

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LYFT, INC.,
Petitioner,

v.

RIDESHARE DISPLAYS, INC.,
Patent Owner.

IPR2021-01600
Patent 10,395,525 B1

Before THOMAS L. GIANNETTI, LYNNE E. PETTIGREW, and
JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Dismissing Patent Owner's Motion to Exclude
35 U.S.C. § 318(a)

I. INTRODUCTION

In this *inter partes* review, instituted pursuant to 35 U.S.C. § 314, Lyft, Inc. (“Petitioner”) challenges the patentability of claim 1 (“the challenged claim”) of U.S. Patent No. 10,395,525 B1 (Ex. 1001, “the ’525 patent”), owned by Rideshare Displays, Inc. (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6 (2018). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 (2022). For the reasons discussed herein, we determine that Petitioner shows by a preponderance of the evidence that the challenged claim is unpatentable.

A. Procedural History

Petitioner filed a Petition requesting *inter partes* review of the challenged claim of the ’525 patent. Paper 1 (“Pet.”). Patent Owner filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). We instituted *inter partes* review of the challenged claim of the ’525 patent on all of the grounds raised in the Petition. Paper 7 (“Dec. on Inst.”), 45.

Following institution, Patent Owner filed a Response to the Petition. Paper 12 (“PO Resp.”). Petitioner filed a Reply to Patent Owner’s Response. Paper 15 (“Pet. Reply”). Patent Owner filed a Sur-reply to Petitioner’s Reply. Paper 17 (“PO Sur-reply”).

Patent Owner filed a Motion to Exclude certain of Petitioner’s evidence (Paper 21, “Mot. Excl.”) and Petitioner filed an Opposition (Paper 22).

An oral hearing was held on January 10, 2023. A transcript of the oral hearing is included in the record. Paper 25 (“Tr.”).

B. Real Parties-in-Interest

The parties identify themselves as the real parties-in-interest. Pet. 1; Paper 5, 2.

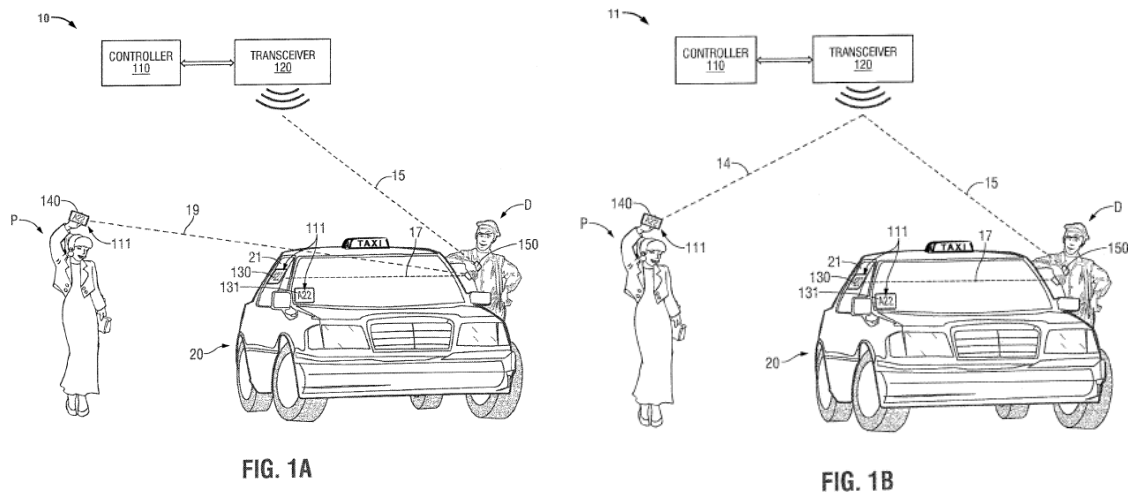
C. Related Matters

The parties identify *Rideshare Displays, Inc. v. Lyft, Inc.*, 20-cv-01629-RGA-JLH (D. Del.) as a matter that may affect, or be affected by, a decision in this proceeding. Pet. 1; Paper 5, 2. In addition, Petitioner has filed petitions for *inter partes* review of four additional patents that are related to the '525 patent and owned by Patent Owner: (i) U.S. Patent No. 9,892,637 B2 (IPR2021-01598); (ii) U.S. Patent No. 10,169,987 B1 (IPR2021-01599); (iii) U.S. Patent No. 10,559,199 B1 (IPR2021-01601); and (4) U.S. Patent No. 10,748,417 B1 (IPR2021-01602). Pet. 1; Paper 5, 2.

D. The Challenged Patent

The '525 patent is titled "Vehicle Identification System." Ex. 1001, code (54). The '525 patent describes a system for "provid[ing] an indicator on a mobile communication device of a user having requested a ride service to allow the user to identify a vehicle prior to boarding the vehicle." *Id.* at 1:22–26. According to the '525 patent, "[a] continuing need exists for systems and methods adapted for use by transportation services to ensure rider and driver security." *Id.* at 1:59–61.

Figures 1A and 1B, shown below, illustrate two separate embodiments of the '525 patent. *Id.* at 2:38–43.



