in sponsor B's reserved geographic area 145.</i></p> <p data-bbox="415 1491 683 1528">EX1005, ¶[0026].</p> <p data-bbox="509 1575 1308 1827"><i>[T]he sponsor can establish perimeters defining geographic areas of exclusive or semi-exclusive control.</i> These geographic areas are areas the sponsor wishes to reserve for delivery of his own advertisements or other content controlled by the sponsor.</p>

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	<p>EX1005, ¶[0044].</p> <p>The perimeters established can be based on map features, such as streets, rivers, landmarks, or any of the other various map features. <i>The perimeters can also be defined by latitude and longitude, or various geometric constructs having a given relative position to either a point location, a map location, a physical address, or otherwise.</i> Some embodiments allow for establishing perimeters defining areas based on a combination of the various types of constructs. So, for example, <i>latitude, longitude and map features may be used to establish the reserved area,</i> or a combination of coordinates and geometric constructs can be used in conjunction with other suitable boundary identifiers to establish an area that may be reserved specifically for content related to a particular advertiser or sponsor.</p> <p>EX1005, ¶[0045].</p> <p>In some embodiments in which an interest in a particular geographic area is shared between multiple sponsors, <i>a primary sponsor's content can be exclusively displayed via a first registered application running on a particular mobile device,</i> while content from other sponsors can be displayed via a second and subsequent applications running on the same mobile device.</p> <p>EX1005, ¶[0053].</p>
[11.o]	<p><i>Hardin '665</i> teaches [11.o]:</p> <p>[T]he content delivery platform can record a request identifier associated with a received request, and provide the request identifier to the mobile device to</p>

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	<p>assist in tracking future actions relating to the request for content.</p> <p>EX1005, ¶[0006]; <i>see also</i> EX1005, FIG. 6 (“Platform records Request Identifier in Platform Database”; “Platform delivers Content and Request Identifier to Requesting Application”), ¶¶[0030], [0049] (“A sponsor can provide content for delivery to mobile devices.... This content can include...alphanumeric identifiers....”), [0053], [0059] (“the content delivery platform records the request from the registered application in a request identifier in the platform database”), [0060] (“the content delivery platform can deliver the request identifier to the requesting application along with the requested content”), [0061] (“using the request identifier can allow individualized content to be delivered to different registered applications”), Claims 2 (“recording a request identifier associated with the request; and providing the request identifier to the mobile device”), 9, 16.</p>
[11.p]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [11.p] obvious.</p> <p><i>Hardin '665</i> in view of <i>Salmre</i> teaches <i>after it is determined, by at least use of the at least one processor and of the location information, that the mobile device has at least entered said particular reserved geographic area of interest:</i></p> <p>See elements [11.f], [11.m], and [11.u] and Section IX. (EX1003, [11.p].)</p> <p><i>Hardin '665</i> teaches the remaining requirements of this element except that it teaches storing the record associated with the identifier and geographic area in memory tangibly embodied by the <u>content delivery platform</u>, not the recited mobile device (EX1003, [11.p]):</p> <p>[T]he content delivery platform can record a request identifier associated with a received request, and provide the request identifier to the mobile device to</p>

