Trials@uspto.gov
571-272-7822

Paper 10
Date: September 1, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RIDECO INC.,
Petitioner,

v.

VIA TRANSPORTATION, INC.,
Patent Owner.

IPR2022-00740
Patent 10,197,411 B2

Before PATRICK R. SCANLON, MICHAEL L. WOODS, and RICHARD H. MARSCHALL, *Administrative Patent Judges*.

WOODS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner, RideCo Inc., filed a Petition for *inter partes* review of claims 1–13, 15, and 17–20 of U.S. Patent No. 10,197,411 (Ex. 1001, "the '411 patent"). Paper 1 ("Pet."). Patent Owner, Via Transportation, Inc., filed a Preliminary Response. Paper 7 ("Prelim. Resp."). With our authorization, Petitioner filed a Preliminary Reply (Paper 8, "Reply") and Patent Owner filed a Preliminary Sur-reply (Paper 9, "Sur-reply").

Under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to institute an *inter partes* review if "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). After considering the Petition, the Preliminary Response, the Reply, the Sur-reply, and the evidence of record, we determine the information presented shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of the challenged claims of the '411 patent. Accordingly, we institute an *inter partes* review of claims 1–13, 15, and 17–20 of the '411 patent on the grounds asserted in the Petition.

II. BACKGROUND

A. Real Parties-In-Interest and Related Matters

Petitioner identifies itself and Transit Labs Inc. as real parties-in-interest. Pet. 71. Patent Owner identifies itself as its sole real party-in-interest. Paper 4, 2.

Petitioner identifies one district court proceeding relating to the '411 patent: *Via Transportation, Inc. v. RideCo Inc.*, Case No. 6:21-cv-

00457-ADA (W.D. Tex.) ("Related Litigation"). Pet. 71. Patent Owner does not identify any additional related proceedings. Paper 4, 2.

We further identify as related IPR2022-00286, which was instituted on June 28, 2022, and challenges U.S. Patent No. 9,816,824 B1 (the "'824 patent").

B. Overview of the '411 Patent

The '411 patent describes a "computer-implemented transportation system." Ex. 1001, code (57). The '411 patent describes "continuously updatable computer-generated routes with continuously configurable *virtual bus stops* for passenger ride-sharing." *Id.* at 1:23–26 (emphasis added).

The '411 patent describes "the term 'virtual bus stop' [as] a location selected . . . as being safe for at least one passenger pickup (i.e., the location to which passenger(s) being directed to go to be picked up by a designated vehicle (e.g., bus, van, car, etc.)) and/or at least one passenger dropoff." *Id.* at 8:57–63.

The system can also identify suitable vehicles for completing the user's requested route using GPS data to determine the "current vehicle location data for a plurality of ride-sharing vehicles traveling within the at least one geographic locale." Ex. 1001, 2:5–10. The system and method outlined by the '411 patent can also include additional features and steps, such as dynamically selecting and assigning a plurality of optimal virtual bus stops and routes for vehicles that will be simultaneously servicing multiple ride-sharing requesting passengers based on various parameters. *See id.* at 2:25–61. The '411 patent further describes dynamically updating and displaying optimal routes on the screens of electronic devices associated with passengers and vehicles. *See id.* at 2:53–3:4. As the '411 patent

explains, "the term 'dynamic(ly)' means that events and/or actions can be triggered and/or occur without any human intervention." *Id.* at 8:25–27.

To illustrate, we reproduce Figure 5 of the '411 patent, below:

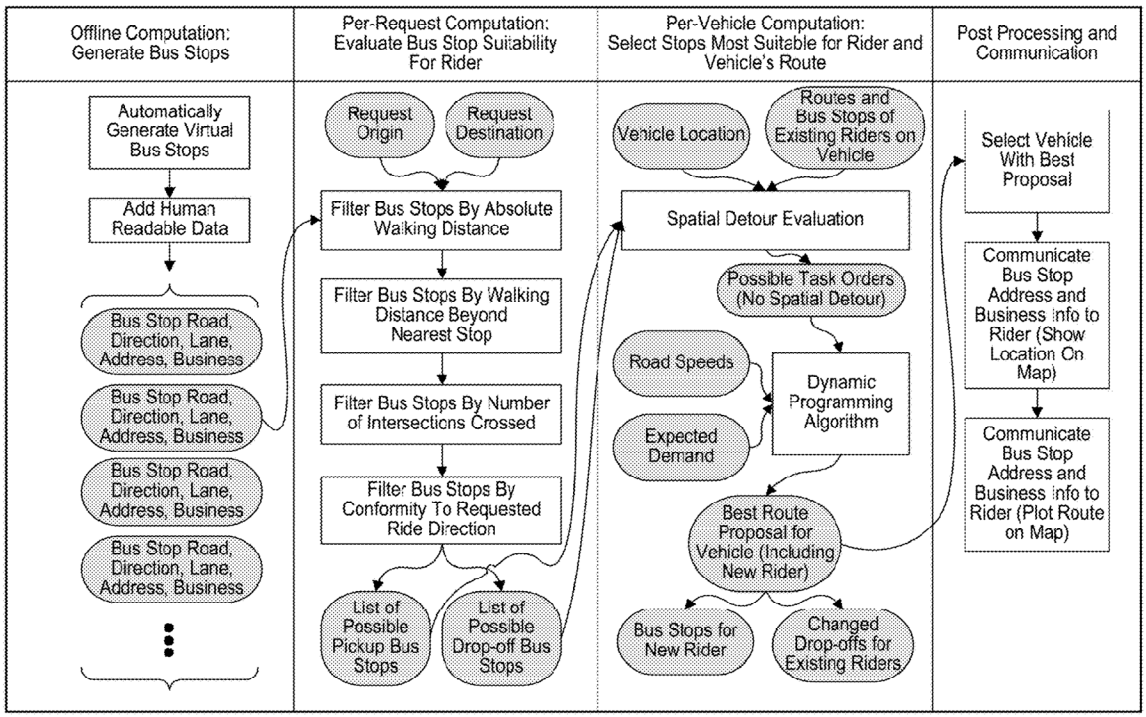

FIGURE 5

Figure 5 "is a diagram illustrating an embodiment of the exemplary computer transportation system" described in the '411 patent. *Id.* at 16:54–56. As shown above in Figure 5 and detailed in the '411 patent, the patent teaches a multistep process by which the system will dynamically select appropriate *virtual bus stops*, routes, and vehicles for a plurality of rideshare-requesting passengers. For example, "the exemplary computer transportation systems of the present invention are further configured to determine which of the virtual bus-stops among the grid of virtual bus-stops are candidate[s] for boarding and/or disembarking based on at least one of" several parameters and factors. *Id.* at 9:13–17. The '411 patent additionally explains that the system can be "further configured to choose a single

boarding virtual bus-stop and/or single disembarking virtual bus-stop . . . , where the chosen boarding virtual bus-stop and/or disembarking bus-stop are based on at least one of" several parameters and factors. *Id.* at 9:37–45.

C. Challenged Claims

Petitioner challenges claims 1–13, 15, and 17–20 of the '411 patent. Pet. 1. Claims 1, 2, and 11 are independent and similar to each other in language and scope, with claims 1 and 2 directed to a system and claim 11 directed to a method. Ex. 1001, 30:46–34:34. Claims 3–10 depend directly from claim 2, and claims 12, 13, 15, and 17–20 depend directly or indirectly from claim 11. *Id.* at 31:17–34:34. Claim 1 is illustrative and reproduced below:

> 1. **[P]** A system for routing a rideshare vehicle, the system comprising:
>
> **[1(a)(i)]** a communications interface configured to receive, from a first mobile communications device of a first user, a request for a rideshare, **[1(a)(ii)]** wherein the request includes information associated with a current location of the first user and a first desired destination;
>
> **[1(b)]** at least one processor configured to receive information from the communications interface and programmed to:
>
> **[1(c)]** determine, based on current locations of multiple rideshare vehicles and the received request, a rideshare vehicle to pick up the first user;
>
> **[1(d)(i)]** select, based on the current travel route of the rideshare vehicle, virtual bus stops for the identified rideshare vehicle, including a first virtual bus stop for picking up the first user and a second virtual bus stop for dropping off the first user, and **[1(d)(ii)]** wherein the first virtual bus stop is at a first location at least a block away from the current location of the first user and the second

> virtual bus stop is at a second location differing from the first desired destination;
>
> **[1(e)]** assign the rideshare vehicle to pick up the first user from the first virtual bus stop and to drop off the first user at the second virtual bus stop;
>
> **[1(f)]** generate a first time-estimation for the rideshare vehicle to arrive at the first virtual bus stop for picking up the first user;
>
> **[1(g)]** continuously track location a current location of the rideshare vehicle prior to arrival at the first virtual bus stop, to generate an updated time-estimation for the rideshare vehicle to arrive at the first virtual bus stop for picking up the first user;
>
> **[1(h)]** cancel the assignment of the rideshare vehicle when the updated time-estimation differs from the first time-estimation by more than a predefined threshold; and
>
> **[1(i)]** reassign another rideshare vehicle to pick up the first user from the first virtual bus stop.

Id. at 30:46–31:16 (bold reference numerals correspond with Petitioner's captions to the elements); *see* Pet. 10–34 (addressing claim 1); *see also* Pet. 73 (Claims App.).