Figures 1A and 1B illustrate two embodiments of a vehicle identification system in accordance with the '525 patent. *Id.* Referring first to Figure 1A, vehicle identification system 10 includes controller 110, transceiver 120, and one or more displays associated with motor vehicle 20. *Id.* at 3:37–39. First display 130 is associated with passenger side rear window 21 of motor vehicle 20, and second display 131 is associated with the front windshield of motor vehicle 20. *Id.* at 3:39–43. Vehicle identification system 10 can “generate one or more signals representing an indicator, which may be displayable as a ‘code’ (e.g., a text string or an alphanumeric string), an icon, or other identifier, on” display 130 and on mobile communication device 140 associated with the user P to enable the user P to identify the vehicle that he or she has requested for a ride service. *Id.* at 4:4–13.

Figure 3, shown below, is a flowchart illustrating a method of identifying a vehicle in accordance with the '525 patent. *Id.* at 2:47–49.

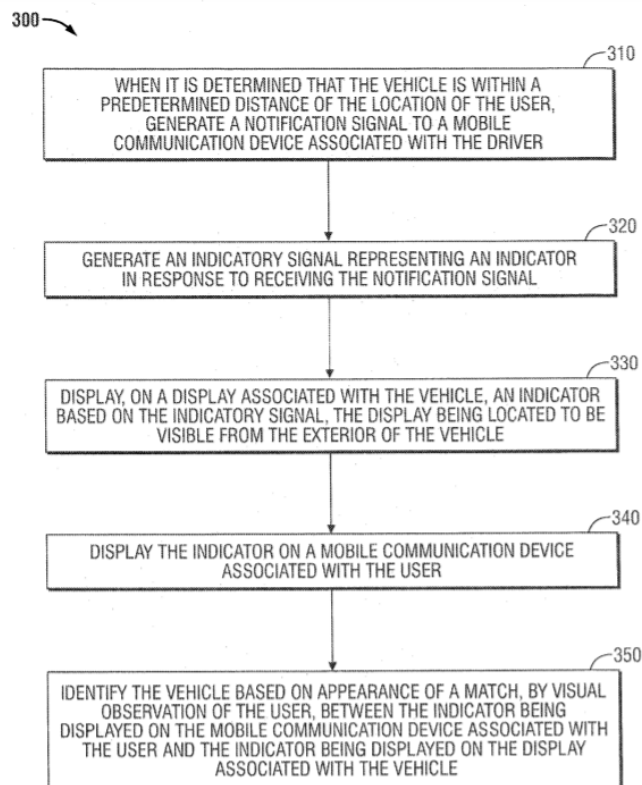


Figure 3 illustrates a method of identifying a vehicle being dispatched to a location of a user having requested a ride from a transportation service.

Ex. 1001, 6:66–7:2. When it is determined that motor vehicle 20 is within a predetermined distance of the location of user P, notification signal 15 is generated to mobile communication device 150 associated with driver D. *Id.* at Fig. 3 (block 310). Indicatory signal 17 representing indicator 111 is generated in response to receiving notification signal 15. *Id.* at Fig. 3 (block 320). Indicator 111 based on indicatory signal 17 is displayed on display 130 associated with motor vehicle 20. *Id.* at Fig. 3 (block 330). Display 130 is located to be visible on the exterior of motor vehicle 20. *Id.* at 7:12–13.

Indicator 111 is also displayed on mobile communication device 140 associated with user P. *Id.* at Fig. 3 (block 340). Motor vehicle 20 is identified based on appearance of a match, by visual observation of user P, comparing the indicator being displayed on the mobile communication device associated with user P and the indicator being displayed on the display associated with motor vehicle 20. *Id.* at Fig. 3 (block 350).

In the embodiment of Figure 1A, the mobile communication device associated with driver D generates the second signal representing an indicator that is transmitted to the mobile communication device associated with user P. *Id.* at 5:32–37. In the embodiment of Figure 1B, vehicle identification system 11 generates indicatory signal 14 transmitted to the mobile communication device associated with user P and notification signal 15 to be transmitted to the mobile communication device associated with driver D. *Id.* at 5:40–49. In this latter embodiment, the driver's mobile communication device does not communicate with the user's mobile communication device. *Id.* at 5:49–54.

E. The Challenged Claim

Claim 1 is the sole claim of the '525 patent, and reads as follows:

1. A vehicle identification system, comprising:

a display associated with a front windshield of a vehicle, wherein the display is movable so as to be visible from an exterior of the vehicle by a rider;

a controller communicatively coupled to mobile communication devices, wherein the controller generates a first signal representing an indicator which is transmitted to a mobile communication device associated with a driver of the vehicle and a second signal representing the indicator which is transmitted to a mobile communication device associated with the rider; and

wherein the mobile communication device associated with the driver of the vehicle generates a third signal representing the indicator which is transmitted to the display, the third signal representing the indicator identifies the vehicle.

Ex. 1001, 8:8–23.

F. Instituted Grounds of Unpatentability

We instituted trial based on the following grounds of unpatentability, which are all the grounds of unpatentability raised in the Petition:

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis ²
1	103	Lalancette ³

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the '525 patent issued from an application having an effective filing date after March 16, 2013, we apply the AIA version of the statutory basis for unpatentability.