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	<p>assist in tracking future actions relating to the request for content.</p> <p>EX1005, ¶[0006].</p> <p>Sponsor A 121, sponsor C 123, or sponsor B 125 can reserve an exclusive interest in a particular geographic area by sending a request to content delivery platform 112. In some embodiments, <i>the request can be</i> for exclusive delivery of content to mobile devices running any registered application within given geographic areas, or <i>for content to be delivered to particular registered applications based on a target location.</i></p> <p>EX1005, ¶[0020]; <i>see also</i> EX1005, ¶[0024].</p> <p>[A] sponsor's request for a selected area is received. As illustrated by block 409, a check is made to determine if the selected area, or a portion of the selected area, has already been reserved by another sponsor.</p> <p>EX1005, ¶[0047]; <i>see also</i> EX1005, Claims 5 (<i>“storing a record of the interest in the selected one of the plurality of geographic areas”</i>), 12, 19.</p> <p>[I]f an area selected for exclusive or semi-exclusive content delivery is available, the selected geographic area can be reserved for the sponsor. And as illustrated by block 413, the sponsor can be notified that an interest in the geographic area has been reserved for him.</p> <p>EX1005, ¶[0048].</p> <p>A sponsor can provide content for delivery to mobile</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>devices having target locations contained within its reserved area.... This content can include...<i>alphanumeric identifiers</i>, or other content suitable for delivery to mobile devices via registered applications. As illustrated by block 417, <i>the content received from the sponsor can be stored for later delivery to registered applications running on mobile devices having target locations that exist within the sponsor's reserved area, which such target locations may include</i>, but are not limited to, <i>when the mobile device or target location physically enters or remains within the sponsor's reserved area for a desired length of time</i>.</p> <p>EX1005, ¶[0049]; see also EX1005, FIG. 4 ("Store Content and Sponsor Information"), ¶¶[0051], [0053].</p> <p>[T]he content delivery platform records the request from the registered application in a request identifier in the platform database, or some other suitable storage location.</p> <p>EX1005, ¶[0059].</p> <p><i>Hardin '665 also teaches wherein the one or more registered application programs on the mobile device...:</i></p> <p>Various disclosed embodiments can be implemented in hardware, software, or a combination containing both hardware and software elements. In one or more embodiments, the invention is implemented in software, which includes but is not limited to firmware, resident software, microcode, etc. Some embodiments may be realized as a computer program product, and may be implemented as a computer-usable or computer-readable medium embodying program code for use by, or in connection with, a</p>

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	<p>computer, a processor, or other suitable instruction execution system.</p> <p>EX1005, ¶[0066]; <i>see also</i> EX1005, ¶¶[0050], [0063], [0067].</p> <p>While <i>Hardin '665</i> does not teach storing the record in memory tangibly embodied by the <i>mobile device</i>, it would have been obvious to modify <i>Hardin '665</i> to store the record in memory tangibly embodied by the mobile device as taught by <i>Salmre</i>:</p> <div data-bbox="483 720 1333 1482"> <pre> graph TD 200[200] 260[260 PROCESSOR] <--> 228[228 DISPLAY] 260 <--> 232[232 KEYPAD] 260 <--> 262[262 MEMORY] 260 <--> 270[270 POWER SUPPLY] 260 <--> 274[274 AUDIO INTERFACE] 260 <--> 240[240 COMMUNICATION CONNECTION(S)] 260 <--> 240LED[240 LED] 262 --- 264[264 OS] 262 --- 266[266 Location APP(S)] 262 --- 268[268 Location STORE] 262 --- 269[269 Map STORE] 272[272] --- 260 272 --- 228 272 --- 232 272 --- 262 272 --- 270 272 --- 274 272 --- 240 272 --- 240LED </pre> </div> <p>EX1006, FIG. 2 (depicting mobile computing device 200 as including memory 262 and location store 268).</p> <p>Location manager 320 is configured to receive location information from on or off device location sources (325(1-N)) and abstract the location information into location events that are provided to location aware application 330.</p>