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–13, 15, and 17–20 are unpatentable based on the following grounds (Pet. 5–6):

Claims Challenged	35 U.S.C. §	References
1	103	Lambert,[1] Sweeney,[2] Olmi[3]
2–7, 10, 12, 15, 18	103	Lambert, Sweeney, Poykko[4]
11, 19, 20	103	Lambert, Sweeney, Lerenc[5]
8, 9, 13	103	Lambert, Sweeney, Poykko, Lerenc
17	103	Lambert, Sweeney, Poykko, Olmi

Petitioner also relies on the Declaration of Mr. Scott Andrews (Ex. 1003). *See, e.g.*, Pet. 4–5 (citing Ex. 1003).

III. ANALYSIS

A. Discretion Under 35 U.S.C. § 314(a)—Fintiv

Relying on the framework from *Fintiv,* Patent Owner argues we should deny the Petition based on the Related Litigation. Prelim. Resp. 22; *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*").

We disagree, as an interim procedure recently issued by the USPTO (discussed below) directs us otherwise.

The Board's precedential decision in *Fintiv* identifies a non-exclusive list of factors parties may consider addressing a related, parallel, district court action to determine whether such action provides any basis for

[1] US 9,679,489 B2, issued June 13, 2017 (Ex. 1004, "Lambert").
[2] US 2015/0161554 A1, published June 11, 2015 (Ex. 1008, "Sweeney").
[3] GB 2,397,683 A, published July 28, 2004 (Ex. 1033, "Olmi").
[4] US 2008/0270204 A1, published Oct. 30, 2008 (Ex. 1005, "Poykko").
[5] US 2014/0324505 A1, published Oct. 30, 2014 (Ex. 1007, "Lerenc").

discretionary denial. *Fintiv*, Paper 11 at 5–16. The Director of the USPTO issued, on June 21, 2022, an Interim Procedure regarding the application of *Fintiv* factors for purposes of determining whether to exercise discretion to deny a petition. Interim Procedure for Discretionary Denials in AIA Post-Grant Proceeding with Parallel District Court Litigation, *available at* https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf ("Interim Procedure"). The Interim Procedure states: "[T]he PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB." Interim Procedure at 3.

Petitioner stipulates that "if the Board institutes the Petition on the same grounds presented, then it will not seek resolution in the district court of any ground of invalidity raised in the Petition or that could have been raised in the Petition." Pet. 68; *see also Sotera Wireless, Inc. v. Masimo Corp.,* IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A) ("*Sotera*").

Patent Owner argues that "while Petitioner offers a *Sotera* stipulation (*see* Pet. 68), that stipulation will not prevent Petitioner from pursuing overlapping invalidity arguments in the co-pending district court litigation due to the unique procedural posture of this case." Prelim. Resp. 22; *see also* Sur-reply 3–5 (arguing the same). Patent Owner points out that "the co-pending district court case involves three patents that share a specification with the '411 patent." Prelim. Resp. 22–23 (citations omitted); *see also* Sur-reply 3–4 (arguing the same). According to Patent Owner, "Under these circumstances, Petitioner's *Sotera* stipulation does not prevent Petitioner

from raising overlapping invalidity arguments based on the same prior art references in the co-pending district court litigation." Prelim. Resp. 23. In particular, Patent Owner submits that the issue of "whether Lambert's teaching of 'dynamically selecting' pickup and dropoff locations teaches system-selected and assigned 'virtual bus stops" is "nearly identical" in each of the patents asserted in the Related Litigation. Sur-reply 5.

We do not view alleged overlap with other invalidity issues involving other patents as sufficient to support discretionary denial. We are aware of no authority to support Patent Owner's argument that a *Sotera* stipulation is ineffective simply because it does not apply to unchallenged claims of unchallenged patents. *See* Reply 4 (arguing the same). Furthermore, Patent Owner cites no authority addressing the Interim Procedure and the inadequacy of a *Sotera* stipulation due to related patents asserted in a related litigation. *See* Sur-reply 3–5. Rather, USPTO procedure requires us to decline exercising our discretion to deny institution under § 314(a). *See* Interim Procedure at 3 ("the PTAB will not discretionarily deny institution . . . .").

Because Petitioner submitted a *Sotera* stipulation, and in accordance with the Interim Procedure, we decline to deny the Petition discretionarily.

B. Discretion Under 35 U.S.C. § 325(d)

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 325(d) to deny institution. Prelim. Resp. 18–25; *see also* Sur-reply 1–3 (arguing the same).

The Director has discretion to institute an *inter partes* review, and has delegated that discretion to the Board. *See* 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.4(a). In determining whether to institute an *inter partes* review, we "may take into account whether, and reject the petition . . . because, the

same or substantially the same prior art or arguments previously were presented to the Office." 35 U.S.C. § 325(d).

In evaluating arguments under § 325(d), we use a two-part framework,

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
>
> (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) (addressing in a two part framework the factors presented in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, Case IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to § III(C)(5), first paragraph)).

Patent Owner argues that "Petitioner relies on art that is cumulative of art already considered during prosecution," namely, Shou Ma (Ex. 2010). Prelim. Resp. 19; *see also* Sur-reply 3 ("Petition[er] here presents the same question of patentability that the Examiner already resolved with respect to Shou Ma"). Patent Owner points out that "the Examiner withdrew [a prior art] rejection after Applicants established that Shou Ma routes rides based on the origin and destination locations provided by riders, *rather than system-selected virtual bus stops*." Prelim. Resp. 20 (citing Ex. 1002, 179–180, 189) (emphasis added); *see also* Sur-reply 1 ("Lambert suffers exactly the same deficiency as Shou Ma—Lambert's ridesharing system does not select virtual bus stops."). Patent Owner contends that "Petitioner 'present[s]

essentially the same question of patentability as was previously considered by the Examiner'—i.e., whether the virtual bus stops of the '411 patent are obvious over rider-specified origin and destination locations." Prelim. Resp. 21 (citation omitted).

Petitioner argues that "there is a material difference between Lambert and Shou Ma." Reply 2.

We agree with Petitioner. Petitioner relies on Lambert for teaching "dynamically selected pick-up/drop-off locations" and submits that these satisfy the claimed "virtual bus stops." *See, e.g.*, Pet. 22–23 (citing Ex.1004, 4:17–23). Lambert's teaching is different from Shou Ma in at least this respect.

Even if we accept Patent Owner's characterization that "Shou Ma routes rides based on the origin and destination locations provided by riders, rather than *system-selected virtual bus stops*" (Prelim. Resp. 20 (emphasis added)), Shou Ma is materially different from Lambert in that Lambert teaches "system-selected virtual bus stops." *See infra* § III.E.5.f.

At this stage of the proceeding, we agree with Mr. Andrews that a POSITA "would understand that since [Lambert's] dynamically selected pickup/dropoff locations (i.e., 'virtual bus stops') are selected to increase the efficiency of the vehicle's route, they are 'selected based on the current travel route of the rideshare vehicle' as required by the claim." Ex. 1003 ¶ 158. We further agree with Mr. Andrews that a POSITA "would have been motivated to dynamically select pickup and drop-off locations to improve the efficiency of the transportation system as expressly suggested by Lambert." *Id.* ¶ 159. We further agree with Mr. Andrews that a POSITA "would have understood this modification would have only required a minor change to the software running on Lambert's server." *Id.* ¶ 160.

Because Lambert teaches its *system of selecting virtual bus* stops to improve efficiency (*see, e.g.*, Ex. 1004, 4:17–23), Lambert is materially different from Shou Ma, which, according to Patent Owner, does not teach "system-selected virtual bus stops" (Prelim. Resp. 20; Sur-reply 1). Accordingly, we do not find that the same or substantially the same art was previously presented to the Office and we decline to exercise our discretion and deny institution under 35 U.S.C. § 325(d). *See Advanced Bionics,* Paper 6 at 8.

C. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art at the time of the invention ("POSITA" or "PHOSITA") "would have been a person having (i) a Bachelor's degree in computer science, computer engineering, electrical engineering, or a similar technical field[;] (ii) a working knowledge of computer programming and navigation systems; and (iii) two to four years of experience with location-based systems, user interfaces and databases." Pet. 4–5 (citing Ex. 1003 ¶ 37).

"For the purpose of [the] Preliminary Response only, Patent Owner does not dispute Petitioner's definition." Prelim. Resp. 12.

For purposes of this Decision, we adopt Petitioner's assessment of the level of ordinary skill in the art as it is consistent with the '411 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

D. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2019). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood

by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Petitioner contends that it generally applies "the ordinary and customary meaning of the claim terms" (Pet. 6), proposing specifically that the term *virtual bus stop* "require[s] no construction" (*id.* at 7 (citation omitted)). Petitioner further submits that claim 10 recites a listing of alternatives—a Markush group—and that "Petitioner need only show the prior art discloses one of the recited options . . . to render this claim unpatentable." *Id.* at 8 (citation omitted).

1. "virtual bus stop"

In our Decision to Institute in related proceeding IPR2022-00286 involving the related '824 patent, we determined that the plain and ordinary meaning of "virtual bus stops" applies. *RideCo Inc. v. Via Transportation, Inc.*, IPR2022-00286, Paper 12 at 11 (P.T.A.B. June 28, 2022). In particular, we explained,

> [W]here the parties now agree that the ordinary meaning should apply to the claim limitations in question and the district court adopted the same approach, we see no reason to depart from applying the ordinary meaning to those same claim limitations in this proceeding. We therefore apply the plain and ordinary meaning to "virtual bus stops."

Id. We further explained that virtual bus stops "excludes literal bus stops and includes stops shared by more than one rider or vehicle that can be represented virtually, in a computer medium." *Id.* at 20–21.