² For each of the three asserted grounds, Petitioner also lists “the knowledge of” one of ordinary skill in the art. Pet. 4. Although we do not list such knowledge separately, we consider such knowledge as part of our obviousness analysis. *See Randall Mfg. v. Rea*, 733 F.3d 1355, 1362–63 (Fed. Cir. 2013).

³ US 2012/0137256 A1, published May 31, 2012 (Ex. 1009, “Lalancette”).

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis ²
1	103	Kalanick, ⁴ Kemler ⁵
1	103	Lalancette, Kalanick

Pet. 4, 22–54. Petitioner submits in support of its arguments the Declaration of David Hilliard Williams (Ex. 1003) and the Second Expert Declaration of David H. Williams (Ex. 1030). Patent Owner submits in support of its arguments the Declaration of Dr. Matthew Valenti (Ex. 2001) and the Second Declaration of Dr. Matthew Valenti (Ex. 2023).

II. LEVEL OF ORDINARY SKILL IN THE ART

To determine whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). In assessing the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962–63 (Fed. Cir. 1986)). “[O]ne or more factors may predominate.” *Id.*

Petitioner argues that one of ordinary skill in the art “would have had at least a bachelor’s degree in electrical or computer engineering, or a similar field with at least two years of experience in the field of vehicle location and tracking systems or related technologies.” Pet. 8. Petitioner adds that “[a] person with less education but more relevant practical experience may also meet this standard.” *Id.* at 8–9 (citing Ex. 1003 ¶ 44).

⁴ US 2015/0332425 A1, published Nov. 19, 2015 (Ex. 1006, “Kalanick”).

⁵ US 9,494,938 B1, issued Nov. 15, 2016 (Ex. 1008, “Kemler”).

Patent Owner argues that one of ordinary skill in the art would have had “knowledge of wireless communications protocols and some general experience with data privacy issues and protection models, in addition to the education level in electrical or computer engineering identified by the parties.” PO Resp. 4 (citing Ex. 2023 ¶ 28). In addition, Patent Owner argues that Mr. Williams overstates what was known by one of ordinary skill in the art, including when Mr. Williams describes the state of the art as reflected in the Technology Background section of the Petition. *Id.* at 4–5. Mr. Williams also “cites to other areas of technology that he acknowledges are irrelevant to the technology in the patent,” according to Patent Owner. *Id.* at 5. Patent Owner argues that “[t]he scope of knowledge of [one of ordinary skill in the art] as defined by Petitioner here is too broad, . . . and this overreach infects each argument that Petitioner makes with respect to the knowledge of” one of ordinary skill in the art. *Id.* at 6 (citing Ex. 2023 ¶¶ 28, 30).

In our Decision on Institution, we adopted Petitioner’s proposed definition, with a qualification. Dec. on Inst. 17. In particular, we determined that a person of ordinary skill in the art also would have had at least some experience in wireless cellular network protocols, as suggested by Patent Owner. *Id.* We also noted that from our review of the ’525 patent and the cited prior art, requiring specific experience with data privacy policies and protection models was not warranted, given the focus of the ’525 patent on more general principles of cellular communications and signal transmission. *Id.*

On the full record, we determine that Petitioner’s definition, with the above qualification, is consistent with the ’525 patent and the asserted prior art, and thus, we maintain it for purposes of this Final Written Decision. *See*

Okajima v. Bourdeau, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579; *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

Our analysis herein, however, does not turn on which of the parties' definitions we adopt. The parties' statements made during the oral hearing are consistent with this point. *See* Tr. 75:17–18 (Patent Owner stating that “[i]t’s not clear to us that the level of ordinary skill arguments actually matter”), 106:12–17 (Petitioner stating that its arguments do not depend on which definition we adopt).

In sum, we maintain Petitioner’s definition, as qualified, for the level of one of ordinary skill in the art, and employ it in our analysis of the parties’ unpatentability arguments.

III. CLAIM CONSTRUCTION

Because the Petition was filed after November 13, 2018, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), following the standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b); 83 Fed. Reg. 51,340, 51,340–41, 51,343 (Oct. 11, 2018). In applying such standard, claim terms are generally given 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. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner argues that the terms of the challenged claim should be afforded their plain and ordinary meaning, except for “a display associated with a front windshield of a vehicle.” Pet. 9–11. Patent Owner also argues that we should construe this term. PO Resp. 6–7.⁶

In addition, the parties submit that the plain and ordinary meaning of the term “generates” supports their arguments concerning patentability. Pet. Reply 2–3; PO Resp. 6. Certain of Patent Owner’s arguments, however, as to what the prior art fails to teach implicate the construction of the term “generates.” See PO Resp. 31–34. We address each of these two terms below.

A. Display Associated with a Front Windshield of a Vehicle

Petitioner proposes that we construe “a display associated with a front windshield of a vehicle” to mean “a display mounted on or connected to a front windshield of a vehicle.” Pet. 11. Petitioner argues that the Specification of the ’525 patent “distinguishes the ‘front windshield’ from other areas of the vehicle, including the ‘rear shield passenger side front window, passenger side rear window, driver side rear window, and/or driver side front window.’” *Id.* at 10–11 (quoting Ex. 1001, 4:18–19). According to Petitioner, “[t]he [S]pecification further discloses the display may be ‘mounted on or otherwise associated with’ the ‘front windshield’ and refers to 130 in F[igures] 1A–1B, where the display 130 appears to be connected to

⁶ Patent Owner identified two additional terms in its Preliminary Response, but did not renew those arguments in its Response. Compare Prelim. Resp. 7–9, with PO Resp. 6–7. As such, those arguments are waived. Paper 8 (Scheduling Order), 9 (“Patent Owner is cautioned that any arguments not raised in the response may be deemed waived.”).

the front windshield.” *Id.* at 11 (quoting Ex. 1001, 4:16–17; citing *id.* at Figs. 1A–1B; citing Ex. 1003 ¶¶ 91–92).