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	<p data-bbox="414 346 690 388">EX1006, ¶[0016].</p> <p data-bbox="511 430 1323 808">Once the location data is received, location manager 320 determines if any location event is triggered that relates to application 330. Instead of only being able to provide raw location data from the location sources to application 330, <i>location manager 320 provides location events upon the occurrence of an item having some logical relationship with an area of interest, such as entering or leaving an area of interest.</i></p> <p data-bbox="414 850 690 892">EX1006, ¶[0018].</p> <p data-bbox="511 934 1323 1186">Instead of an application having to interpret the raw location data, <i>application 330 registers for location events based on the relation of the item to areas of interest.</i> Upon the occurrence of the predefined location event, location manager 320 notifies application 330.</p> <p data-bbox="414 1228 1226 1270">EX1006, ¶[0021]; <i>see also</i> EX1006, ¶¶[0032], [0037].</p> <p data-bbox="511 1312 1323 1795">One or more application programs, such as location app(s) 266 are loaded into memory 262 and run on the operating system 264.... Mobile computing device 200 may also include volatile and nonvolatile storage within memory 262. <i>Memory 262 also includes location data store 268 that is used to store location based information</i> and map store 269 that is used to map based information. <i>Location store 268 is a global facility for storing location that may be used by all location aware applications (266) on the device.</i></p> <p data-bbox="414 1837 690 1879">EX1006, ¶[0046].</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	As explained <i>infra</i> Section IX, POSAs would have been motivated to look to <i>Salmre</i> to improve upon the procedures described in <i>Hardin '665</i> . Thus, <i>Hardin '665</i> in view of <i>Salmre</i> teaches [11.p].
[11.q]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [11.q] obvious. See elements [11.e]-[11.g] and [11.j]-[11.l] and Section IX. (EX1003, [11.q].)
[11.r]	See element [11.m]. (EX1003, [11.r].)
[11.s]	See elements [11.n]-[11.o]. (EX1003, [11.s].)
[11.t]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [11.t] obvious. See element [11.p] and Section IX. (EX1003, [11.t].)
[11.u]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [11.u] obvious. <i>Hardin '665</i> in view of <i>Salmre</i> teaches <i>after it is determined, by at least use of the at least one processor, of the location information, and of the first particular designated geographic area of interest associated with the at least first record stored in the memory for the first one of the one or more registered application programs on the mobile device:</i> See elements [11.f] and [11.p] and Section IX. (EX1003, [11.u].) <i>Hardin '665</i> teaches the remaining requirements of this element: [T]he content delivery platform can record a request identifier associated with a received request, and provide the request identifier to the mobile device to