In its Preliminary Response, Patent Owner disagreed with our construction in IPR2022-00286, arguing that "[t]he '411 patent does not describe 'virtual bus stops' as simply locations that can be 'represented

virtually, in a computer medium.'" Prelim. Resp. 13. Patent Owner submits that "the '411 patent uses the term 'virtual bus stops' to refer to the pickup and dropoff locations **selected by the ridesharing system**." *Id.*; *see also id.* at 17 ("Patent Owner respectfully submits that the plain and ordinary meaning of 'virtual bus stops' in light of the intrinsic record is pickup and dropoff locations *selected by the ridesharing system*.")

Patent Owner explains that "[t]he specification of the '411 patent—like the claims themselves—thus indicates that an essential aspect of the claimed invention is a ridesharing system that selects pickup and dropoff locations (called 'virtual bus stops') for riders." Prelim. Resp. 17.

In particular, Patent Owner argues,

> The plain and ordinary meaning of "virtual bus stops" is amply and repeatedly supported in the language of the Challenged Claims themselves. For example, independent claims 1 and 2 of '411 patent both recite "[a] system for routing a rideshare vehicle, **the system comprising**: . . . **at least one processor . . . to . . . select** . . . **virtual bus stops for the identified rideshare vehicle**." Ex. 1001 ('411 patent), claims 1, 2. The claims further specify that these system[] selected "virtual bus stops" are the locations for "picking up" and "dropping off" users. *See id.* Dependent claims 3-10, 13, 14, and 16 also expressly indicate that the "virtual bus stops" are selected by the ridesharing system itself. While independent claim 11 does not expressly state that the ridesharing system performs the "selecting" of virtual bus stops, the context of the claim makes clear that the system performs the selection after receiving a request from a user and determining the location of rideshare vehicles.

Prelim. Resp. 15.

Patent Owner further argues,

> The specification of the '411 patent also confirms that the plain and ordinary meaning of "virtual bus stops" is pickup and dropoff locations selected by the ridesharing system. The title

> of the patent and the field of the invention both refer to "continuously updatable **computer-generated** routes with continuously configurable virtual bus stops." Ex. 1001 ('411 patent), 1:1-28. The summary of the invention refers to the present invention as "**a computer-implemented method**" that includes the step of "dynamically selecting, in real-time, **by the at least one specifically programmed processor** . . . a subset of candidate virtual bus stops." *Id*., 1:37-62. The detailed description of the invention starts with the statement that "the present invention includes **computer transportation systems configured to use a grid of so-called 'virtual bus-stops'**." *Id.*, 8:55-57. The '411 patent then specifically states that "[a]s used herein, the term 'virtual bus stop' is a location **selected by the exemplary computer transportation system(s)** of the present invention as being safe for at least one passenger pickup . . . and/or at least one passenger dropoff." *Id*., 8:55-57. The '411 patent then goes on to describe, in detail, exemplary rules for how the "**computer transportation systems** of the present invention" select virtual bus stops. *Id*., 9:13-13:6. The '411 patent also describes how the "computer transportation system of the present invention generates databases of the virtual bus stops." *Id*., 16:60-18:54. The '411 patent further explains how "the calculated virtual bus stop for each task is selected by the exemplary computer transportation system," including "illustrative computer script" for performing that task. *Id*., 19:40-21:14.

Prelim. Resp. 15–16.

Even if we agree with Patent Owner's narrow construction that "virtual bus stop" should be limited to "pickup and dropoff locations selected by the ridesharing system" (Prelim. Resp. 13), at this stage of the proceeding, Petitioner has made a reasonable showing that Lambert's teaching of dynamically-selecting pick-up and drop-off locations satisfies the term. *See infra* § III.E.5.f. Accordingly, we need not construe the claim term "virtual bus stop" further. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that "we

need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

2. Other claim terms

We need not construe any other claim terms to determine whether to institute *inter partes* review. *See Nidec*, 868 F.3d at 1017.

E. Claim 1 as Unpatentable Over Lambert, Sweeney, and Olmi

Petitioner contends that independent claim 1 would have been obvious over Lambert, Sweeney, and Olmi. Pet. 8–34. Patent Owner argues that Lambert fails to disclose the "virtual bus stops" and related limitations in each of the independent claims, and that Poykko and McCall fail to remedy the deficiencies of Lambert. Prelim. Resp. 36–52. We first provide an overview of the legal principles and prior art, and then address the parties' arguments.

1. Principles of Law

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary

skill in the art; and (4) when in evidence, objective indicia of non-obviousness.[6] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

2. Lambert (Ex. 1004)

Lambert is a United States patent titled "Ride Chaining." Ex. 1004, code (54). Lambert discloses "[a] ride sharing system [that] connects drivers who wish to share their vehicles with riders looking for a ride," and "[m]atching an individual rider with an individual driver [to get] the rider to his destination quickly." *Id.* at 1:13–16. Lambert explains that the "invention can be implemented in numerous ways, including as a process; an apparatus; a system; . . . [or] a computer program product embodied on a computer readable storage medium." *Id.* at 1:61–64. Lambert describes a system for determining a dispatch that "comprises an input interface for receiving a request for a first pickup including a first pickup location and a first destination, a driver selection system for determining a driver to dispatch to the first pickup location, and an output interface for providing a first pickup indication to the driver to go to the first pickup location." *Id.* at 2:28–34. Lambert also discloses "ride chaining," which Lambert describes as including the steps for a first request and "further for receiving a request for a second pickup including a second pickup location and a second destination." *Id.* at 2:39–41.

Lambert explains a system for coordinating ride sharing. At a basic level, "[a] rider uses the rider system to request a ride, the driver dispatch server system assigns the ride to a driver, the ride request is delivered to the

[6] With respect to the fourth *Graham* factor, the parties at this time do not present arguments or evidence regarding objective indicia of non-obviousness. Therefore, the obviousness analysis at this stage of the proceeding is based on the first three *Graham* factors.

driver using the driver system, and the driver drives to meet the rider and gives them the ride." *Id.* at 2:49–53. Lambert's Figure 8A is reproduced below.

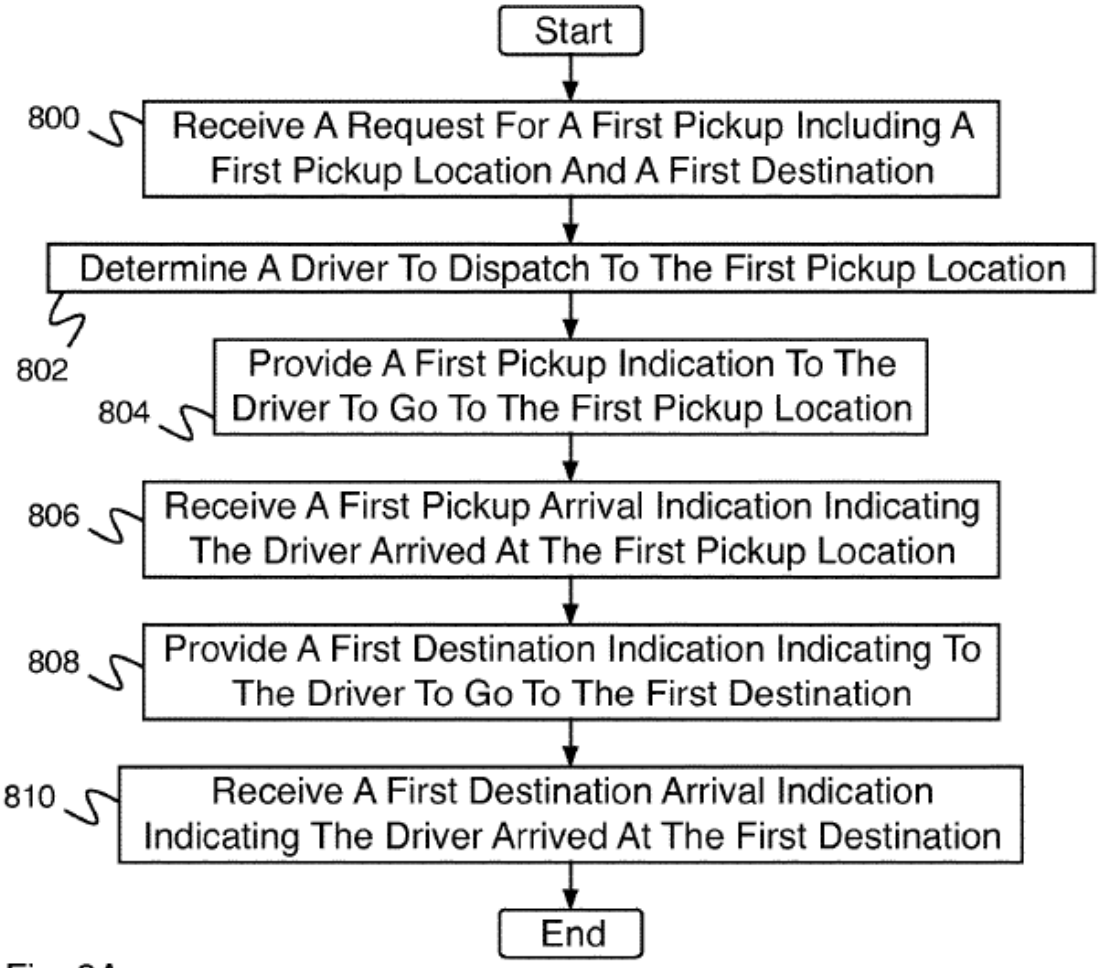

Fig. 8A

Figure 8A "is a flow diagram illustrating an embodiment of a process for a dispatch," and explains the steps by which the system assigns drivers to particular requests from riders. *Id.* at 1:41–42. The steps include receiving a request for a first pickup from a first pickup location, providing that location to a driver, and providing a first destination location to the driver. *Id.* at Fig. 8A.