Patent Owner proposes that we construe “a display associated with a front windshield of a vehicle” to mean “a display that is in proximity with the front windshield, visible on or through the front windshield of a vehicle.” PO Resp. 6–7. Patent Owner argues that its proposed construction is supported by the ’525 patent Specification which contrasts “mounted” with “otherwise associated with,” evidencing that the display need not be mounted to the front windshield. *Id.* at 7 (citing Ex. 1001, 4:16–20).

We determine that no express construction is needed for this term because Petitioner shows that Lalancette teaches this limitation under either parties’ proposed construction, and Patent Owner does not dispute that Lalancette teaches the term. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”); *see also infra* Section V.B (finding that Petitioner demonstrates that Lalancette teaches “a display associated with a front windshield of a vehicle”).

B. Generates

Based on Patent Owner’s arguments regarding what the prior art fails to teach, the term “generates” in the phrase “the controller generates a first signal representing an indicator” requires construction. *See* Ex. 1001, 8:13–16; PO Resp. 28–30; *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1318 (Fed. Cir. 2016) (finding that disputes between the parties over the plain and ordinary meaning of a term should be resolved as a matter of claim construction).

Patent Owner first argues that claim 1 “require[s] that a new *signal* be generated each time there is a ride dispatched.” PO Resp. 28 (citing Ex. 2023 ¶ 70) (emphasis added). Patent Owner, however, proceeds to conflate generating a signal with generating an icon.⁷ *Id.* at 28–30. For example, Patent Owner next argues that the teachings of Lalancette “eliminate[] the possibility that *icons* can be generated on a per-ride basis,” and that “the *icon* would remain associated with the user on subsequent trips.” *Id.* at 28–29 (citing Ex. 1009 ¶¶ 31–42; Ex. 2023 ¶ 73) (emphases added). According to Patent Owner, “[t]his contrasts with the system of claim 1 where an icon is generated for each user-driver trip,” and “[n]either the user nor the driver have pre-selected icons.” *Id.* at 29 (citing Ex. 2023 ¶ 73); *see also id.* at 30 (citing Ex. 2023 ¶ 74) (making similar arguments).

Simply put, these arguments incorrectly conflate “signal” and “indicator” (e.g., icon). Claim 1 recites that a controller generates a signal representing an indicator, rather than reciting that the controller generates the indicator. Ex. 1001, 8:13–18. And the Specification of the ’525 patent is replete with examples of the controller generating signals that represent an indicator for transmission by a transceiver, which is different than generating the indicator itself. *See, e.g.*, Ex. 1001, 2:1–5, 5:4–7, 6:30–37, 6:62–65.

And we find unavailing Patent Owner’s arguments that claim 1 requires a new indicator (e.g., icon) for each trip, and that the indicator cannot be pre-selected. PO Resp. 29. The language of claim 1 sets forth no such requirements. Ex. 1001, 8:8–23. Notably, Patent Owner does not cite to the Specification or claim language to support these arguments. *Id.*

⁷ The ’525 patent describes “an indicator” as “a ‘code’ (e.g., a text string or an alphanumeric string), *an icon*, or other identifier.” Ex. 1001, 4:7–10 (emphasis added).

Rather, Patent Owner cites to the testimony of Dr. Valenti. PO Resp. 28–30 (citing Ex. 2023 ¶¶ 70–74). We find that this testimony lacks factual support and is entitled to little weight. *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (finding that when “an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term[,] . . . it is improper to rely on extrinsic evidence”).

In addition, because the Specification and file history do not explicitly provide a definition for the term “generates,” we look to a dictionary definition to illustrate its plain meaning for the parties. The Federal Circuit has approved the use of dictionaries for guidance in claim construction, “so long as the extrinsic evidence does not contradict the meaning otherwise apparent from the intrinsic record.” *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008); *see also Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343, 1348 (Fed. Cir. 2010) (approving of “consult[ing] a general dictionary definition of [a] word for guidance” in determining ordinary meaning); *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1325 (Fed. Cir. 2008) (“[O]ur decisions, including *Phillips*, do not preclude the use of general dictionary definitions as an aid to claim construction.”) (citation omitted).

A dictionary definition of “generate” is “to bring into existence: such as: . . . to originate by a vital, chemical, or physical process: [produce].” Merriam-webster.com (accessed April 8, 2022), <https://www.merriam-webster.com/dictionary/generate> (Ex. 3001). We therefore construe the term “generates” as it relates to the controller in reference to a signal in

accordance with its plain and ordinary meaning, which is to originate or produce the signal.