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>assist in tracking future actions relating to the request for content.</p> <p>EX1005, ¶[0006]; <i>see also</i> EX1005, ¶[0024].</p> <p>Furthermore, some embodiments include time based restrictions.</p> <p>EX1005, ¶[0008].</p> <p>Sponsor A 121, sponsor C 123, or sponsor B 125 can reserve an exclusive interest in a particular geographic area by sending a request to content delivery platform 112.... <i>The request can also include time limitations, limitations based on the length of time a mobile device remains within a given geographic area,</i> or other desired limitations.</p> <p>EX1005, ¶[0020].</p> <p>[C]ontent delivery platform 112 can deliver advertisements or other content related to Sponsor A <i>at selected times</i>, while content related to Sponsor C is delivered <i>at other times</i>.</p> <p>EX1005, ¶[0028].</p> <p>The request can include, but is not limited to, information indicating the location of object of interest 233, a request for content, information indicating the location of registered application 231, <i>information indicating the identity of the registered application 231, and a previously received request identifier.</i></p> <p>EX1005, ¶[0030]; <i>see also</i> EX1005, FIG. 6 (“Platform records Request Identifier in Platform Database”; “Platform delivers</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p>Content and Request Identifier to Requesting Application”), ¶¶[0059] (“the content delivery platform records the request...in a request identifier in the platform database”), [0060] (“the content delivery platform can deliver the request identifier to the requesting application along with the requested content”), [0061] (“using the request identifier”), Claims 2 (“recording a request identifier associated with the request; and providing the request identifier to the mobile device”), 9, 16.</p> <p>[A] determination is made as to whether the application sending the request for content has a target location that is located within a sponsor’s reserved geographic area. In some embodiments, the target location may be the location of the device.... <i>[I]f the target location is located within a sponsor’s reserved area, content from the corresponding sponsor can be chosen for delivery to the mobile device.... [D]ifferent sponsors may designate particular content to be provided on different days of the week or at different times of day....</i> For example, content associated with a first sponsor may be selected for delivery in a particular geographic area <i>during the lunch hour</i>, while content related to a second sponsor is selected for delivery in that same geographic area <i>between the hours of midnight and 2 am</i>.</p> <p>EX1005, ¶[0051]; <i>see also</i> EX1005, FIG. 5 (“Select Content from Sponsor”), ¶¶[0049], [0052].</p>
[11.v]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [11.v] obvious:</p> <p>See element [11.u] and Section IX. (EX1003, [11.v].)</p>
[11.w]	<p><i>Hardin '665</i> teaches [11.w]:</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p><i>The content delivery platform can receive a request from a registered application program for content to be displayed on a mobile device....</i></p> <p>EX1005, ¶[0005]; <i>see also</i> EX1005, Claims 1 (“receiving, from the application program, a request for content to be displayed on the mobile device;...providing content to the application program based on the selecting”), 8, 15, ¶[0056] (explaining “a mobile device requests content from the content providing platform” and “the content providing platform...provid[es] content to the application”).</p> <p><i>[T]he content delivery platform can record a request identifier associated with a received request, and provide the request identifier to the mobile device</i> to assist in tracking future actions relating to <i>the request for content</i>.</p> <p>EX1005, ¶[0006]; <i>see also</i> EX1005, ¶¶[0059] (“the content delivery platform records the request from the registered application in a request identifier in the platform database”), [0060] (“the content delivery platform can deliver the request identifier to the requesting application along with the requested content”), FIG. 6 (“Application sends Content Request to Platform using Key”; “Platform delivers Content and Request Identifier to Requesting Application”).</p> <p>In response to receiving the target location information 216 from object of interest 233, <i>registered application 231 can send a request 213 to content delivery platform 212. The request can include</i>, but is not limited to, information indicating the location of object of interest 233, <i>a request for content</i>, information indicating the location of registered application 231, information indicating the identity of the registered application 231, and <i>a previously received request identifier</i>.</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p><i>Content delivery platform 212 can receive and process request 213</i> to identify the location of registered application 231 and the location of object of interest 233.</p> <p>EX1005, ¶¶[0030]-[0031], FIG. 2.</p> <p>A sponsor can provide content for delivery to mobile devices having target locations contained within its reserved area.... <i>This content can include advertisements, still image content, animated content, video content, audio content, alphanumeric identifiers, or other content suitable for delivery to mobile devices via registered applications.... [T]he content received from the sponsor can be stored for later delivery to registered applications running on mobile devices having target locations that exist within the sponsor's reserved area, which such target locations may include,</i> but are not limited to, <i>when the mobile device or target location physically enters or remains within the sponsor's reserved area for a desired length of time.</i></p> <p>EX1005, ¶[0049].</p>
[11.x]	See element [11.w]. (EX1003, [11.x].)
Claim 12	
[12.pre]	See claim 11.
[12.a]	<p><i>Hardin '665 teaches [12.a]:</i></p> <p><i>The content delivery platform can receive a request from a registered application program for content</i></p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p><i>to be displayed on a mobile device.... Content is then provided to the application program.</i></p> <p>EX1005, ¶[0005]; <i>see also</i> EX1005, ¶¶[0006], [0019].</p> <p>[C]ontent related to sponsor A can be <i>delivered via one of the registered applications</i>, while another <i>registered application receives and displays content related to sponsor G.</i></p> <p>EX1005, ¶[0038].</p> <p>[S]elected content can be provided to an application for display on a mobile device. In at least one embodiment, <i>different content from the same sponsor can be provided to the same device for display within different applications, or the same content from the same sponsor can be displayed for all mobile devices running all registered applications</i> that have target locations within the delivery area for the content. For example, <i>a first program run on a mobile device may display a first advertisement within that program while a second program running on the same device may display a second advertisement</i>, which is different from the first advertisement. In some embodiments in which an interest in a particular geographic area is shared between multiple sponsors, <i>a primary sponsor's content can be exclusively displayed via a first registered application running on a particular mobile device, while content from other sponsors can be displayed via a second and subsequent applications running on the same mobile device.</i></p> <p>EX1005, ¶[0053]; <i>see also</i> EX1005, FIG. 5 (“Provide Content to Application for Display on Device”), ¶[0038].</p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p><i>[T]he content delivery platform can deliver the request identifier to the requesting application along with the requested content.</i> As illustrated by block 617, a user of the mobile device can interact with the provided content using any of various methods such as pressing a button, selecting a user selectable object <i>on a graphical user interface</i>, or otherwise.</p> <p>EX1005, ¶[0060]; <i>see also</i> EX1005, Claims 1 (“providing the content to the application program based on the selecting”), 8, 15, FIG. 6 (“Platform delivers Content and Request Identifier to Requesting Application”), ¶¶[0056], [0059].</p>
Claim 13	
[13.pre]	<p>Claim 13 recites a third particular application program with essentially the same elements as the first and second particular application programs of claim 11. POSAs would understand that the teachings with respect to the first and second application programs can be applied to a third application program. (EX1003, 13.[pre]-[13.f].)</p> <p><i>See</i> claim 11.</p>
[13.a]	<p><i>Hardin '665</i> teaches [13.a]:</p> <p><i>See</i> elements [11.e]-[11.f] and [11.u]. (EX1003, [13.a].)</p>
[13.b]	<p><i>See</i> elements [11.g] and [11.k].</p>
[13.c]	<p><i>Hardin '665</i> in view of <i>Salmre</i> renders [13.c] obvious.</p> <p><i>See</i> element [11.l] and Section IX.</p>