For some embodiments, Lambert discusses two riders sharing rides for the purpose of efficiency due to similarities in routes and request times, in which case the "request for a new ride is received by the driver dispatch server system that can be shared with the already assigned route, the driver dispatch server system modifies the route to include the new ride, and provides the new modified route to the driver." *Id.* at 2:53–3:1. Also, for the purpose of efficiency, Lambert discloses that, in some embodiments,

> trip efficiency is increased by dynamically selecting pickup and dropoff locations (e.g., dropping off the first passenger a block away from their destination in order to avoid the driver looping around the block or making a left turn onto a busy street; selecting a pickup point at a major intersection between both riders and instructing them to walk there, etc.).

Id. at 4:17–23.

We further reproduce Lambert's Figure 9, below:

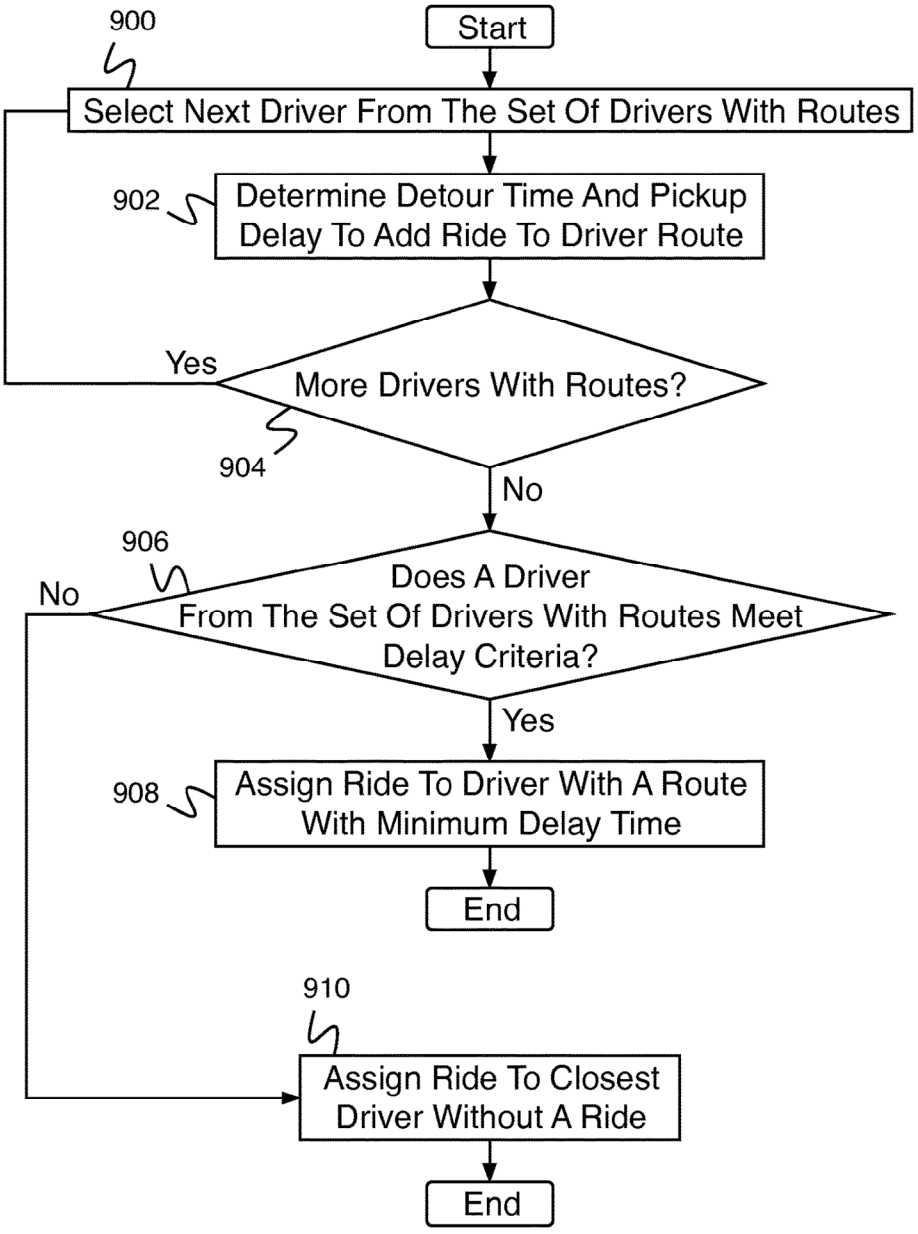

Figure 9 "is a flow diagram illustrating an embodiment of a process for determining a driver to dispatch to a pickup location." Ex. 1004, 1:46–48.

We further reproduce Lambert's Figure 11, below:

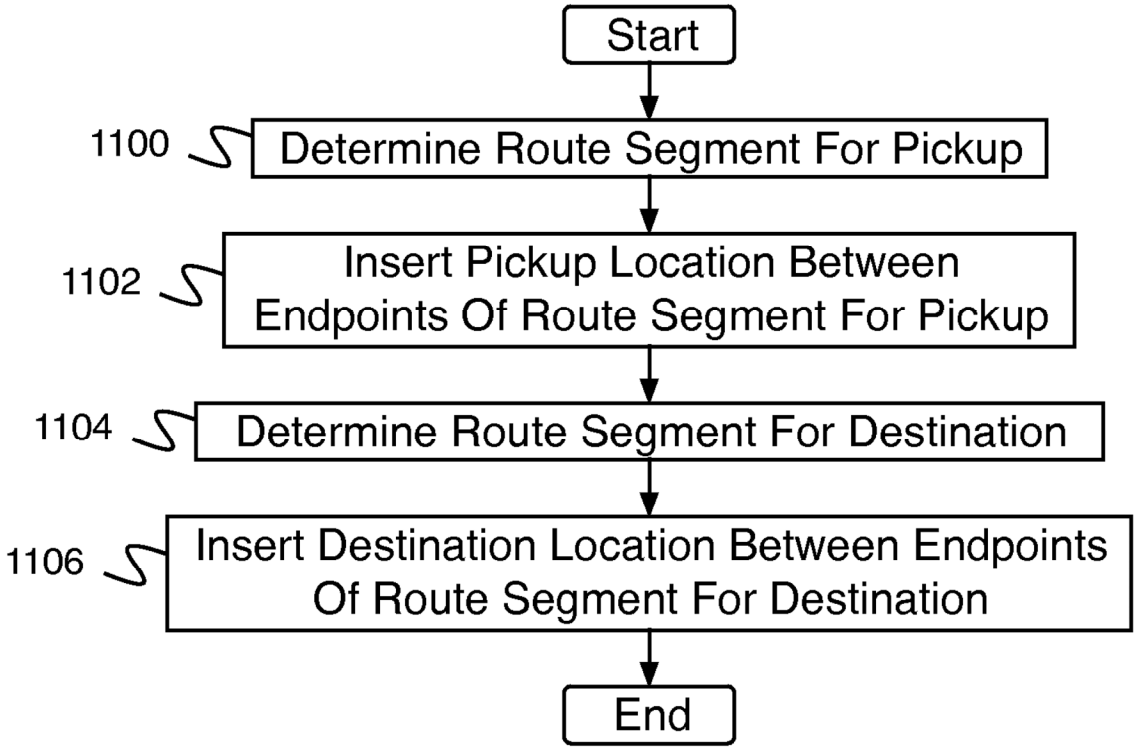

Figure 11 "is a flow diagram illustrating an embodiment of a process for determining a most efficient new route comprising a current route with a ride added." Ex. 1004, 1:51–53.

3. Sweeney (Ex. 1008)

Sweeney is a United States patent application titled "Intelligent Dispatch System for Selecting Service Providers" and describes a "system and method for arranging a transport service." Ex. 1008, codes (54), (57). Sweeney explains that "a user that requests a transport service may be provided the first available driver or the closest driver to the user's requested pickup location." *Id.* ¶ 2. We illustrate Figure 1A of Sweeney, below:

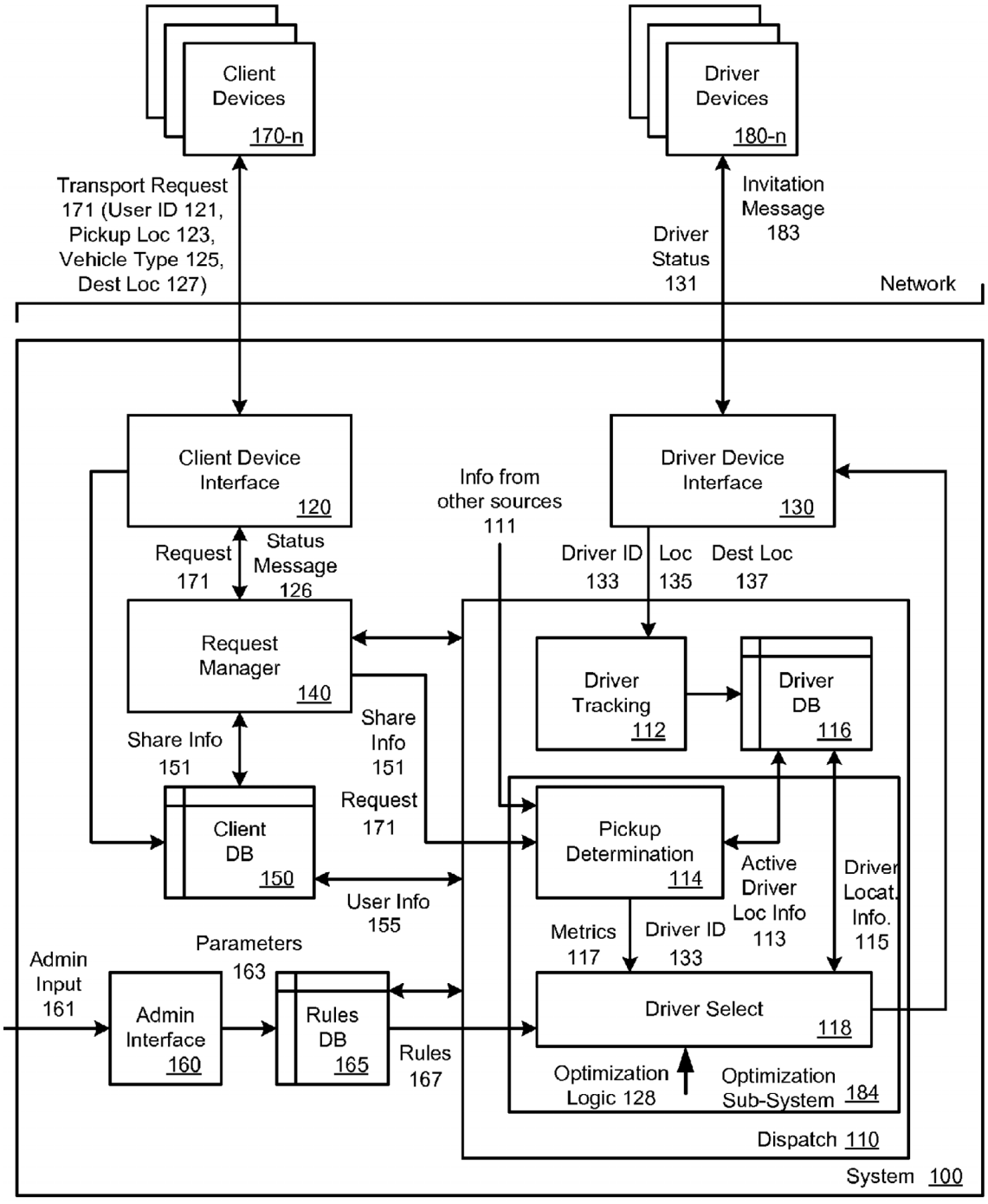

FIG. 1A

Figure 1A "illustrates an example system to arrange an on-demand service." *Id.* ¶ 3. In particular, system 100 includes dispatch 110, client service

interface 120, driver device interface 130, request manager 140, administrator interface 160, client database 150, rules database 165, driver database 116, a plurality of client devices 170, a plurality of driver devices 180. *Id.* ¶ 33. In at least some examples, client devices 170 execute service applications when generating transport requests 171. *Id.* ¶ 36. In some examples, transport request 171 specifies vehicle type 125 and/or destination location 127. *Id.* Pickup location can correspond to location of client device 170, a future location of client device 170, or a location specified by the client. *Id.*

4. Olmi (Ex. 1033)

Olmi is a United Kingdom patent application titled "Intelligent Grouping Transportation – Autonomous dial-a-ride transit system." Ex. 1033, code (54). Olmi discloses a "mode of public transportation which uses computer systems, data communication systems, electronic positioning systems, and electronic street navigation systems in order to orchestrate a fleet of driver-controlled multi-passenger transit vehicles on the roads." *Id.* at code (57). "To ride via this transport system, individual [travelers] must first submit their itinerary requirements to the computer system." *Id.* In some examples, travelers will enter their itinerary data on their cellular phone. *Id.* Olmi's computer system then "scans all the submitted itinerary requirements that it receives, and then intelligently groups [travelers] with compatible itineraries onto the same, typically minibus-sized, transit vehicle." *Id.* Olmi's computer system creates customized road routes so that each traveler is picked up and transported according to the itinerary. *Id.* Olmi's computer system provides street navigation instructions to the transit vehicle driver for guidance along the customized route. *Id.*

Olmi further discloses "route re-opimisation" that "kick[s]-in automatically whenever a transit vehicle becomes significantly displaced from its intended route." *Id.* at 76. "[S]hould a transit vehicle, for whatever reason, significantly deviate[s] from th[e] optimal transit route, this will trigger the intelligent grouping module to step in and re-optimise that transit vehicle's route." *Id.*

5. Analysis

For clarity, we adopt Petitioner's nomenclature in addressing the language of claim 1. *See* Pet. 10–34.

*a. **[P]** A system for routing a rideshare vehicle*

Petitioner cites Lambert's disclosure of a "ride sharing system that connects drivers who wish to share their vehicles with riders looking for a ride." Pet. 10 (quoting Ex. 1004, 1:13–14). Petitioner further cites Lambert's disclosure that

> If a driver has already been assigned a route by the driver dispatch server system, and a request for a new ride is received by the driver dispatch server system that can be shared with the already assigned route, the driver dispatch server system modifies the route to include the new ride, and provides the new modified route to the driver.

Id. (quoting Ex. 1004, 2:63–3:1).

At this stage of the proceeding, and without determining whether the preamble is limiting, Petitioner has shown a reasonable likelihood that Lambert discloses a "system for routing a rideshare vehicle."

b. ***[1(a)(i)]*** *a communications interface configured to receive, from a first mobile communications device of a first user, a request for a rideshare*

Petitioner submits that Lambert discloses this limitation (*see* Pet. 10–11), producing the following annotated version of Lambert's Figure 1:

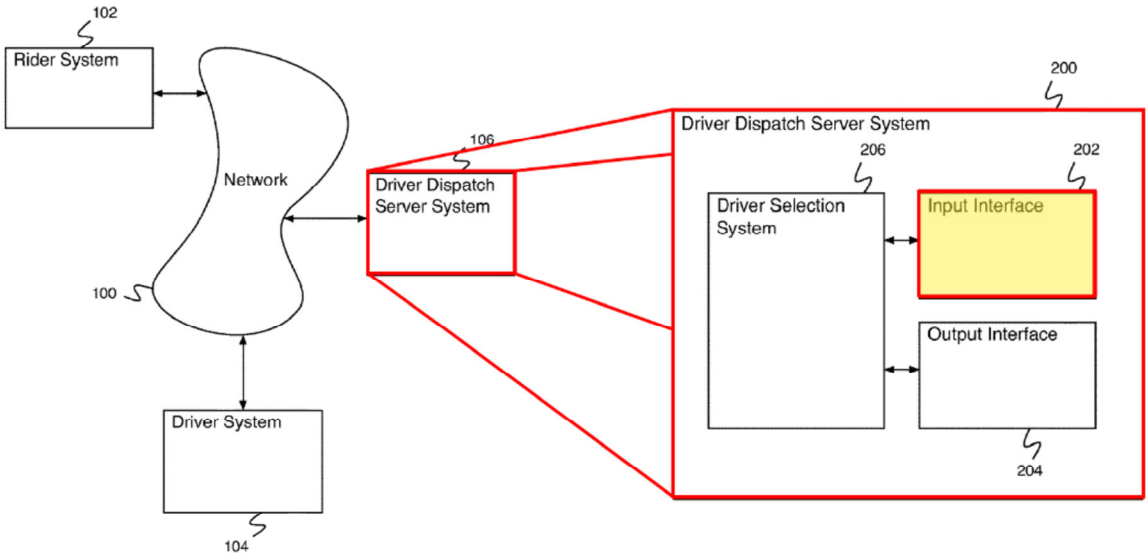

Figure 1 "is a block diagram illustrating an embodiment of [Lambert's] system for ride chaining." Ex. 1004, 1:24–25. In particular, Figure 1 depicts network 100 in two-way communication with rider system 102, driver system 104, and driver dispatch server system 106. *See id.* at 4:46–67. Petitioner annotates Figure 1 to include further detail of driver dispatch system 106/200 to include input interface 202, driver selection system 206, and output interface 204. *See* Pet. 11.

Petitioner explains that Lambert's driver dispatch system 106 communicates with rider system 102 over network 100 and that rider system 102 includes "computing systems for operation by users" and mobile devices, such as smartphones and tablet computers. *Id.* at 10–11 (citing Ex. 1004, Fig. 1, 4:64–67, 4:53–55, 4:62–64). Based on this disclosure,

Petitioner submits that Lambert's "rider system 102 includes a first mobile communications device of a first user." *Id.* at 11 (emphasis omitted).

According to Petitioner, input interface 202 receives "'a request for a pickup including a first pickup location and a first destination' from rider system 102." *Id.* (quoting Ex. 1004, 5:38–41).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert discloses a "communications interface configured to receive, from a first mobile communications device of a first user, a request for a rideshare."

*c. **[1(a)(ii)]** wherein the request includes information associated with a current location of the first user and a first desired destination*

To address this limitation, Petitioner relies on a combination of Lambert and Sweeney. *See* Pet. 12–16.

