Trials@uspto.gov
571-272-7822

Paper 9
Date: May 11, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner,

v.

CHARGE FUSION TECHNOLOGIES, LLC,
Patent Owner.

IPR2023-00063
Patent 10,819,135 B2

Before JEREMY M. PLENZLER, CARL M. DEFRANCO, and PAUL J. KORNICZKY, *Administrative Patent Judges.*

KORNICZKY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Tesla, Inc. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–5, 7–11, and 14–16 of U.S. Patent No. 10,819,135 B2 (Ex. 1001, "the '135 patent"). Paper 2 ("Pet."). Charge Fusion Technologies, LLC ("Patent Owner") filed a Preliminary Response opposing institution. Paper 6 ("Prelim. Resp."). With the Board's permission, Petitioner filed a Reply. Paper 7 ("Reply").

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) (2018).

After considering the Petition, Preliminary Response, and the evidence of record, we determine that Petitioner has demonstrated a reasonable likelihood of showing the unpatentability of at least one of the challenged claims. Thus, we institute an *inter partes* review on all challenged claims on all asserted grounds. 37 C.F.R. § 42.108(a). Specifically, we grant Petitioner's request to institute an *inter partes* review of claims 1–5, 7–11, and 14–16 of the '135 patent.

II. BACKGROUND

A. Real Parties-in-Interest

As required by 37 C.F.R. § 42.8(b)(1), each party identifies the real party-in-interest. Petitioner identifies itself as a real party-in-interest. Pet. 80. Patent Owner identifies itself as a real party-in-interest. Paper 4, 1.

B. Related Proceedings

As required by 37 C.F.R. § 42.8(b)(2), Petitioner and Patent Owner identify the judicial or administrative matters that would affect or be affected by a decision in this proceeding. Petitioner and Patent Owner state the '454 patent is the subject of *Charge Fusion Technologies, LLC v. Tesla, Inc.*, No. 1:22-cv-00488-LY (W.D. Tex. 2021). Pet. 80–81; Paper 8, 1. The parties also identify the following *inter partes* review proceedings:

Case No.	Patent No.	Status
IPR2022-00519	9,853,488	Institution denied
IPR2022-01217	10,998,753	Pending
IPR2023-00062	9,853,488	Pending

Pet. 81; Paper 4, 1. Petitioner states the Specification of the '135 patent is essentially the same as the '488 and '753 patents. Pet. 81.

C. Overview of the '135 Patent (Ex. 1001)

The '135 patent is titled "Systems and Methods for Charging Electric Vehicles Utilizing a Touch-Sensitive Interface." Ex. 1001, code (54). The '135 patent relates to "[s]ystems and methods for charging electric vehicles and for quantitative and qualitative load balancing of electrical demand." Ex. 1001, Abstract. The '135 patent states it would be advantageous to intelligently charge vehicles by creating a charging schedule. *Id.*, 2:5-15.

According to the '135 patent, users may use a graphical user interface to effectuate and facilitate operation of the systems. Ex. 1001,

14:19–21. Figure 7, reproduced below, illustrates an exemplary user interface. *Id.* at 1:53–54.

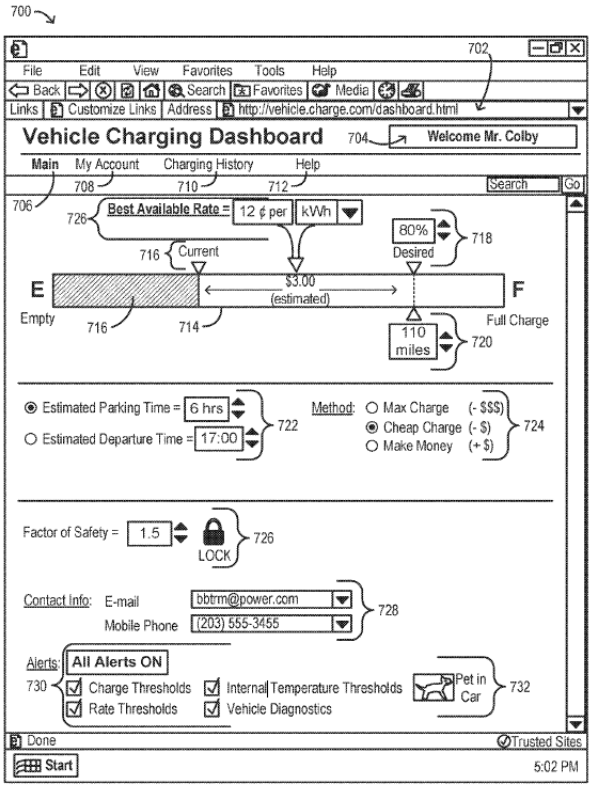


FIG. 7

Figure 7 illustrates a diagram of an exemplary interface 700. *Id.* at 14:16–18. Interface 700 may be utilized in conjunction with and/or to effectuate and/or facilitate operation of the systems. *Id.* at 14:18–21. The "main" menu item 706 may comprise a "dashboard" and/or primary screen via which vehicle charging parameters may be established, stored, viewed, and/or changed. *Id.* at 14:40–51. The "main" menu item 706 may comprise, for example, a vehicle charge indicator 714 that visually indicates a current charge level 716 of the vehicle. *Id.* Similarly, a desired charge percent level 718 may be both shown and alterable. *Id.* A user may select the desired charge percent level 718, for example, and may slide the marker on the vehicle charge indicator 714 to a new described location 50 and/or may

utilize the exemplary up/down arrow controls to increase or decrease the desired charge percent level 718. *Id*. Also, a user may view and/or change the desired charge range level, and thus determine a desired distance to travel and accordingly set the desired charge range to match the desired distance. *Id*. at 14:53–62.

According to the '135 patent, the "main" menu item 706 may comprise a "pet in car" button 732. Ex. 1001, 15:45–55. The "pet in car" button 732 may automatically set alerts and/or charge parameters to levels conducive to maintaining the comfort and safety of a pet left in a parked vehicle. *Id*. Thus, a user may safely leave a pet in a parked vehicle by establishing and/or setting charging parameters designed to keep the air conditioning on to maintain a cool vehicle and/or to keep the heat on to maintain a warm vehicle (e.g., depending upon the relevant season and/or external weather conditions). *Id*.