'418 Patent	<i>Hardin '665/Salmre</i>
[13.d]	See element [13.a].
[13.e]	See element [11.m].
[13.f]	See elements [11.n]-[11.o].
[13.g]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [13.g] obvious. See element [11.p] and Section IX.
[13.h]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [13.h] obvious. See elements [11.u] and [13.a] and Section IX.
[13.i]	See element [11.w].
Claim 14	
[14.pre]	See claim 13.
[14.a]	See element [13.a].
Claim 15	
[15.pre]	See claim 11.
[15.a]	<i>Hardin '665</i> teaches [15.a]: [T]he content received from the sponsor can be stored for later delivery to registered applications running on mobile devices having target locations that exist within the sponsor's reserved area, which such target locations may include, but are not limited to, <i>when the mobile device or target location</i>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p><i>physically enters or remains within the sponsor's reserved area for a desired length of time.</i> In some embodiments, content can be delivered to a mobile device by the sponsor or another party in response to <i>a notification that the mobile device or target location has entered or is contained within the sponsor's reserved area.</i></p> <p>EX1005, ¶[0049].</p>
[15.b]	See element [15.a]
Claim 16	
[16.pre]	See claim 11.
[16.a]	<p><i>Hardin '665</i> teaches [16.a]:</p> <p>[T]he location of mobile devices, or another target location, can be determined using various suitable methods. For example, <i>a mobile device running a registered application can provide location information to content delivery platform 112 in the form of latitude or longitude coordinates, raw or processed GPS data, or other location information received and recorded by either the device itself or another device.</i></p> <p>EX1005, ¶[0024].</p> <p><i>[A] determination is made as to whether the application sending the request for content has a target location that is located within a sponsor's reserved geographic area.... [T]he target location may be the location of the device.</i></p>

'418 Patent	<i>Hardin '665/Salmre</i>
	EX1005, ¶[0051]; <i>see also</i> EX1005, FIG. 5 (“Is Target Location in a Sponsor’s reserved Area?”).
[16.b]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [16.b] obvious. See element [11.u] and Section IX.
[16.c]	<i>Hardin '665</i> in view of <i>Salmre</i> renders [16.c] obvious. See elements [11.v] and [16.b] and Section IX.
Claim 17	
[17.pre]	See claim 11.
[17.a]	<p><i>Hardin '665</i> teaches [17.a]:</p> <p>Various embodiments can be implemented as a system that includes memory, a communications interface, and a processor that cooperate to store and execute a program of instructions implementing various methods and techniques described herein.</p> <p>EX1005, ¶[0009].</p> <p>[A] <i>registered application program is provided to mobile devices</i> by developer platform 108, <i>content delivery platform 112</i>, one of sponsor A 121, sponsor C 123, or sponsor B 125, or by another desired delivery mechanism.</p> <p>EX1005, ¶[0019].</p> <p><i>System 100 can include a network, for example Internet 131, through which content delivery platform 112, can communicate to other networked</i></p>

'418 Patent	<i>Hardin '665/Salmre</i>
	<p><i>devices.... Content delivery platform 112 can use this communication infrastructure to communicate with various computing devices....</i></p> <p>EX1005, ¶[0021].</p>
Claim 18	
[18.pre]	See claim 11.
[18.a]	See elements [11.u] and [13.d].