Petitioner acknowledges that "Lambert does not specify whether the requested first pickup location includes information associated with a current location of the first user." *Id.* at 12 (emphases omitted). To address this shortcoming, Petitioner reasons that "[i]t would have been obvious to a PHOSITA to configure Lambert's rider system to submit the user's current location as the pick-up location because this configuration was already well known in the art." *Id.* (citing Ex. 1003 ¶¶ 133–141).

In relying on Sweeney, Petitioner submits that Sweeney teaches transport requests that can be "automatically generated in response to corresponding users providing input (e.g., in response to user selection of a user interface feature provided from execution of the application) when, for example, requesting transport from a pickup location" and that the transport request may correspond to "the current location of the client device," as

provided through Global Positioning System ("GPS"). *See id.* at 12–13 (citing in part Ex. 1008 ¶ 36, Ex. 1003 ¶ 135).

Based on Sweeney's teachings, Petitioner further reasons that

> It would have been obvious to a PHOSITA to configure *Lambert's* pick-up location to be the user's current location as taught by *Sweeney*. . . . A PHOSITA would have been motivated to include the first user's current location in *Lambert's* first pick-up location information as taught by *Sweeney* at least because this combination would have been (1) a combination of prior art elements according to known methods to yield predictable results; and (2) obvious to try—a choice of pick-up locations from a finite number of identified, predictable solutions, with a reasonable expectation of success.

Pet. 13 (citing Ex. 1003 ¶¶ 136–141). Petitioner further explains that a "PHOSITA would have further understood this combination of prior art elements would have predictably resulted in communicating the current location of the user to the server, which would then reliably use this information to determine a driver to pick-up the user." *Id.* at 14 (citing Ex. 1003 ¶ 137). Petitioner's expert testifies that the proposed combination "would have predictably resulted in *less opportunity for user error* (e.g., entering the wrong location information), which would have increased the efficiency and reliability of Lambert's rideshare system." Ex. 1003 ¶ 139 (emphasis added).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that it would have been obvious for Lambert's system to include "wherein the request includes information associated with a current location of the first user and a first desired destination."

d. ***[1(b)]*** *at least one processor configured to receive information from the communications interface*

Petitioner cites to Lambert's disclosure that its driver selection system 206 "receives a ride request (e.g., via input interface 202) and determines a driver to assign the ride." Pet. 15 (quoting Ex. 1004, 5:62–64; citing *also id.* at Fig. 2). Petitioner also cites to Lambert's disclosure that "driver selection system 206 is implemented using a processor" and submits that Lambert's input interface is the "communications interface." *See id.* (citing Ex. 1004, 6:4–5).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert discloses a "at least one processor configured to receive information from the communications interface."

e. ***[1(c)]*** *determine, based on current locations of multiple rideshare vehicles and the received request, a rideshare vehicle to pick up the first user*

Petitioner cites to Lambert's disclosure that "[d]river selection system 206 determines a driver for ride sharing (e.g., assigning a ride to a driver that is in the process or carrying out a route including one or more rides)." Pet. 16 (quoting Ex. 1004, 5:65–67). Petitioner further submits an annotated version of Lambert's Figure 8A (*id.* at 17), a copy of which we reproduce, below:

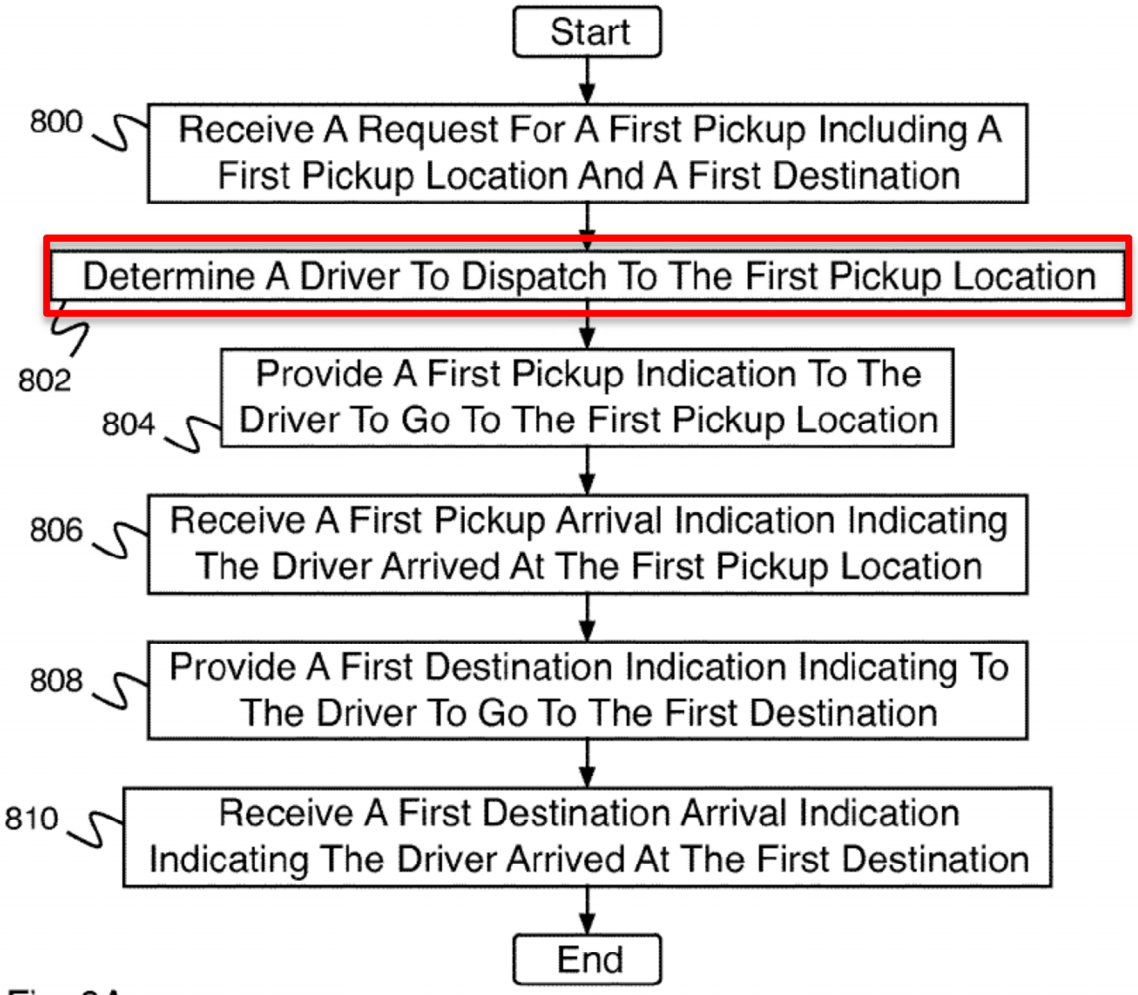

Fig. 8A

Figure 8A "is a flow diagram illustrating an embodiment of [Lambert's] process for a dispatch." Ex. 1004, 1:41–42. Petitioner annotates Figure 8A by placing a red box around step 802, "Determine a Driver To Dispatch To The First Pickup Location." Pet. 17.

Petitioner further submits an annotated version of Lambert's Figure 9 (Pet. 19), a copy of which we reproduce, below:

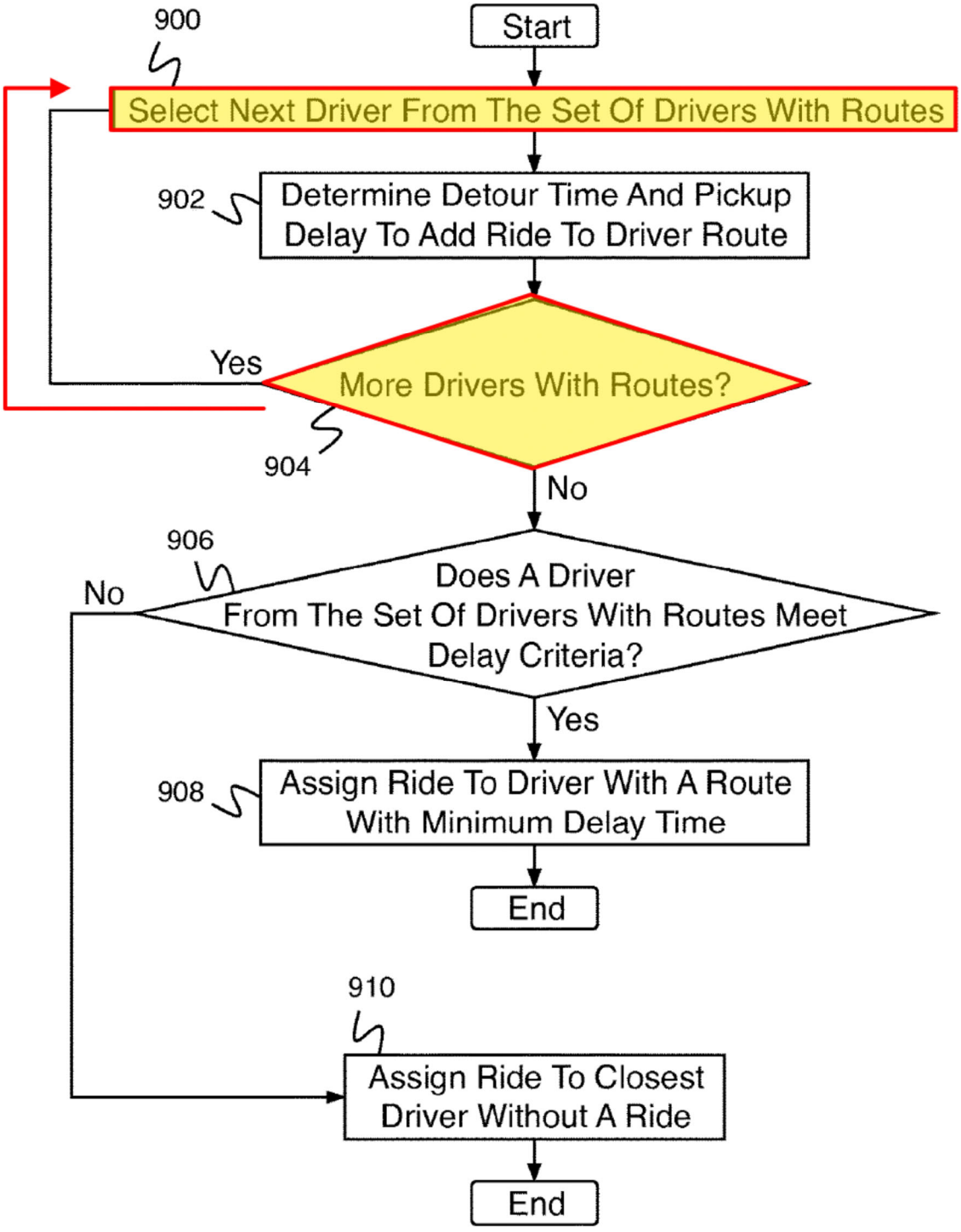

Figure 9 "is a flow diagram illustrating an embodiment of a process for determining a driver to dispatch to a pickup location." Ex. 1004, 1:46–48. Petitioner annotates Figure 9 by highlighting (in yellow) decision step 904

"More Drivers With Routes?" and emphasizes (in red) the arrow that emanates from step 904 to step 900, "Select Next Driver From The Set Of Drivers With Routes." Pet. 19. Petitioner submits that Lambert's system *determines a rideshare vehicle to pick up the first user* based on the detour time and pickup delay for each driver selected from the driver database. *Id.* (citations omitted).

Petitioner explains that since each driver "in the database is associated with a specific vehicle, a PHOSITA would have understood [that] *Lambert's* 'driver present location data' is also the current location of the driver's vehicle." Pet. 18 (citing Ex. 1003 ¶ 145).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert discloses "determine, based on current locations of multiple rideshare vehicles and the received request, a rideshare vehicle to pick up the first user."

> *f.* ***[1(d)(i)]*** *select, based on the current travel route of the rideshare vehicle, virtual bus stops for the identified rideshare vehicle, including a first virtual bus stop for picking up the first user and a second virtual bus stop for dropping off the first user*

Petitioner cites to Lambert's teaching of improving route efficiency by "dynamically selecting pickup and dropoff locations (e.g., dropping off the first passenger a block away from their destination in order to avoid the driver looping around the block or making a left turn onto a busy street" and "selecting a pickup point at a major intersection between both riders and instructing them to walk there, etc.)." Pet. 22–23 (citing Ex. 1004, 4:17–23). Petitioner explains,

> Since these dynamically selected pick-up/drop-off locations (i.e., *virtual bus stops for the identified rideshare vehicle, including a first virtual bus stop for picking up the first user*

> *and a second virtual bus stop for dropping off the first user*) are selected to increase the efficiency of the vehicle's route, they are *selected based on the current travel route of the rideshare vehicle*.

Id. at 23 (citing Ex. 1003 ¶ 158).

Petitioner acknowledges that Lambert "does not describe when the dynamic selection of efficient pick-up/drop-off locations is performed." Pet. 23. Petitioner explains,

> However, it would have been obvious to a PHOSITA to perform this selection during the updated route building process of Figure 11. . . . When implementing Figure 11, a PHOSITA would have been motivated to configure the driver selection system to dynamically select pickup/dropoff locations to improve the efficiency of the route as expressly suggested by *Lambert*. . . . A PHOSITA would have understood this modification would have yielded the predictable result of a more efficient route that does not require the driver to travel along a route segment that would add unnecessary delay to the route by avoiding, for example, the driver looping around the block or making a left turn onto a busy street.

Pet. 23 (citing Ex. 1003 ¶ 159). Petitioner further explains,

> A PHOSITA would have further understood this could be implemented by including a further optimization process in Figure 11 that recognizes inefficiencies to the route caused by the user's requested pick-up/dropoff locations and dynamically selecting more efficient pick-up/drop-off locations in the vicinity of the user's requested location. . . . A PHOSITA would have understood this modification would have only required a minor change to the software running on *Lambert's* server. . . . Therefore, there would have been a reasonable expectation of success.

Pet. 24 (citing Ex. 1003 ¶ 160).

Patent Owner disputes Petitioner's position.

Patent Owner contends that "Lambert . . . is directed to a conventional door-to-door ridesharing system that operates based on . . . *rider-identified pickup and dropoff locations*" and that "Lambert does not teach or suggest that the ridesharing system itself maintains or selects virtual bus stops." Prelim. Resp. 37–38 (emphasis added). In support of this argument, Patent Owner cites to Lambert's disclosure of rider-specified pickup and destination locations. *Id.* at 38 (citing Ex. 1004, Fig. 12).

Patent Owner further argues that "Petitioner makes no effort to explain how 'dynamically selecting' pickup and dropoff locations teaches a ridesharing system that administers virtual bus stops." *Id.* at 39 (citing Pet. 22–23). Patent Owner contends that Petitioner's analysis is conclusory. *Id.*

At this stage of the proceeding, we disagree with Patent Owner. Patent Owner's arguments are not fully responsive to Petitioner's proposed challenge. Petitioner proposes to modify Lambert based on Lambert's own teachings regarding dynamic selection of pickup and drop off locations. *See* Pet. 22–24.

Although Lambert teaches that the rider or passenger *may* select the pickup and dropoff location, as pointed out correctly by Patent Owner (*see* Prelim. Resp. 38), Lambert *also teaches* embodiments in which "trip efficiency is increased by dynamically selecting pickup and dropoff locations," such as by "dropping off the first passenger a block away from their destination in order to avoid the driver looping around the block or making a left turn onto a busy street." Ex. 1004, 4:17–21. Lambert further teaches "selecting a pickup point at a major intersection between both riders and instructing them to walk there." *Id.* at 4:21–23. In other words, Lambert not only discloses the rider identifying a particular pickup and dropoff location, it is reasonably likely that Lambert also teaches a system in

which its processor determines a "virtual bus stop" for "trip efficiency." *See id.* at 4:17–23. Based on these teachings and as supported by Mr. Andrews's testimony, Petitioner establishes a reasonable likelihood that a "person of ordinary skill in the art would have been motivated to dynamically select pickup and drop-off locations to improve the efficiency of the transportation system." Ex. 1003 ¶ 159.

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert, as modified by Petitioner, satisfies "select[ing], based on the current travel route of the rideshare vehicle, virtual bus stops for the identified rideshare vehicle, including a first virtual bus stop for picking up the first user and a second virtual bus stop for dropping off the first user."

> g. ***[1(d)(ii)]*** *wherein the first virtual bus stop is at a first location at least a block away from the current location of the first and the second virtual bus stop is at a second location differing from the first desired destination*

In referencing the same disclosure discussed above in relation to limitation 1(d)(i), Petitioner submits that "*Lambert* provides an example where the dynamically selected drop-off location is a block away from the requested destination." Pet. 24 (citing Ex. 1004, 4:18–23). As discussed above, Lambert teaches selecting pickup and dropoff locations "a block away from their destination in order to avoid the driver looping around the block or making a left turn onto a busy street." Ex. 1004, 4:17–23.

Based on this teaching, Petitioner reasons that

> [I]t would have been obvious to a PHOSITA to configure *Lambert* to also dynamically select a *pick-up location* a block away from the requested pick-up location (i.e., *the current location of the first user*) for at least the same beneficial reasons

> described in *Lambert* relating to the drop-off location. . . . A PHOSITA would have understood a dynamically selected pick-up location a block away from the user-requested pick-up location would be selected to avoid the driver looping around the block or making a left turn onto a busy street as expressly suggested by *Lambert*. [] Since selecting a more efficient location a block away from the user's requested location was known and expressly suggested by *Lambert*, there would have been a reasonable expectation of success selecting a pick-up location a block away from the user's current location. . . . Thus, *Lambert* also renders obvious *the first virtual bus stop is at a first location at least a block away from the current location of the first user*.

Pet. 24–25 (citing Ex. 1003 ¶¶ 162, 163)

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert, as modified by Petitioner, satisfies "wherein the first virtual bus stop is at a first location at least a block away from the current location of the first and the second virtual bus stop is at a second location differing from the first desired destination."

> *h.* ***[1(e)]*** *assign the rideshare vehicle to pick up the first user from the first virtual bus stop and to drop off the first user at the second virtual bus stop*

Petitioner submits that Lambert teaches this limitation. Pet. 26.

Quoting Lambert, Petitioner submits that in step 908, shown in Figure 9 (reproduced above), "the ride is assigned to the driver with a route with minimum delay time (e.g., detour time, pickup delay, a combination of detour time and pickup delay, etc.)." Pet. 25–26 (quoting Ex. 1004, 10:61–64) (emphasis omitted). Based in part on this disclosure, Petitioner reasons that

> [I]t would have been obvious to include dynamically selected pick-up/drop-off locations for the user in the updated route generated using the process of Fig. 11. . . . Thus, *Lambert*

> teaches *assigning the rideshare vehicle to pick up the first user from the first virtual bus stop and to drop off the first user at the second virtual bus stop*.