D. Illustrative Claim

As mentioned above, Petitioner challenges claims 1–5, 7–11, and 14–16 of the '135 patent. Claims 1, 8, and 14 are independent. Independent claim 1 is reproduced below.[1]

> 1[pre]. A non-transitory computer readable storage medium storing instructions that, when executed by a processor, cause the processor to:
>
> 1[a] retrieve from a memory storage device one or more electric charge parameters describing one or more electric charge parameters of an electric vehicle;

[1] For ease of reference, we use Petitioner's claim recitation numbering scheme as indicated by the bracketed numbers. *See* Pet. ii.

1[b] display via a user interface of a mobile device at least one of the one or more electric charge parameters

1[c] wherein the user interface is adapted to display the one or more electric charge parameters as a vehicle charge indicator element comprising a first portion indicative of an amount of charge residing in a battery of the electric vehicle and a second portion indicative of an uncharged capacity of the battery of the electric vehicle and wherein the vehicle charge indicator element further comprises a slider by which an amount of charge may be specified;

1[d] receive an amount of charge specified by the slider;

1[e] commence charging of the electric vehicle in accordance with the received amount of charge;

1[f] display via the user interface a visual indicia for selecting a mode of operation of the electric vehicle the selected mode of operation operating to determine and maintain an interior temperature of the electric vehicle suitable for a pet located within the electric vehicle;

1[g] receive an indication of an activation of the selected mode of operation of the electric vehicle; and

1[h] operate a climate control mechanism of the electric vehicle while the vehicle is in a parked state and in accordance with the selected mode of operation for a duration of time until the amount of charge residing in the battery reaches a predetermined level.

Ex. 1001, 29:16–47.

E. Evidence and Asserted Grounds

Petitioner relies upon the following evidence:

(1) US 7,671,567, issued March 2, 2010 ("Eberhard," Ex. 1009);

(2) 2008 Tesla Roadster Touch Screen Users Manual ("Roadster Manual," Ex. 1005); and

(3) Japanese Unexamined Patent Application No. JPH1055496, published February 24, 1998 ("Hibi," Ex. 1008).

Petitioner submits a declaration from Christopher Wilson (Ex. 1002).

Petitioner challenges the patentability of the '135 patent claims based on the following ground (Pet. 2):

Ground	Claim(s) Challenged	35 U.S.C. §[2]	Reference(s)/Basis
1	1–5, 7–11, 14–16	103	Eberhard, Roadster Manual, Hibi

III. ANALYSIS

A. Legal Standards

Petitioner bears the burden of persuasion to prove unpatentability, by a preponderance of the evidence, of the claims challenged in the Petition. 35 U.S.C. § 316(e). Except in limited circumstances not present here, this burden of persuasion does not shift to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition and Patent Owner's Preliminary Response shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the Petition. 35 U.S.C. § 314(a).

[2] The relevant sections of the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the '135 patent claims priority to an application filed before this date, our citations to 35 U.S.C. § 103 in this Decision are to the pre-AIA version. Our decision is not impacted, however, by which version of the statute applies.

As mentioned above, Petitioner's challenges are based on obviousness. Pet. 2. A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on 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 the record, objective evidence of nonobviousness.[3] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

The level of ordinary skill in the art is "a prism or lens" through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a hypothetical person presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, 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." *Id.*

[3] At this stage of the proceeding, Patent Owner has not directed us to any objective evidence of non-obviousness. *See generally* Prelim. Resp.

> Petitioner states a person of ordinary skill in the art would have had at least a bachelor's degree in electrical engineering, mechanical engineering, or physics (or an equivalent field) and at least two years of work experience involving automotive systems, including vehicle information systems, vehicle sensors, and vehicle controllers (ECUs). More education can supplement practical experience and vice versa.

Pet. 9–10 (citing Ex. 1002 ¶ 28). Patent Owner states that, "[b]ecause the proposed level of ordinary skill does not affect the ultimate analysis, Patent Owner takes no position with respect to Petitioner's proposed level of ordinary skill in the art." Prelim. Resp. 15.

We adopt Petitioner's definition of the level of ordinary skill for the purposes of institution.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2021). This claim construction standard includes construing the claim in accordance with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art. *Id.*; *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005). In construing claims in accordance with their ordinary and customary meaning, we consider intrinsic evidence such as the specification and the prosecution history of the patent. *Phillips*, 415 F.3d at 1315–17. Extrinsic evidence, including expert and inventor testimony, dictionaries, and treatises, may also be used but is less significant than the intrinsic record. *Id.* at 1315. Usually, the specification is dispositive, and it is the single best guide to the meaning of a

disputed term. *Id.* Any special definitions for claim terms must be set forth in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Petitioner and Patent Owner agree that the term "electric vehicle" should be construed as a "vehicle that utilizes, stores and/or provides electrical power." Pet. 11; Prelim. Resp. 14. The parties also agree that other terms should be given their plain and customary meaning as understood by a person of ordinary skill in the art. Pet. 11; Prelim. Resp. 14.

We adopt the parties' definition of "electric vehicle" and determine that no other claim term needs to be construed.

D. Ground 1: Asserted Obviousness of Claims 1–5, 7–11, and 14–16 Over Eberhard, the Roadster Manual, and Hibi

Petitioner asserts that claims 1–5, 7–11, and 14–16 are unpatentable under 35 U.S.C. § 103 as being obvious over Eberhard (Ex. 1009), the Roadster Manual (Ex. 1005), and Hibi (Ex. 1008). Pet. 17–79. Patent Owner filed a Preliminary Response opposing Petitioner's challenge. Prelim. Resp. 19–51. Based on the present record, and for the reasons identified below, we determine Petitioner has shown a reasonable likelihood of prevailing on its obviousness challenge at least as to claim 1.

Below, we present a brief overview of Eberhard, the Roadster Manual, and Hibi and then we address Petitioner's and Patent Owner's contentions.

1. Overview of Eberhard (Ex. 1009)

Eberhard is a U.S. patent titled "Multi-Mode Charging System for an Electric Vehicle." Ex. 1009, code (54). It relates to "charging and cooling

modes for the battery pack of an electric vehicle." *Id.* at 1:17–18. Eberhard states that a "dial, menu based system on a visual display, buttons, etc.," allows the user to select the charging cut-off voltage or to select the average charge. *Id.* at 8:18–24. Eberhard also states that "any of a variety of charging/operational mode means" can be used, such as "a display system . . . with a touch sensitive screen" only or in combination with "switching means (e.g., toggle switches, push button switches, slide switches, etc.)." *Id.* at 8:51–56.