IX. POSAs WOULD HAVE BEEN MOTIVATED TO COMBINE HARDIN '665 AND SALMRE

POSAs would have been motivated to look to *Salmre* to improve upon the system disclosed in *Hardin '665*. (EX1003, ¶¶117, 120.) As discussed in Section VIII.A, while *Hardin '665* discloses an application program on a mobile device, it does not disclose an application program that makes a request to reserve a geographic area of interest or a content delivery platform that runs on the same mobile device as the application making the reservation request, features recited in all independent claims. (See, e.g., EX1001, Claims 1, 11, 19.) As discussed above, these features are disclosed by *Salmre*. In particular, as discussed in Section V.B, *Salmre* discloses a system that includes a location manager on a mobile device that may be accessed by multiple location-aware applications on the

mobile device. (EX1006, ¶¶[0046], [0052].) These applications can register with the location manager to receive location events based on the relation of the mobile device to an area of interest. (*Id.*, ¶[0021].) *Salmre* discloses that applications on mobile devices register for location events:

Instead of an application having to interpret the raw location data, ***application 330 registers for location events based on the relation of the item to areas of interest.*** Upon the occurrence of the predefined location event, location manager 320 notifies application 330.

(*Id.*) *Salmre* reinforces this teaching by describing that users may select areas of interest using applications running on mobile devices:

The areas of interest are defined based on the needs of the location aware application.... Some areas of interest may be selected by the developer, while ***other areas of interest may be selected by a user. For example, many applications...are configured after the application is provided to the user. In the above example, a parent may select the areas of interest.***

(*Id.*, ¶[0032].) Moreover, *Salmre* discloses that the location manager resides on the same mobile device as the location-aware applications:

One or more application programs, such as location app(s) 266 are loaded into memory 262 and run on the operating system 264. One or more location aware applications (266) reside on mobile computing device 200.... Mobile computing device 200 may also include volatile and nonvolatile storage within memory 262. Memory 262 also includes location data store 268 that is used to store location based information and map store 269 that is used to map based information.

Location store 268 is a global facility for storing location that may be used by all location aware applications (266) on the device.

(*Id.*, ¶[0046]; see also *id.*, ¶[0052].)

POSAs would have been motivated to modify *Hardin* '665's system so that the content delivery platform is on the mobile device and applications running on mobile devices—rather than sponsors—could reserve geographic areas. First, POSAs would have been aware in the timeframe following publication of *Hardin* '665 and *Salmre* that it is desirable to reduce a mobile device's power consumption. (EX1003, ¶121.) Indeed, *Salmre* references the need to “conserve battery power.” (EX1006, ¶[0048].) POSAs would have recognized that by

modifying *Hardin* '665's content delivery platform to run on a mobile device such as *Salmre*'s location manager would result in reduced power consumption because it would not be necessary for the mobile device to constantly send location information to a central server, or process return messages. (EX1003, ¶121.) These efficiencies of the *Hardin* '665/*Salmre* combination would be particularly true—and overall device power savings further enhanced—where multiple geofences and/or location-aware applications are in use on a single mobile device, such as the system disclosed in *Hardin* '665. (*Id.*) POSAs would recognize that these efficiencies of the *Hardin* '665/*Salmre* combination would arise from being able to leverage a single locate across multiple geofences and/or location-aware applications, instead of generating a locate for each (server) fence update, and in turn associated 1-to-1 each locate-sent-to-server communications. (*Id.*)

The Federal Circuit has held that “an 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.**” *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006). The Federal Circuit noted that “[b]ecause 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.” *Id.*

Second, POSAs also would have been motivated to look to *Salmre* to improve latency issues associated with client-server communications. (EX1003, ¶122.) In *Hardin* ’665’s system, which uses a remote content delivery platform, the mobile device needs to send every locate to the server-based content delivery platform for processing. (*Id.*) As explained in *Hardin* ’665, “the application running on the mobile device sends the mobile device’s location...to the content delivery platform.” (EX1005, ¶[0058].) The content delivery platform will then need to process the location information and, if the content delivery platform determines a location event has occurred, it will need to send a response to the application on the mobile device. (*See id.*, ¶[0051].) This communication with the server and processing of the location information off-device results in a lag time between the locate and notification of a location event. (EX1003, ¶123.) POSAs would recognize that implementing the content delivery platform on the mobile device, like *Salmre*’s location manager, would reduce these latency issues.