We note that this is the same definition that we provided in our Decision on Institution, and which Patent Owner appears to adopt in its Response. Dec. on Inst. 22–23; PO Resp. 6 (quoting without attribution Ex. 3001⁸ (defining “generate”)). More specifically, Patent Owner submits that “[a]t institution, the Board determined that the term ‘generating’ should be construed according to its ordinary meaning,” and argues that “[a]pplying ordinary meaning should still lead to the conclusion that the prior art does not render the claims of the patent unpatentable.” PO Resp. 6. We also note that for many of the arguments we address above for this term, we also addressed them in our Decision on Institution. Patent Owner’s Response largely recasts the arguments without using the phrase “actively formulated” while maintaining their same or similar substance. *Compare supra*, with Dec. on Inst. 22.

IV. PRINCIPLES OF LAW

A claim is unpatentable under 35 U.S.C. § 103 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 of the invention to a person having ordinary skill in the art. *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) objective evidence

⁸ Patent Owner incorrectly identifies the source of this definition as the Oxford Dictionary, rather than the Merriam-Webster Dictionary. PO Resp. 6.

of non-obviousness, if present.⁹ *See Graham*, 383 U.S. at 17–18. When evaluating a claim for obviousness, we also must “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

V. ALLEGED OBVIOUSNESS OVER LALANCETTE

Petitioner argues that Lalancette renders claim 1 obvious. Pet. 4, 39–48. We have reviewed the parties’ arguments and the evidence of record. For the reasons that follow, we determine that Petitioner shows by a preponderance of the evidence that Lalancette renders claim 1 obvious.

A. *Summary of Lalancette*

In its most relevant embodiment, Lalancette describes an electronic display mounted to be visible from outside a taxi, a mobile computing device in the taxi that manages a dash-mounted driver display and the mounted electronic display, and a smart phone of a user. Ex. 1009 ¶¶ 27–33. The taxi is equipped with an electronic display mounted outside of the taxi car or at least visible from outside the taxi car as well as a dash-mounted driver display. *Id.* ¶ 27. The displays are configured to display information received from the taxi dispatch service. *Id.*

In one scenario described by Lalancette, a user orders a taxi using a handset to request taxi service from a taxi dispatch service. *Id.* ¶ 29. The user device (the handset) conveys user identification (user ID) to the service provider. *Id.* The service provider validates the request to ensure the request can be accommodated. *Id.* ¶ 30. An automated dispatch system uses

⁹ Patent Owner does not present arguments or evidence of such objective evidence of non-obviousness. *See generally* PO Resp.

the user's location to select the most suitable taxi car to respond to the request for service from the user. *Id.*

The service provider then requests a personal human-readable icon for the user from an icon server by sending a message carrying a user ID for the user. *Id.* ¶ 31. The icon server uses the user ID to retrieve a personal icon corresponding to the user from an icon database. *Id.*

The icon server sends the retrieved icon to the service provider. *Id.* ¶ 32. The service provider dispatches the selected taxi car to the location of user and displays the user's icon on the taxi's roof-top electronic display and the driver's dashboard display. *Id.* The service provider also transmits a copy of the icon to the user device for confirmation to the user. *Id.*

In one embodiment, as part of the dispatch procedure, the service provider transmits the dispatch information and the user's icon to a mobile computer in the taxi car and the mobile computer manages the taxi roof-top electronic display 122 and the driver's dashboard display. *Id.*

When then taxi car approaches the user's location, the user can view the rooftop display to identify the taxi car as the taxi responding to the user's request. *Id.* ¶ 33. The user can compare the display of the icon on the rooftop display to the copy of the icon on the user's device 104 to confirm the identity of the taxi. *Id.*

B. Challenged Claim 1

1. Vehicle Identification System (Preamble)

Petitioner argues that Lalancette teaches “[a] vehicle identification system,” as recited in the preamble of claim 1. Pet. 39–40. More specifically, Petitioner argues that Lalancette teaches “‘a cross-platform target identification system’ to ‘identify a target in a target-rich environment’ for use with a ‘taxi dispatch service.’” *Id.* at 39 (citing

Ex. 1009, code (57), ¶¶ 1–2, 27, 29, 33). According to Petitioner, Lalancette explains that “[w]hen taxi car 118 approaches user (102)’s location, user 102 can view the rooftop display 122 to identify taxi car 118 as being the taxi responding to user (102)’s request, from among other taxi cars in the vicinity,” and that “[t]his can be especially useful in situations where there are a large number of similar looking taxi cars in one location.” *Id.* at 39–40 (quoting Ex. 1009 ¶ 33; citing *id.* at Fig. 1).

After reviewing Petitioner’s arguments and evidence, which are not addressed by Patent Owner (*see generally* PO Resp.), we determine that Petitioner demonstrates by a preponderance of the evidence that Lalancette teaches “[a] vehicle identification system.”

2. Display Associated With A Front Windshield

Petitioner argues that Lalancette teaches “a display associated with a front windshield of a vehicle, wherein the display is movable so as to be visible from an exterior of the vehicle by a rider,” as recited in claim 1. Pet. 40–42. More specifically, Petitioner argues that Lalancette teaches a “[t]axi car 120 [] equipped with electronic display 122 mounted outside of the taxi car or at least visible from outside the taxi car as well as a dash-mounted driver display 124.” *Id.* at 40–41 (quoting Ex. 1009 ¶ 27; citing *id.* ¶¶ 17, 32–33, 39, claim 13). Petitioner argues that Lalancette teaches that “‘electronic display 122’ may be a ‘rooftop display 122’ and that a ‘user 102 can view the rooftop display 122 to identify [the] taxi car’ when it ‘approaches user (102)’s location.’” *Id.* at 41 (citing Ex. 1009 ¶¶ 17, 32–33, 39, claim 13, Fig. 1).