2. Overview of the Roadster Manual (Ex. 1005)

The 2008 Tesla Roadster Touch Screen Users Manual describes the touch screen user interface for the Tesla Roadster. Ex. 1005. The Tesla Manual describes and illustrates a charge screen, which "displays charging status" and provides "access [to] charge settings." *Id.* at 4. The charge screen can be "[t]ouch[ed] to adjust charge settings." *Id.* at 10. The charge settings include "[t]iming of charge (charging can begin either when the vehicle is plugged in, or at a specifically scheduled time)." *Id.*

3. Overview of Hibi (Ex. 1008)

Hibi is a Japanese unexamined patent titled "Remote Control System for Automobile." Ex. 1008, code (54). Using the "data display screen" of a "mobile communication terminal, Hibi's user may view data transmitted from a parked vehicle. *Id.* ¶¶ 1, 11, 38. Hibi discloses that sensors, including a battery voltmeter and an engine tachometer, are used to collect data about the automobile. *Id.* ¶ 24. Readings from these sensors are displayed on the data display screen as a battery charge indicator graphic and an indicator of whether the engine is running. *Id.* ¶ 38, Fig. 11. Using

the same data display screen, the user may also input an operation instruction to control one of the devices equipped to the automobile. *Id.* ¶¶ 14, 38. Hibi discloses that the user may control the air conditioning, set and maintain a target temperature and humidity for the interior of the vehicle, and enable a mode to charge the battery, among other options. *Id.* ¶ 38, Fig. 11.

Hibi further discloses that the system may automatically detect and respond to an "abnormality" afflicting the parked vehicle. Ex. 1008, Abstract. For example, Hibi discloses that the system may detect a "Low battery" abnormality and respond to this abnormality by charging the vehicle battery. *Id.* ¶ 42, Fig. 5(a). Hibi's system can also detect temperature change abnormalities inside the cabin of the vehicle and can respond by activating the air conditioner to resolve the detected abnormal temperature. *Id.* ¶¶ 39–42; Fig. 5(a). Hibi explains that this type of abnormality response is designed, in part, for situations "when the driver leaves a child 61 or a pet animal 62 within the vehicle and is away from the automobile." *Id.* ¶ 47, Fig. 6.

4. Claim 1

Petitioner, relying on Mr. Wilson's testimony, provides a limitation-by-limitation comparison of Eberhard, the Roadster Manual, and Hibi to independent claim 1. Pet. 17–43.

a) 1[pre]. A non-transitory computer readable storage medium storing instructions that, when executed by a processor, cause the processor to:

Petitioner contends that Eberhard teaches the preamble. Pet. 19 (citing Ex. 1002 ¶¶ 52–54). According to Petitioner, Eberhard discloses a

"multi-mode charging and operating system" capable of utilizing a "cut-off voltage selected from at least three cut-off voltages," "cooling the electric vehicle's battery pack," and providing "user accessible means for selecting a preferred mode from a plurality of charging/operational modes." *Id*. at 17 (citing Ex. 1009, 2:13–25). Petitioner explains that a person of ordinary skill in the art would have understood that "the 'multi-mode charging and operating system' of Eberhard with all the features described would necessarily be implemented by instructions stored on a non-transitory computer readable storage medium and executed by the processor." *Id*. at 18 (citing Ex. 1002 ¶ 53).

At this stage of the proceeding, Patent Owner does not challenge Petitioner's contentions in this regard.

b) 1[a] retrieve from a memory storage device one or more electric charge parameters describing one or more electric charge parameters of an electric vehicle

Petitioner contends that Eberhard teaches the limitation. Pet. 21 (citing Ex. 1002 ¶¶ 55–57). According to Petitioner, Eberhard discloses a "multimode charging and operating system" that may operate under a user selected "operational mode" and the operational mode defines "aspects of the charging, battery and power control systems that affect the performance of an electric vehicle." *Id*. at 19 (citing Ex. 1009, 2:13–25, 5:66–6:5). Petitioner explains that Eberhard discloses a "mode display that indicates which charging/operational mode has been selected" and the "operational mode" for setting the cut-off voltage in Eberhard is a "charge parameter", as required by this limitation. *Id.* (citing Ex. 1009, 2:40–61; Ex. 1002 ¶ 55). Petitioner further explains that a person of ordinary skill in the art would

have understood that Eberhard's electric charge parameters are "set" through use of and storage on a memory storage device, that the electric charge parameters must be received from the memory storage device to display the "mode display," and that these steps of storing parameters on a memory storage device and receiving parameters from the memory storage device for display to the user, or for other uses, are routine operations well known in the art. *Id.* at 20 (citing Ex. 1002 ¶ 56).

At this stage of the proceeding, Patent Owner does not challenge Petitioner's contentions.

c) 1[b] display via a user interface of a mobile device at least one of the one or more electric charge parameters

Petitioner contends that Eberhard teaches this limitation. Pet. 21 (citing Ex. 1002 ¶¶ 58–60). According to Petitioner, Eberhard discloses a "mode display that indicates which charging/operational mode has been selected and Eberhard explains that, to display the user's selection of a cut-off voltage, the user may be shown "a sliding scale (e.g., from minimum driving range to maximum driving range) with an indicator on the scale showing the user's selection." *Id.* (citing Ex. 1009, 2:40–6, 18:26–37).

At this stage of the proceeding, Patent Owner does not challenge Petitioner's contentions.

d) 1[c] wherein the user interface is adapted to display the one or more electric charge parameters as a vehicle charge indicator element comprising a first portion indicative of an amount of charge residing in a battery of the electric vehicle and a second portion indicative of an uncharged capacity of the battery of the electric vehicle and wherein the vehicle charge indicator element further comprises a slider by which an amount of charge may be specified

Petitioner contends that the combined teachings of Eberhard and the Roadster Manual disclose this limitation. Pet. 22. According to Petitioner, the Roadster Manual discloses a vehicle charge indicator element in an electric vehicle that is in the shape of a battery comprising a green portion indicating the amount of charge residing in a battery of an electric vehicle followed by a dark blue area within the icon indicating the uncharged capacity of the battery. *Id.* at 21 (citing Ex. 1005, 2; Ex. 1002 ¶ 61).