Third, POSAs would have been motivated to look to *Salmre* to add and/or

include mobile phone/device-based geofencing to a central server-based geofencing scheme to better support more geofencing use cases and reduce communications costs. (*Id.*, ¶124.) Implementing the content delivery platform on the mobile device would facilitate use of “moving” geofences, *i.e.*, where both the device and the area of interest are moving. (*Id.*, ¶125.) In this use case, it is necessary for resources to be immediately available. This may not be possible using *Hardin* ’665’s system due to the latency issues attendant to the central server-based geofencing scheme. (*Id.*) A device-based geofencing scheme would also reduce communication costs because the device would not need to be in constant communication with the server. (*Id.*, ¶126.)

Finally, POSAs would have been motivated to modify *Hardin* ’665’s system with the teachings of *Salmre* to make it easier to develop and use location-aware applications. *Salmre* explains that combining the “separate and complex tasks of location information gathering, analysis, and display and making them integrated” makes it easier to develop and use location-aware applications. (EX1006, ¶¶[0002], [0014].) Likewise, POSAs would recognize that implementing the content delivery platform on the mobile device and receiving reservation requests from applications running on the device would make it easier to develop and use location-aware applications. (EX1003, ¶127.)

X. PTAB DISCRETION UNDER 35 U.S.C. §314(a) SHOULD NOT PRECLUDE INSTITUTION

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11, 6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”) should not apply here because Google is not a party to any district court litigation. Even if *Fintiv* still applies, this Petition presents compelling evidence of unpatentability and, per PTO interim guidance dated 6/22/2022, that alone demonstrates that the PTAB should not discretionarily deny institution. (EX1015, 2, 4-5.) To the extent *Fintiv* is still considered due to Samsung being in litigation with POs, the *Fintiv* factors still weigh against discretionary denial.

Factor 1 is neutral because neither party has requested a stay in the co-pending litigation, and it is unknown whether a stay will be granted if requested. *See Fintiv*, 12; *Sand Revolution II, LLC v. Cont’l Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24, 7 (PTAB June 16, 2020) (informative) (“*Sand Revolution*”). But even if there is no stay, this factor does not weigh against institution for Google.

Regarding **factor 2**, POs’ complaint was filed against Samsung on 7/30/2021 in the Eastern District of Texas. (EX1016.) Based on a median time from filing to trial in E.D. Texas of 24.2 months, the likely disposition date is some time in August, 2023. (EX1018, 35.) A final written decision (“FWD”) is

anticipated in January, 2024. Because the FWD and the disposition date are in relatively close proximity, the Board should not deny institution of this Petition. Notably, a projected FWD date as much as eleven months after the scheduled trial date can be insufficient for *Fintiv* denial in light of other factors. *See, e.g., Tianma Microelectronics Co. Ltd. v. Japan Display Inc.*, IPR2021-01057, Paper 15, 5-14 (PTAB Jan. 6, 2022); *Samsung Elecs. Co., Ltd. v. Acorn Semi, LLC*, IPR2020-01207, Paper 21 (PTAB Feb. 10, 2021).

The district court litigation is in relatively early stages (**factor 3**). Petitioners are filing this Petition prior to the claim construction hearing and before expert discovery. With respect to Google, which has never been sued under the challenged patent, this factor weighs against denial.

Factor 4 weighs against discretionary denial because Petitioners ultimately challenge all claims (1-25) of the '418 patent, while POs have not alleged infringement of claims 4-5, 8, or 14. Moreover, to eliminate any doubt as to the absence of meaningful overlap, Samsung stipulates that, unless the Board denies or later vacates institution of this Petition, Samsung will not seek resolution in the district court litigation of invalidity based on the specific grounds asserted in this Petition. (EX1032); *Sand Revolution*, 11-12.

Regarding **factor 5**, Google is not a party to the district court litigation, which, at a minimum, strongly weighs against discretionary denial. Regardless, to

the extent the Board thinks the other factors are close, this factor should tip the balance against discretionary denial.