According to Petitioner, “[o]ne of ordinary skill in the art would have considered it obvious to have a display mounted on or connected to a front windshield of a vehicle, wherein the display is movable so as to be visible

from an exterior of the vehicle by a rider . . . because putting a sign, a form of a display, in the front windshield of a vehicle was well-known (and required by the Office of the Secretary of Transportation for certain transportation vehicles)” *Id.* (citing Ex. 1023, 49 (§ 38.39); Ex. 1003 ¶ 158). One of ordinary skill in the art “would have considered it obvious to mount or connect a display to the windshield that would be visible from an exterior of the vehicle as it approached a rider to further secure the display to the vehicle while ensuring it is viewable by a rider and protect the display from the outside environment,” according to Petitioner. *Id.* at 42 (citing Ex. 1003 ¶ 158). Petitioner adds that one of ordinary skill in the art “would have considered it obvious to make such a display movable to permit the driver to adjust the display as needed depending on the driver’s preference and on the likely location of the rider relative to the vehicle.” *Id.*

After reviewing Petitioner’s arguments and evidence, which are not addressed by Patent Owner (*see generally* PO Resp.), we determine that Petitioner demonstrates by a preponderance of the evidence that Lalancette teaches “a display associated with a front windshield of a vehicle, wherein the display is movable so as to be visible from an exterior of the vehicle by a rider.”

3. *Controller Communicatively Coupled*

Petitioner argues that Lalancette teaches “a controller communicatively coupled to mobile communication devices,” as recited in claim 1. Pet. 42–45. More specifically, Petitioner argues that Lalancette teaches that “[u]ser 102 can access telecommunications network 106 using smart phone 104 via communication link 109’ using ‘a smart phone or a communication device having the ability to send and receive digital

information.” *Id.* at 42 (quoting Ex. 1009 ¶¶ 27, 29). Petitioner argues that Lalancette teaches that “taxi dispatch service 108 is accessible to customers from telecommunications network 106 via communications link 110.” *Id.* (quoting Ex. 1009 ¶ 27; citing *id.* at Fig. 1). According to Petitioner, Lalancette “explains that ‘[c]ommunication links 109 and 110 can be web or Internet connections and can be wired or wireless’ and that user communications are received and identified by ‘[t]elecommunication equipment at service provider 108 . . . using mechanisms well known to persons skilled in the art.’” *Id.* at 42–43 (quoting Ex. 1009 ¶ 29).

In addition, Petitioner argues that Lalancette teaches “a taxi service provider using telecommunications equipment to transmit and receive communications with user’s devices through a telecommunications network.” *Id.* at 43 (citing Ex. 1009 ¶¶ 27, 29). More specifically, Lalancette “teaches the taxi service provider 108 transmitting and receiving that information in order to perform various steps in the disclosed target identification system,” according to Petitioner. *Id.* (citing Ex. 1009 ¶¶ 37, 39). In particular, Petitioner argues that Lalancette’s Figure 2 illustrates a “‘method . . . from the point of view of a server’ which may be ‘incorporated into [the] service provider system,’” and “the server ‘receives a request for a service for a user, for example, a person ordering a taxi from a taxi dispatch service,’ ‘associates the request for service for a user with a human-readable icon associated with the user,’ and ‘sends the human-readable icon to a target display.’” *Id.* at 43–44 (quoting Ex. 1009 ¶¶ 37, 39; citing *id.* at Fig. 2) (alterations in original). Petitioner argues that Lalancette teaches that the method “may be implemented using computers, processors, or controllers.” *Id.* at 44 (citing Ex. 1009 ¶¶ 45–48).

Petitioner argues that accordingly, one of ordinary skill in the art would recognize the taxi dispatch server performing the method to be a controller, and that “in order for *Lalancette*’s taxi dispatch server to communicate across a telecommunications network using the taxi service provider’s ‘telecommunication equipment,’ the taxi dispatch server (‘controller’) would need to be ‘communicatively coupled’ to mobile communication devices.” *Id.* at 44–45 (citing Ex. 1003 ¶ 163).

After reviewing Petitioner’s arguments and evidence, which are not addressed by Patent Owner (*see generally* PO Resp.), we determine that Petitioner demonstrates by a preponderance of the evidence that Lalancette teaches “a controller communicatively coupled to mobile communication devices.”

4. *Wherein the Controller Generates a First Signal*

Claim 1 further recites “wherein the controller generates a first signal representing an indicator which is transmitted to a mobile communication device associated with a driver of the vehicle.” Ex. 1001, 8:13–16. We agree with Petitioner and find that Lalancette teaches this limitation. Pet. 45–47; Pet. Reply 13–16. We address this limitation below in two parts.