Petitioner explains that Eberhard uses a slide switch to specify the amount of charge for the electric vehicle. Pet. 23. Petitioner acknowledges that while Eberhard's slide switches appear to be physical switches, a skilled artisan would readily have understood that this switch modality could easily be implemented in a touchscreen display environment and that, although Eberhard is silent as to the switch modality in his touchscreen embodiments, the same modalities used for physical implementations would be considered in touchscreen display environments. *Id.* at 23–24 (citing Ex. 1002 ¶ 63). Petitioner states the

> interchangeability known to a [person of ordinary skill in the art] between the manner in which input modalities are used, e.g., whether touchscreen and/or associated slide switches, is also consistent with the '135 patent's acknowledgement that 'displays' as used in the patent 'may be interactive and **may**

> **include touch screen features or associated keypads as is well understood**.

Id. at 24 (citing Ex. 1001, 26:38–55, 19:55–56).

At this stage of the proceeding, Patent Owner does not challenge Petitioner's contentions as this limitation.

e) 1[d] receive an amount of charge specified by the slider

Petitioner contends that Eberhard teaches this limitation. Pet. 31 (citing Ex. 1002 ¶ 72). Petitioner explains that Eberhard's slider allows the user to "select the average charge" and, once a selection is made, Eberhard "display[s] an indicator of the selected mode, adjusting a cut-off voltage … wherein the cut-off voltage [is] based on the selected mode." *Id*. (citing Ex. 1009, 8:15–35, 2:62–3:5).

At this stage of the proceeding, Patent Owner does not challenge Petitioner's contentions.

f) 1[e] commence charging of the electric vehicle in accordance with the received amount of charge

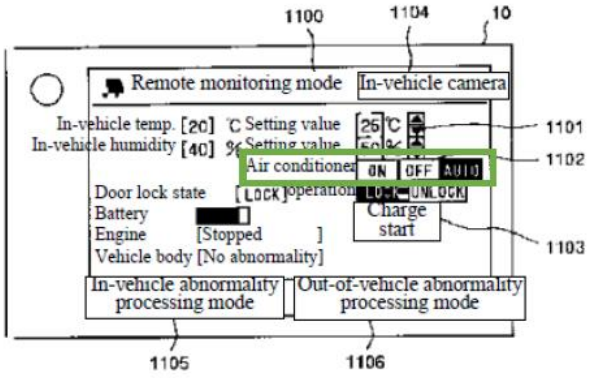
Petitioner contends that Eberhard teaches this limitation. Pet. 31 (citing Ex. 1002 ¶ 73). According to Petitioner, Eberhard discloses "commenc[ing] charging of the electric vehicle in accordance with the received amount of charge" and this charging can be conducted in accordance with a cut-off voltage received from the user interface that represents an amount of charge. *Id*. (citing Ex. 1009, 5:57–64; 8:15–25).

At this stage of the proceeding, Patent Owner does not challenge Petitioner's contentions.

g) 1[f] display via the user interface a visual indicia for selecting a mode of operation of the electric vehicle the selected mode of operation operating to determine and maintain an interior temperature of the electric vehicle suitable for a pet located within the electric vehicle

Petitioner contends that the combined teachings of Eberhard and Hibi teach or suggest this limitation. Pet. 32. According to Petitioner, Eberhard acknowledges that electric vehicles were known to include a climate control system as it discloses the inclusion and use of vehicle "A/C heat controls" on the user interface (i.e., visual "display screens"). *Id*. (citing Ex. 1009, 8:60–9:3, 1:9–11 (expressly incorporating the disclosures of Application No. 12/058,047 (i.e., Ex. 1001) by reference); Ex. 1011, 5:12–16 ("In various embodiments, the heating system 214 is part of a heating, ventilation and air conditioning system adapted to control climate in a cabin of the electrical vehicle")).

Petitioner explains that Hibi also teaches a user interface that displays in-vehicle temperature and humidity. Pet. 32 (citing Ex. 1008 ¶ 38). Figure 11 as annotated by Petitioner is reproduced below.



Id. at 34. Figure 11 illustrates an exemplary data display screen 1100 of Hibi's mobile communication terminal 10, which may be carried by the driver/user 13. Ex. 1008 ¶¶ 38, 10. Referring to annotated Figure 11,

Petitioner explains that the user interface includes the current temperature and humidity, as well as "ON," "OFF," or "AUTO" modes to control the vehicle air conditioner (which is highlighted with the green box).

According to Petitioner, in the AUTO mode, Hibi's user interface displays the target temperature and humidity and enables the "setting value of the temperature and humidity" to be "changed by touching an up and down button" and the system will then automatically control an apparatus, such as a heater or air conditioner, to maintain the target temperature. Pet. 34 (citing Ex. 1008 ¶¶ 38, 47, 61, 29). Petitioner further explains that Hibi's mode of operation may be used to "maintain the inside of the vehicle in a comfortable state for children, animals, or the like left within the vehicle." *Id.* (citing Ex. 1008 ¶¶ 61, Fig. 6 (item 61 (child) and item 62 (pet))). Petitioner contends that Hibi's ability to detect abnormal conditions, including abnormal temperatures, necessarily discloses to the skilled artisan the ability to determine when temperatures are normal, and thus do not require countermeasures or responses and Hibi's system is operable to *determine* a suitable interior temperature and, using Hibi's countermeasures (e.g., using the air conditioner, opening a window, or turning on the heater), are designed to *maintain* a suitable interior temperature, as they are responses to get the vehicle cabin to its normal desired temperature. *Id.* at 35–36 (citing Ex, 1002 ¶ 78).

Petitioner contends that a person of ordinary skill in the art would have been motivated to incorporate the teachings of Hibi regarding climate control into Eberhard's multi-mode charging and operating system. Pet. 36 (citing Ex. 1002 ¶¶ 80–86). Petitioner explains that

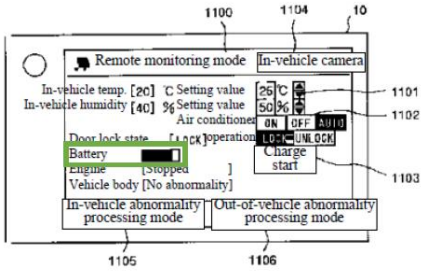
> Placing functionality to operate the climate control features of the vehicle in Eberhard's system would have been obvious to a

POSITA as Eberhard provides an in-vehicle framework that already contemplates providing the user with "AC/heat controls." EX1009, 8:60-9:3; EX1002 ¶80.