Pet. 26 (citing Ex. 1003 ¶¶ 165, 166).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that it would have been obvious for Lambert's system to include "assign the rideshare vehicle to pick up the first user from the first virtual bus stop and to drop off the first user at the second virtual bus stop."

*i. **[1(f)]** generate a first time-estimation for the rideshare vehicle to arrive at the first virtual bus stop for picking up the first user*

Petitioner submits that "*Lambert's* server calculates a 'pickup delay (e.g., the delay until the ride passenger is picked up).'" Pet. 26 (quoting Ex. 1004, 10:39–44. Based on this disclosure, Petitioner reasons that "it would have been obvious to include dynamically selected pick-up location (i.e., *the first virtual bus stop for picking up the first user*) in the updated route generated using the process of Fig. 11, which is used to estimate the pick-up delay." *Id.* (citing Ex. 1003 ¶ 167).

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that it would have been obvious for Lambert's system to include "generate a first time-estimation for the rideshare vehicle to arrive at the first virtual bus stop for picking up the first user."

*j. **[1(g)]** continuously track location a current location of the rideshare vehicle prior to arrival at the first virtual bus stop, to generate an updated time-estimation for the rideshare vehicle to arrive at the first virtual bus stop for picking up the first user*

Petitioner relies on a combination of Lambert and Sweeney to address this limitation. *See* Pet. 28–29. Petitioner submits that Lambert "teaches

tracking the current location of the rideshare vehicle via a GPS location signal prior to arrival at the first pick-up location (i.e., the first virtual bus stop)" but acknowledges that Lambert "does not specify whether the tracking is performed *continuously*," as required by the claim. *Id.* at 28 (emphasis replaced). Nevertheless, Petitioner submits that "continuously tracking a current location of the rideshare vehicle prior to arrival at the first virtual bus stop would have been obvious to a PHOSITA based on the teachings of Sweeney." *Id.* (citing Ex. 1003 ¶ 169) (emphasis omitted).

Petitioner cites to Sweeney's disclosure that

> The driver tracking 112 can update the driver database 116 with the driver information in real-time for each respective driver (using the driver IDs 133). In this manner, the dispatch 110 can **continuously** (or periodically) **monitor the current location 115** and service state 131 of drivers of system 100.

Pet. 28 (citing Ex. 1008 ¶ 40).

Based on Sweeney's teachings, Petitioner reasons that

> [A] PHOSITA would have been motivated to configure *Lambert's* server to continuously track the current location of the rideshare vehicle prior to arrival at the first virtual bus stop at least because this combination would have been (1) a combination of prior art elements according to known methods to yield predictable results and (2) use of a known technique to improve similar ridesharing systems in the same way.

Pet. 28–29 (citing Ex. 1003 ¶¶ 171–173). Mr. Andrews testifies that "[d]etecting changes to the vehicle's route via continuous tracking would have made Lambert's system more robust and able to adapt to changing conditions in real time" and that a POSITA "would have been motivated to improve similar ridesharing systems in the same way." Ex. 1003 ¶ 172.

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert, as modified by Petitioner, satisfies "continuously

track location a current location of the rideshare vehicle prior to arrival at the first virtual bus stop, to generate an updated time-estimation for the rideshare vehicle to arrive at the first virtual bus stop for picking up the first user."

k. ***[1(h)]*** *cancel the assignment of the rideshare vehicle when the updated time-estimation differs from the first time-estimation by more than a predefined threshold*

Petitioner relies on a combination of Lambert and Olmi to address this limitation. *See* Pet. 30–33.

Petitioner submits that Lambert's "selection of a driver involves generating a pick-up delay" and "cancelling the assignment of a rideshare vehicle when conditions change," such as "when the actual number of passengers exceeds the expected number." Pet. 30 (citing Ex. 1004, 7:37–46). Petitioner acknowledges, however, that Lambert "does not expressly describe cancelling the assignment of the rideshare vehicle when the updated pick-up delay time-estimation differs from the first pick-up delay time-estimation by more than a predefined threshold." *Id.* Nevertheless, Petitioner reasons that it "would have been obvious to a PHOSITA based on the teachings of Olmi." *Id.* (citing Ex. 1003 ¶¶ 174–178) (emphasis omitted).

Petitioner cites to Olmi's teaching of "re-optimizing" rideshare assignments "when a transit vehicle gets delayed for a long time due to heavy traffic, or when traffic congestion conditions . . . have significantly deteriorated ahead along the current optimal transit route of the transit vehicle, now making that route less optimal." Pet. 30–31 (quoting Ex. 1033, 76). Petitioner further cites to Olmi's teaching that the "re-optimization process results in 'one or more passenger pick-ups planned for that transit

vehicle are now cancelled, with waiting passengers now collected by another transit vehicle.'" *Id.* at 31 (quoting Ex. 1033, 76).

Based on Olmi's "re-optimization" teaching, Petitioner reasons that

> [I]t would have been obvious to a PHOSITA to modify *Lambert* to cancel the assignment of the rideshare vehicle only when the difference between the updated pick-up delay time-estimation and the first pick-up delay time-estimation exceeds a predefined limit/threshold such as 5 minutes or 10 minutes.

Id. at 31–32 (citing Ex. 1003 ¶ 177). Mr. Andrews testifies that

> A PHOSITA would have understood this modification would have been a predictable improvement in user experience since using a time difference threshold means the user's expectations of the time delay do not deviate by more than a threshold amount, meaning the user can more reliability count on the system to pick them up or deliver them at a predictable time. . . . Therefore, a PHOSITA would have been motivated to improve similar ridesharing systems in the same way.

Ex. 1003 ¶ 177.

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert, as modified by Petitioner, satisfies "cancel the assignment of the rideshare vehicle when the updated time-estimation differs from the first time-estimation by more than a predefined threshold."

l. ***[1(i)]*** *reassign another rideshare vehicle to pick up the first user from the first virtual bus stop*

Petitioner relies on a combination of Olmi and Lambert for satisfying this limitation. *See* Pet. 33–34.

Petitioner cites to Olmi's re-optimization teaching that results in "one or more passenger pick-ups planned for that transit vehicle are now cancelled, with **waiting passengers now collected by another transit vehicle**." Pet. 33 (quoting Ex. 1033, 76).

Petitioner further cites to Lambert's teaching of "recalculating selection of a driver/vehicle for a rider based on changed conditions" and "driver selection calculation result[ing] in assigning a driver/rideshare vehicle to pick-up the first user from the first virtual bus stop." Pet. 33–34 (citing Ex. 1004, 4:43–45).

Based on these and other teachings, Petitioner reasons that "[i]t would have also been obvious to a PHOSITA configure *Lambert's* driver selection system re-assign the first user to another rideshare vehicle after cancelling the original rideshare vehicle as taught by *Olmi*." Pet. 33 (citing Ex. 1003 ¶ 180). Mr. Andrews testifies that the proposed modification would have improved rider's/user's satisfaction, as "cancelling the user's assignment to a rideshare vehicle and *failing* to reassign the user to another vehicle would have frustrated users and created a tremendous amount of user dissatisfaction." Ex. 1003 ¶ 182.

At this stage of the proceeding, Petitioner has shown a reasonable likelihood that Lambert, as modified by Petitioner, satisfies "reassign another rideshare vehicle to pick up the first user from the first virtual bus stop."

m. Summary of Claim 1 as Unpatentable Over Lambert, Sweeney, and Olmi

Upon review of the parties' arguments and supporting evidence, we determine that Petitioner demonstrates a reasonable likelihood that claim 1 would have been obvious over Lambert, Sweeney, and Olmi.

F. Remaining Challenges

Petitioner also challenges: (1) claims 2–7, 10, 12, 15, and 18 as obvious over Lambert, Sweeney, and Poykko; (2) claims 11, 19, and 20 as obvious over Lambert, Sweeney, and Lerenc; (3) claims 8, 9, and 13 as

obvious over Lambert, Sweeney, Poykko, and Lerenc; and (4) claim 17 as obvious over Lambert, Sweeney, Poykko, and Olmi. Pet. 5–6. In each of these challenges, Petitioner relies on Lambert for teaching "virtual bus stops," just as in its first challenge. *See id.* 23 (independent claim 1, element 1(d)(i)), 36 (independent claim 2, element 2(b)), 56 (independent claim 11, element 11(c)(i)).

Other than arguing that Lambert does not teach "virtual bus stops," which we address above (*see supra* § III.E.5.f), Patent Owner does not respond to these other challenges. *See* Prelim. Resp. 37–38 ("In every Ground, Petitioner relies on Lambert as allegedly teaching . . . virtual bus stops. . . . Lambert, however, is directed to a conventional door-to-door ridesharing system . . . [and] does not teach or suggest . . . virtual bus stops."). Because we institute *inter partes* review as to claim 1, we also institute *inter partes* review as to these 2–14, 15, and 17–20. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and Preliminary Response, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims of the '411 patent is unpatentable on grounds asserted in the Petition.

V. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–13, 15, and 17–20 of the '411 patent on the unpatentability grounds asserted in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

PETITIONER:

Eric A. Buresh
Callie Pendergrass
Kelly R. Hughes
ERISE IP, P.A.
Eric.Buresh@eriseip.com
Callie.Pendergrass@eriseip.com
Kelly.Hughes@eriseip.com

PATENT OWNER:

Timothy P. Cremen
Roy D. Jung
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
TCremen@sheppardmullin.com
RJung@sheppardmullin.com