First, we find that Lalancette teaches that the controller (i.e., taxi service provider 108) generates a first signal representing an indicator (icon) which is transmitted to a mobile communication device (i.e., the mobile computer) in taxi car 118. *See* Ex. 1009 ¶¶ 29, 31–33, 39; Pet. 46. More specifically, Lalancette teaches the following in responding to a request for service from a user:

Service provider 108 . . . requests a personal human-readable icon for user 102, from icon server 112 by sending

message 142, carrying a user ID for user 102. Icon server 112 uses the user's (102) user ID as a key to the database and retrieves a personal icon corresponding to user 102 from icon database (dB) 114 via message interaction 144. The retrieving step validates the request by determining if the request returns a valid icon. The icon server 112 thus provides a validation of icons to help ensure that other users can not use an icon associated with user 102.

Ex. 1009 ¶ 31. Lalancette teaches that “the icon server 112 sends the retrieved icon to service provider 108,” and “as part of the dispatch procedure, the service provider 108 transmits the dispatch information and the user's icon to a mobile computer in taxi car 118 and the mobile computer manages the taxi roof-top electronic display 122 and to the driver's dashboard display 124.” *Id.* ¶ 32; *see also id.* at Fig. 1 (showing taxi 118 displaying (122, 124) user 102's personal icon (as shown on smartphone 104)), ¶ 27; Ex. 1003 ¶ 165; Pet. 46–47.

We find unavailing Patent Owner's arguments that conflate generating a signal with generating an indicator (e.g., icon) because, as we discuss above, claim 1 does not require generating an indicator, but rather a signal that represents an indicator. PO Resp. 28–29; *supra* Section III.B (construing “generates”); *see also In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998) (stating “the name of the game is the claim”); *cf. In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (stating limitations not appearing in the claims cannot be relied upon for patentability). Likewise, we find unavailing Patent Owner's arguments that icons must be newly-generated on a per-ride/trip basis because, as we discuss above, claim 1 has no such requirements. PO Resp. 28–30; *supra* Section III.B; *In re Hiniker Co.*, 150 F.3d at 1369; *In re Self*, 671 F.2d at 1348.

Second, we agree with Petitioner that Lalancette teaches that the mobile communication device (i.e., the taxi car 118's mobile computer) is associated with a driver of the vehicle (i.e., the driver of taxi car 118). Pet. 45–46; Pet. Reply 13–14. In particular, Lalancette teaches that the mobile computer is in taxi car 118, and thus is associated with it. And Lalancette teaches that the taxi car 118 has one driver while it is in service for dispatch to a rider, and thus, that driver is associated with the taxi car 118. Ex. 1009 ¶¶ 29–33. Thus, the mobile computer in taxi car 118 is associated with the driver of taxi car 118. *Id.* Moreover, Lalancette teaches that the taxi's equipment is associated with its driver. *See* Ex. 1009 ¶ 33 (emphasis added) (teaching that “user 102 can show the driver the copy of the icon on the user device 104 which the driver can compare to the copy of the icon displayed on the *driver's dashboard display 124*”).

We find unavailing Patent Owner's argument that “Lalancette does not disclose a mobile device associated with a driver at all.” PO Resp. 27 (citing Ex. 2023 ¶ 69). Patent Owner argues that instead “Lalancette sends a signal directly to the vehicle itself through a ‘mobile computer in taxi car 118.’” *Id.* (citing Ex. 1009 ¶ 32). As we explain above, however, the mobile computer in taxi car 118 is associated with its driver.

We also find unavailing Patent Owner's argument that Mr. Williams, Petitioner's expert, “acknowledged that Lalancette does not disclose the use of a mobile communication device associated with the driver.” *Id.* (citing Ex. 2022, 128:14–129:25, 132:1–8). Patent Owner misrepresents Mr. Williams's testimony. Mr. Williams was not asked whether Lalancette “discloses” a mobile communication device, but rather was asked “You'll agree that La[l]ancette doesn't identify the mobile computer as a mobile communication device associated with the driver?” Ex. 2022, 129:10–13.

Mr. Williams responded “[i]n that passage of where mobile computer is specifically referenced, that description is not in that passage.” *Id.* at 129:14–16. Notably, Mr. Williams also testified that (i) “[t]he nature of La[l]ancette requires some sort of computing device in the taxi that has the ability to receive and communicate in order to get information, for example, icon information from the central computer”; (ii) “mobile computer . . . has a variety of form factors inclusive of something like a [s]martphone”; and (iii) “[i]n the passage where [Lalancette] references mobile computer, it doesn’t have a specific form factor discussion such as referencing [s]martphones.” *Id.* at 125:17–22, 129:20–25, 132:5–8.

We also find unavailing Patent Owner’s argument that “Lalancette does not disclose a mobile device associated with a driver at all” to the extent that Patent Owner “attempts to improperly narrow the definition of a mobile device to only mean a smartphone,” as Petitioner alleges. PO Resp. 27; Pet. Reply 14. We find that this argument, and the expert testimony (Ex. 2023 ¶ 69) cited in support, are contradicted by the ’525 patent Specification, which describes mobile communication devices broadly. *See* Ex. 1001, 3:4–7.

In sum, we find that Petitioner demonstrates by a preponderance of the evidence that Lalancette teaches “wherein the controller generates a first signal representing an indicator which is transmitted to a mobile communication device associated with a driver of the vehicle.”