Further, a POSITA would have found it obvious to incorporate this feature because Eberhard and Hibi relate to similar products and methods—they each relate to systems to control vehicle functions, including charging and climate control, and potentially in the absence of the user, or by the user while the user is away from the vehicle (e.g. they both disclose the use of remote controls to operate the vehicle). EX1009, 1:15-18, 8:60-9:3, 10:33-53, 11:25-36; EX1008, [0001], [0007], [0038]; EX1002 ¶80.

In addition, a POSITA would understand that climate control is an important feature that users wish to exercise control over, and providing means to automatically or remotely control the climate of a vehicle is important to a user. EX1002 ¶81. Specifically, a POSITA would understand that drivers often wish to leave occupants such as pets in their vehicles for a short time and that this is considerably safer if the temperature of the vehicle can be monitored and controlled. Adding Hibi's monitoring and controlling to the system of Eberhard would help to meet the well-known interests of drivers in safely leaving, e.g., pets in vehicles. *Id.*

Furthermore, a POSITA would find the teachings of Eberhard and Hibi to be compatible as they both monitor charging conditions, including the voltage level of a vehicle battery. For example, Eberhard "controls and monitors cut-off voltage during charging." EX1009, 4:52-65. Similarly, the system in Hibi has a "battery voltmeter" and displays a vehicle charge indicator to the user. EX1008, [0024], Fig. 11 (annotation added):



> Even where Eberhard may be silent as to the specific "AC/heat controls" that may be incorporated into the Eberhard system, given the nature of Eberhard's system, which is concerned with enabling "the user to select the operational mode of a vehicle" including through a "remote selection means" that allows the user to "remotely alter the charging/operational mode" of the vehicle, it would have been obvious that providing the user a means to select a mode of operation to control the environment of the vehicle from a remote location would be advantageous. EX1009, 8:60-9:3, 10:24-32; EX1002 ¶83.
>
> Also, because both Eberhard and Hibi utilize similar touchscreen interfaces, and have the capability to control both charging and climate control systems, there would be no hardware modifications; rather, adding Hibi's climate control functions into the system of Eberhard is simply a matter of changing software functionality. EX1008, [0038]; EX1009, 1:15-18, 8:60-9:3, 9:4-19; EX1002 ¶84. All the necessary charging related information and controls are already available on the electric vehicles, meaning a POSITA would have a reasonable expectation of success in implementing this software change. EX1002 ¶84; *Pfizer*, 480 F.3d at 1364.

Pet. 36–39.

(1) Patent Owner's Arguments

As to a motivation to combine Eberhard and Hibi, Patent Owner contends that Petitioner has not shown that a person of ordinary skill in the art would have "combined Eberhard and Hibi (along with the Tesla Manual) to arrive at the invention recited in the Challenged Claims because Eberhard and Hibi propose different solutions to different problems." Prelim. Resp. 21 (citations omitted). As to Eberhard, Patent Owner states that "Eberhard describes its problem as electric vehicle batteries being expensive and having a limited-service life depending on factors such as rate of charge, charge level, level of discharge before charging, storage temperature, and

temperature during use." *Id*. at 21–22 (citing Ex. 1009, 1:30–64). "Eberhard then proposes its solution as allowing the user to select using either mechanical or touchscreen on/off switches different charging/operational modes which, through no input of the user, will either increase or decrease the service life of the battery depending solely upon the mode selected by the user." *Id*. at 22 (citing Ex. 1009, 2:13–39). Patent Owner contends that there is no teaching disclosed in Eberhard concerning the users' need to select one or more charging parameters nor does Eberhard disclose any means for doing so. *Id*.

As to Hibi, Patent Owner states that Hibi discloses a remote monitoring system for a gas-powered vehicle and "teaches a system that cures any battery deficiencies by simply turning the engine of the Hibi's gas powered vehicle on to charge the battery." Prelim. Resp. 22 (citing Ex. 1008 ¶¶ 41–43). Patent Owner further contends that "Hibi teaches that the car is in 'neutral' to charge the engine when attempting to counter certain low battery, unlike the 'parked state' in the challenged claims." *Id*. (citing Ex. 1008, Figure 5).

Patent Owner argues that Petitioner has not explained why a person of ordinary skill in the art "looking to solve the problem of increasing the service life of a rechargeable battery would look towards Hibi, a reference directed to notify the driver of an abnormality of a vehicle when it is being monitored by a user remotely." Prelim. Resp. 23 (citing Ex. 1008, Abstract). Patent Owner also argues that a person of ordinary skill in the art "would not look towards Hibi to improve Eberhard's method of setting charging/operation modes, as Hibi is directed to allowing users to remotely monitor conditions within the vehicle, a condition that is not relevant to Eberhard as the invention in Eberhard is strictly directed towards a multi-

mode battery charging system." *Id*. at 24–25 (citing Ex. 1009, All Claims; Figures 1–9). Patent Owner further argues that "Petitioner relies on motivations such as the skilled artisan "'would understand that climate control' is important" but "never provides any actual analysis as to what Eberhard recognizes as a shortcoming or desires to improve or how Hibi would solve a problem within Eberhard." *Id*. at 25. Patent Owner also contends that Petitioner argues that an ordinary artisan would be motivated to make the combination because the combination would yield predictable results. *Id*. at 26. Finally, Patent Owner argues that the supporting testimony by Mr. Wilson should be ignored because it is a verbatim copy of the Petiton. *Id*. at 27–28.

We do not agree with Patent Owner's arguments. Patent Owner's description of the goals of Eberhard and Hibi appears to be too narrow and does not address Petitioner's articulated rationale. Petitioner adequately explains for purposes of institution that

> Eberhard and Hibi relate to similar products and methods—they each relate to systems to control vehicle functions, including charging and climate control, and potentially in the absence of the user, or by the user while the user is away from the vehicle (e.g. they both disclose the use of remote controls to operate the vehicle).