Finally, **factor 6** weighs strongly against discretionary denial. As *Fintiv* noted, “if the merits of a ground raised in the petition seem particularly strong...institution of a trial may serve...overall system efficiency and integrity.” *Fintiv*, 14-15. Consistent with the Director’s interim guidance, compelling evidence of unpatentability, alone, precludes discretionary denial. (EX1015, 2 (“[T]he PTAB will not rely on the *Fintiv* factors to discretionarily deny institution in view of parallel district court litigation where a petition presents compelling evidence of unpatentability.”), 4-5.)

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

A. Real Parties-in-Interest

Petitioners identify themselves as the real parties-in-interest.

B. Related Matters

To the best of Petitioners’ knowledge, the ’418 patent has not been challenged in any other *inter partes* review or post-grant review prior to this proceeding. To the best of Petitioners’ knowledge, the ’418 patent is involved in the following district court litigation:

Hardin et al. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc., C.A. No. 2:21-CV-00290-JRG (E.D. Tex.)

The following petitions for *inter partes* review have been filed concurrently and challenge the remaining claims of this patent as well as those of U.S. Patent Nos. 10,049,387 and 10,984,447:

9,779,418	IPR2022-01330
9,779,418	IPR2022-01332
10,049,387	IPR2022-01327
10,049,387	IPR2022-01328
10,049,387	IPR2022-01329
10,984,447	IPR2022-01333
10,984,447	IPR2022-01334
10,984,447	IPR2022-01335

Application 17/182,809, which is a continuation application of Application 16/019,285, is pending.

C. Lead and Backup Counsel

Lead Counsel	Back-Up Counsel
Jeffrey A. Miller, Reg. No. 35,287 jmillerptab@apks.com Arnold & Porter Kaye Scholer LLP 5 Palo Alto Square, Suite 500 3000 El Camino Real Palo Alto, CA 94306 Tel: 650-319-4519	Jin-Suk Park, Reg. No. 50,678 (jin.park@arnoldporter.com) Arnold & Porter Kaye Scholer LLP 601 Massachusetts Ave., NW Washington, DC 20001-3743 Tel: 202-942-5000 Fax: 202-942-5999

D. Service Information

Please address all correspondence to lead and back-up counsel at the addresses shown above. Petitioners consent to electronic service by e-mail.

E. Power of Attorney

A power of attorney is filed herewith according to 37 C.F.R. §42.10(b).

XII. FEES

Petitioners concurrently electronically submit the required fees for this Petition. The Board is authorized to charge Arnold & Porter Kaye Scholer LLP's deposit account, No. 50-2387, for any fee deficiency.

Date: August 2, 2022

Respectfully submitted,

/Jeffrey A. Miller/
Jeffrey A. Miller, Lead Counsel
Reg. No. 35,287

CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that the foregoing Petition for *Inter Partes* Review contains 13,992 words, excluding those portions identified in 37 C.F.R. §42.24(a), as measured by the word-processing system used to prepare this paper.

/Jeffrey A. Miller/
Jeffrey A. Miller, Lead Counsel
Reg. No. 35,287

CERTIFICATE OF SERVICE

I certify that on August 2, 2022, I caused a true and correct copy of the foregoing Petition for *Inter Partes* Review of Patent No. 9,779,418 and supporting exhibits to be served via overnight delivery on the Patent Owners at the following correspondence address of record as listed on Patent Center:

Ryan Hardin
P.O. Box 271861
Houston TX 77277

A courtesy copy was also sent via electronic mail to Patent Owners' litigation counsel listed below:

Thomas M. Melsheimer (tmelsheimer@winston.com)
M. Brett Johnson (mbjohnson@winston.com)
Rex A. Mann (mann@winston.com)
Chad B. Walker (cbwalker@winston.com)
Ahtoosa A. Dale (adale@winston.com)
Saranya Raghaven (sraghaven@winston.com)
Matt Hopkins (mhopkins@winston.com)
Wesley Hill (wh@wsfirm.com)

/Jeffrey A. Miller/
Jeffrey A. Miller, Lead Counsel
Reg. No. 35,287