5. Wherein the Controller Generates a Second Signal

Petitioner argues that Lalancette teaches “wherein the controller generates . . . a second signal representing the indicator which is transmitted to a mobile communication device associated with the rider,” as recited in

claim 1. Pet. 47–48. More specifically, Petitioner argues that Lalancette teaches that “service provider 108 also transmits a copy of the icon to user device 104 for confirmation to the user.” *Id.* at 47 (quoting Ex. 1009 ¶ 32). In addition, Petitioner argues that Lalancette’s Figure 1 illustrates “the second signal representing the indicator is transmitted to and displayed on the user’s mobile communication device.” *Id.* at 48 (citing Ex. 1009, Fig. 1 (excerpting user 102 and their smartphone 104 showing the user 102’s personal icon displayed on the phone 104)).

After reviewing Petitioner’s arguments and evidence, which are not addressed by Patent Owner (*see generally* PO Resp.), we determine that Petitioner demonstrates by a preponderance of the evidence that Lalancette teaches “wherein the controller generates . . . a second signal representing the indicator which is transmitted to a mobile communication device associated with the rider.”

6. Device Associated with the Driver Generates a Third Signal

Claim 1 further recites “wherein the mobile communication device associated with the driver of the vehicle generates a third signal representing the indicator which is transmitted to the display, the third signal representing the indicator identifies the vehicle.” Ex. 1001, 8:19–23. We agree with Petitioner that Lalancette teaches this limitation. Pet. 45–48.

More specifically, we agree with Petitioner that Lalancette teaches “that the taxi’s mobile computer manages the taxi roof-top electronic display and displays the received icon signal on the roof-top display as the taxi approaches the user.” *Id.* at 48. For example, Lalancette teaches that “the service provider 108 transmits the dispatch information and the user’s icon to a mobile computer in taxi car 118 and the mobile computer manages the taxi roof-top electronic display 122 and to the driver’s dashboard display

124.” Ex. 1009 ¶ 32; *see also id.* at Fig. 1 (showing taxi 118 displaying (122, 124) user 102’s personal icon (as shown on smartphone 104)), ¶ 27; Ex. 1003 ¶ 165; Pet. 46–47.

In addition, for the reasons discussed above, we find unavailing Patent Owner’s argument that “Lalancette does not disclose a mobile device associated with a driver at all; therefore, there is no mobile communication device associated with the driver to generate a signal to transmit to the display.” PO Resp. 30 (citing Ex. 2023 ¶ 75); *see supra* Section V.B.4 (finding that Lalancette teaches a mobile communication device associated with the driver of the vehicle).

In sum, we find that Lalancette teaches “wherein the mobile communication device associated with the driver of the vehicle generates a third signal representing the indicator which is transmitted to the display, the third signal representing the indicator identifies the vehicle.”

7. Summary

In summary, based on the arguments and evidence of record, we find that Petitioner demonstrates by a preponderance of the evidence that claim 1 is unpatentable under 35 U.S.C. § 103 over Lalancette.

VI. REMAINING GROUNDS

Petitioner argues that claim 1 is rendered obvious by (i) Kalanick and Kemler and (ii) Lalancette and Kalanick. Pet. 4, 22–39, 48–54. Thus, these grounds of unpatentability challenge claim 1 which we already determine is unpatentable over Lalancette. *See supra* Section V.B (determining Petitioner shows claim 1 is unpatentable). Under the circumstances of this case, analyzing additional grounds challenging the same claim, which we have determined to be unpatentable, would not be an efficient use of the Board’s time and resources. *See Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*,

809 F. App’x 984, 990 (Fed. Cir. 2020) (“We agree that the Board need not address issues that are not necessary to the resolution of the proceeding.”).

Accordingly, we do not reach these grounds. *Cf. In re Gleave*, 560 F.3d 1331, 1338 (Fed. Cir. 2009) (not reaching other grounds of unpatentability after affirming the anticipation ground); *see also Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (determining once a dispositive issue is decided, there is no need to decide other issues).

VII. PATENT OWNER’S MOTION TO EXCLUDE

Patent Owner filed a Motion to Exclude paragraphs 4–31 of the Second Declaration of David Hilliard Williams (Ex. 1030). Mot. Excl. 1. We do not rely on any of these paragraphs in this Final Written Decision. Accordingly, we dismiss as moot Patent Owner’s Motion to Exclude.

VIII. CONCLUSION¹⁰

Based on the full record, we determine that Petitioner shows by a preponderance of the evidence that claim 1 is unpatentable over Lalancette.

Claim(s)	35 U.S.C. §	Reference(s) /Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1	103	Lalancette	1	

¹⁰ Should Patent Owner wish to pursue amendment of the challenged claim in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

1	103 ¹¹	Kalanick, Kemler		
1	103 ¹²	Lalancette, Kalanick		
Overall Outcome			1	

IX. ORDER

In consideration of the foregoing, it is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), Petitioner has shown by a preponderance of the evidence that claim 1 of the '525 patent is unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude (Paper 21) is *dismissed* as moot; and

FURTHER ORDERED that parties to the proceeding seeking judicial review of this Final Written Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

¹¹ Because we determine that the challenged claim is unpatentable under § 103 over Lalancette, we decline to address it for this ground.

¹² Because we determine that the challenged claim is unpatentable under § 103 over Lalancette, we decline to address it for this ground.

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