Pet. 36 (citing Ex. 1009, 1:15–18, 8:60–9:3, 10:33–53, 11:25–36; Ex. 1008 ¶¶ 1, 7, 38; Ex. 1002 ¶ 80). Relying on the testimony of Mr. Wilson, Petitioner adequately explains that the skilled artisan would have understood that "climate control is an important feature that users wish to exercise control over, and providing means to automatically or remotely control the climate of a vehicle is important to a user" and "drivers often wish to leave occupants such as pets in their vehicles for a short time and that this is

considerably safer if the temperature of the vehicle can be monitored and controlled." *Id.* at 37 (citing Ex. 1002 ¶ 81). Adding Hibi's monitoring and controlling to Eberhard's system would help to meet the well-known interests of drivers in safely leaving pets in vehicles. *Id.; see* Ex. 1008 ¶ 61 ("automatically controlling or the driver remotely controlling an apparatus within the automobile makes it possible to maintain the inside of the vehicle in a comfortable state for children, animals, or the like left within the vehicle and to . . . prevent the occurrence of an accident due to lack of oxygen, dehydration, or the like").

As to a reasonable expectation of success, Patent Owner argues that Petitioner has not shown a reasonable expectation of success in reconfiguring Eberhard with Hibi because "Petitioner fails to address ***how*** one would reconfigure Eberhard's charge modalities with Hibi as the two systems are diametrically opposite" — "Eberhard and the Tesla manual rely on a vehicle that is either all electric or a hybrid" whereas "Hibi's system relies on a motor that will charge the battery (EX1008, ¶38; Figure 5), while Eberhard relies on charging the battery to run the motor." Prelim. Resp. 30–31 (citing Ex. 1009, 2:10–12; Ex. 1005, 12).

We do not agree with Patent Owner's arguments. Relying on the testimony of Mr. Wilson, Petitioner adequately explains that the skilled artisan would have had a reasonable expectation of success in combining Eberhard's and Hibi's climate control software. Pet. 38–39. Petitioner explains that "because both Eberhard and Hibi utilize similar touchscreen interfaces, and have the capability to control both charging and climate control systems, there would be no hardware modifications; rather, adding Hibi's climate control functions into the system of Eberhard is simply a matter of changing software functionality." *Id.* (citing Ex. 1008 ¶ 38; Ex.

1009, 1:15–18, 8:60–9:3, 9:4–19; Ex. 1002 ¶ 84). Petitioner states that because "[a]ll the necessary charging related information and controls are already available on the electric vehicles, [a person of ordinary skill in the art] would have [had] a reasonable expectation of success in implementing this software change." *Id*. at 39 (citing Ex. 1002 ¶ 84).

h) 1[g] receive an indication of an activation of the selected mode of operation of the electric vehicle

Petitioner contends that the combined teachings of Eberhard and Hibi teach or suggest this limitation. Pet. 40. According to Petitioner, Hibi discloses a user interface that allows the user to select an "AUTO" mode, and to set target values for the temperature and humidity by "touching an up and down button" and to start the engine by touching the "charge start button." *Id*. (citing Ex. 1008 ¶ 38, Fig. 11). Petitioner explains that the system receives these settings as an "operation instruction" from the driver and, when this instruction is received, the system automatically controls the vehicle systems in accordance with the settings. *Id*. (citing Ex. 1008 ¶¶ 14, 47, 61.

Petitioner states that Hibi discloses that the driver may, through the mobile communication terminal, switch the system to the monitoring mode or remote monitoring mode. Pet. 40 (citing Ex.1008 ¶ 48. Hibi further discloses that the mobile communication terminal has "communication means for conducti[ng] an operation such as starting or stopping the system." *Id*. (citing Ex. 1008 ¶ 16). Thus, the driver may activate the system "only when remote monitoring and operation are truly required." *Id*. (citing Ex. 1008 ¶ 16).

(1) Patent Owner's Arguments

Patent Owner contends that Petitioner does not explain how Hibi teaches or discloses any receiving of an "indication of an activation" of the AUTO Mode and Petitioner does not cite to anything that shows an activation of "AUTO" mode and shifts from "AUTO" mode to "remote monitoring mode." Prelim. Resp. 40 (citing Pet. 40, 74). Patent Owner states that Hibi does not teach or disclose any indication of an activation of remote monitoring mode, and instead teaches an indication of the deactivation of the remote monitoring mode. *Id*. Referring to Figure 4 of Hibi, Patent Owner argues that "Hibi only sends any notification, or identifies the activation of a mode when remote monitoring mode is deactivated due to an abnormality" and as "Hibi discloses 'when the system shifts from the remote monitoring mode, *the driver is notified*.'" *Id.* at 42 (citing Ex. 1008 ¶ 40) (emphasis added).

We do not agree with Patent Owner's arguments. We understand that claim 1 recites that the system's processor, not the driver, "receives an indication of an activation of the selected mode of operation of the electric vehicle." Petitioner adequately explains that once Hibi's user selects an "AUTO" mode, sets target values for the temperature and humidity by "touching an up and down button," or starts the engine by touching the "charge start button," the system receives these settings as an "operation instruction" from the driver and, when this instruction is received, the system automatically controls the vehicle systems in accordance with the settings. Pet. 40 (citing Ex. 1008 ¶¶ 38, 14, 47, 61, Fig. 11). Thus, we understand that Petitioner contends that Hibi's system receives an indication that the selected mode of operation is activated in order to operate the vehicle systems.

i) 1[h] operate a climate control mechanism of the electric vehicle while the vehicle is in a parked state and in accordance with the selected mode of operation for a duration of time until the amount of charge residing in the battery reaches a predetermined level

Petitioner contends that the combined teachings of Eberhard and Hibi teach or suggest this limitation. Pet. 41. According to Petitioner, Hibi discloses a system which controls an automobile "whose driver is absent while parked" and "automatically control[s]" heating and air conditioning systems, and the engine starter within the vehicle." Pet. 41 (citing Ex. 1008 ¶¶ 7, 47, Fig. 5(a)). Petitioner explains that the system may be set to use the heating and air conditioning systems to maintain a target temperature and this may be performed either with the engine on or off. *Id.* (citing Ex. 1008 ¶¶ 30, 31,43). Thus, Petitioner states that Hibi discloses the operation of "a climate control mechanism of the electric vehicle while the vehicle is in a parked state and in accordance with the selected mode of operation" as claimed. *Id.*

As to the limitation reciting operate a climate control mechanism "with the selected mode of operation for a duration of time until the amount of charge residing in the battery reaches a predetermined level," Petitioner contends that Hibi "is also configured to detect and respond when the battery runs to a predetermined level of charge." Pet. 41–42. Petitioner explains that Figure 5(a) indicates that "Low battery" is an abnormality that the system may detect using a voltmeter and a person of ordinary skill in the art would have understood that, to detect a low battery abnormality using a voltmeter, there must be a predetermined level of charge below which the battery would be considered "low." *Id.* at 42 (citing Ex. 1002 ¶¶ 90–92). According to Petitioner, after Hibi detects the low battery (i.e., the

predetermined level of charge), it enters the "in-vehicle abnormality processing mode" which is different from the "selected mode." In this low battery mode, the system will decide on countermeasures, such as starting the car's engine to recharge the battery. *Id*. (citing Ex. 1008 ¶¶

(1) Patent Owner's Arguments

Patent Owner presents two arguments in response to Petitioner's contentions. First, Patent Owner argues that Hibi does not disclose "operate a climate control mechanism of the electric vehicle while the vehicle is in a parked state and in accordance with the selected mode of operation." Prelim. Resp. 44. According to Patent Owner, Hibi only discloses three modes: (1) system setting mode 21, (2) monitoring mode 23, and (3) abnormality system mode 25. *Id*. (citing Ex. 1008 ¶¶ 30, 31, 43). Patent Owner states that "Petitioner muddles these three modes together in an attempt to satisfy the claim elements" and does not explain "how these three modes function together or how three different modes is consistent with the 'selected mode of operation' requirement." *Id*.

We do not agree with Patent Owner's argument because Patent Owner is mischaracterizing Petitioner's position. We understand that Petitioner contends that the claimed mode of operation is Hibi's climate control - operation — heating, cooling, humidity control. Pet. 32–35. We do not agree with Patent Owner's argument that Petitioner must correlate Hibi's system setting mode 21, monitoring mode 23, and abnormality system mode 25 with the claimed "mode of operation" merely because they contain the term "mode."

Second, Patent Owner argues that Hibi does not disclose "for a duration of time until the amount of charge residing in the battery reaches a

predetermined level." Prelim. Resp. 46. Patent Owner explains that Petitioner cannot rely on Hibi's "low battery" indicator to meet the "predetermined level" limitation because once Hibi receives the "low battery" notification, "it does not ***cease*** operation of the climate control mechanism but, instead, starts the engine so that the battery starts charging and the climate control mechanism can continue for an undetermined amount of time." *Id*. at 48 (citing Pet. 42; Ex. 1008, Fig. 5(a)) (emphasis added).

We do not agree with Patent Owner's arguments. On the present record, we are not apprised of any reason why the claim requires that the system must ***cease*** operation of the climate control mechanism when the battery charge reaches a predetermined level. We understand that Petitioner contends that initial/first selected mode of operation ***continues*** for a duration of time until the amount of charge residing in the battery reaches a predetermined level and then the mode of operation ***changes*** after the predetermined battery level. For purposes of institution, Petitioner adequately explains that Hibi's climate control system operates in an initial/first "selected mode of operation" (e.g., heating or cooling) with a disabled engine until a low battery notification. After the low battery notification, Hibi enters a new "mode of operation" with an activated engine which charges the battery.

We strongly encourage the parties to address this dispute about the meaning of this limitation, that is, whether the limitation requires the selected mode of operation to "cease operation" or "change operation" after the system reaches the predetermined battery level. The parties should also address whether a person of ordinary skill in the art would have understood

that Hibi's climate control system could be disabled in response to a low battery level rather than activating the engine to recharge the battery.

j) Conclusion

Based on the record before us, we determine Petitioner demonstrates a reasonable likelihood of prevailing in showing that the subject matter of independent claim 1 would have been obvious over Eberhard, the Roadster Manual, and Hibi.

5. Remaining Claims 2–5, 7–11, and 14–16

We have reviewed Petitioner's contentions and cited supporting evidence addressing how Eberhard, the Roadster Manual, and Hibi teach or suggest each of the additional limitations recited in remaining claims 2–5, 7–11, 14–16. *See* Pet. 43–79.

As to independent claims 8 and 14, the limitations in claims 8 and 14 are very similar to those in claim 1. *See* Pet. 60–62 (claim 8), 71–74 (claim 14). As this stage of the proceedings, Patent Owner only contends that the combined teachings of Eberhard and Hibi do not teach or suggest claim limitations 8i and 14h for essentially the same reasons that they do not teach or suggest claim limitation 1h. *See* Prelim. Resp. 49–51. We do not agree with Patent Owner's arguments as discussed above in connection with claim limitation 1h.

As we preliminarily conclude that Petitioner demonstrates a reasonable likelihood of prevailing with respect to its obviousness challenge to independent claim 1, we institute review on all challenged claims on all grounds set forth in the Petition, including Petitioner's challenge to claims

2–5, 7–11, and 14–16 as unpatentable over Eberhard, the Roadster Manual, and Hibi. 37 C.F.R. § 42.108(a).

IV. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(a)

Patent Owner argues that we should exercise discretion to deny institution under 35 U.S.C. § 314(a) and *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*") in view of the co-pending Texas Litigation. Prelim. Resp. 16–19. Petitioner argues that all *Fintiv* factors weigh against exercising discretion to deny institution. Pet. 79–80; Reply 1–3.

Fintiv instructs us to consider whether to deny institution in certain circumstances when there is parallel district court litigation, upon consideration of six factors:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
>
> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
>
> 3. investment in the parallel proceeding by the court and the parties;
>
> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

Fintiv at 6. Our analysis of *Fintiv* is guided by the USPTO Director's Memorandum issued on June 21, 2022, titled "Interim Procedure for

Discretionary Denials in AIA Post Grant Proceedings with Parallel District Court Litigation" ("Director's Memo").[4]

We address each *Fintiv* factor below.

1. Factor 1

Patent Owner contends that, although Petitioner has filed a motion to stay, the "parallel district court proceeding is not stayed, and Petitioner has presented no evidence that a stay may be granted if trial is instituted." Prelim. Resp. 29. Petitioner disagrees with Patent Owner's characterization of stay in the Texas Litigation. Reply, 1–2. Specifically, Petitioner explains:

> [T]he litigation was stayed on May 19, 2022 after it was transferred from the Waco Division of W.D. Tex. to the Austin Division. Ex. 1015; Ex. 1006. On August 2, 2022, the district court lifted the stay only "to the extent necessary to comply with this Scheduling Order" (only contentions and claim construction). Ex. 1007. And since the POPR was filed, the district court has entered a stay until the PTAB issues institution decisions in this and a parallel IPR addressing another patent asserted in the district court. Ex. 1016.

Id. The cited Exhibits support Petitioner's position that the Court granted a stay in the Texas Litigation. *See* Ex. 1016.

Accordingly, Factor 1 weighs against exercising our discretion to deny institution.

---

[4] USPTO, Memorandum on Interim Procedure for Discretionary Denials in AIA Post-grant Proceedings with Parallel District Court Litigation (June 21, 2022), available at uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf ("Guidance Memo").

2. Factor 2

The parallel litigation began in the U.S. District Court for the Western District of Texas in the Waco Division, but was transferred to the Austin Division. Pet. 80–81. No trial date has been set. Prelim. Resp. 17; Reply 2. Patent Owner argues that we should deny institution based on the expected trial date using the median time to trial from when the case was filed in the Western District of Texas. Prelim. Resp. 17–18.

Fintiv Factor 2 discusses consideration of a *trial date*. The Director's Memo states that it may be useful to compare a trial date with evidence of a median time to trial. Director's Memo 8. The purpose is to ascertain the likelihood of the scheduled trial date actually occurring on or around that date. *Id.* at 8 ("Stakeholders correctly noted that scheduled trial dates are unreliable and often change[,]" and a "scheduled trial date . . . is not by itself a good indicator of [when] the district court trial will occur."). The Director's Memo does not state that median time-to-trial statistics are themselves a trial date, or otherwise replace consideration of a trial date under *Fintiv* Factor 2. In the circumstances here, the usefulness of the median time to trial statistics is less clear and we will not speculate on when a trial may be scheduled.

Accordingly, Factor 2 weighs against exercising our discretion to deny institution.

3. Factor 3

Patent Owner contends that "[b]y the time the Board's institution decision is likely to issue in mid-May 2023, the Parties and the district court will have already expended considerable time and resources into the claim construction process and discovery, and Judge Yeakel will have already conducted the March 2, 2023, *Markman* hearing." Prelim. Resp. 17.

Petitioner responds that "Patent Owner's contentions regarding investment for factor 3 are not correct in light of the district court stay" because "[o]nly minimal investment in the district court proceeding (and no *Markman* Hearing) will have occurred prior to this institution decision." Reply, 3. In view of the stay in the Texas Litigation, we agree with Petitioner that considerable time and resources will not have been expended before our decision on institution.

Accordingly, Factor 3 weighs against exercising our discretion to deny institution.

4. Factor 4

Petitioner indicates that it "has sent a letter to Patent Owner that it will not rely on the grounds used in its Petition in the District Court litigation." Reply, 3 (citing Ex 1020; *Sand Revolution II, LLC v. Cont'l Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 12 (PTAB June 16, 2020) (informative) ("*Sand Revolution*")). The letter referenced by Petitioner indicates that "if *inter partes* review is instituted, [Petitioner] will not assert invalidity of the '135 patent in the litigation based on the grounds instituted in the *inter partes* review." Ex. 1020. As noted above, Patent Owner contends that "Petitioner has not provided any assurance that it will not pursue in the Texas Litigation the same grounds as in the Petition *or any grounds that could have reasonably been raised in the petition*." Prelim. Resp. 18–19 (emphasis added).

Petitioner offers a *Sand Revolution*-type of stipulation. We are not aware of any precedent that *Sand Revolution*-type stipulations are no longer valid or not entitled to weight in the *Fintiv* analysis. *Sand Revolution* stipulations are narrower in scope than *Sotera*-type stipulations. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB

Dec. 1, 2020) (precedential as to § II.A) (finding that a broad stipulation not to pursue any ground raised or that could have been reasonably raised in the parallel litigation weighs strongly toward institution) ("*Sotera*"). Petitioner's stipulation eliminates specific overlap with the parallel proceeding. As in *Sand Revolution*, we weigh this factor as favoring not exercising our discretion to deny institution. *Sand Revolution* at 12.

5. Factor 5

"If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution . . . ." *Fintiv* at 13. There is no dispute that Petitioner is a defendant in the Texas Litigation. But this factor is of little value when the circumstances of the related litigation are similar to those discussed above in Factors 1–4.

Accordingly, based on the specific facts of this case, we consider this factor neutral. To the extent this factor should weigh in favor of exercising our discretion to deny institution, that weight is marginal at best.

6. Factor 6

Patent Owner argues that Petitioner has failed to establish compelling merits because "Petitioner has failed to show [even] a reasonable likelihood that it would prevail on Grounds 1–3 [sic]." Prelim. Resp. 19. The Director's Memo does not require a Petitioner to establish compelling merits to avoid discretionary denial. *See* Director's Memo 4–5 (explaining that compelling merits can overcome what would otherwise warrant a discretionary denial under *Fintiv* analysis); *see also CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 6 (PTAB Feb. 27, 2023) (precedential) ("[t]he Board should first assess *Fintiv* factors 1–5; if that

analysis supports discretionary denial, the Board should engage the compelling merits question.").

Because *Fintiv* Factors 1–5, when weighed together, do not favor exercising our discretion to deny institution, there is no need to determine whether the Petition establishes compelling merits.

7. Summary

For the reasons stated above, the *Fintiv* Factors do not support exercising our discretion to deny institution.

V. CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner demonstrates a reasonable likelihood of prevailing in establishing that at least independent claim 1 of the '135 patent is unpatentable. We, therefore, institute trial on all challenged claims and all grounds raised in the Petition.

At this stage of the proceeding, we have not made a final determination as to the patentability of any challenged claim or as to the construction of any claim term. Any final determination will be based on the record developed during trial. We place Patent Owner on express notice that any argument not asserted in a timely-filed Response to the Petition, or in another manner permitted during trial, shall be deemed waived, even if that argument was presented in the Preliminary Response. Similarly, if the parties do not present their proposed claim constructions in their briefs, or in another manner permitted during trial, they will be precluded from presenting such arguments and their arguments shall be deemed waived.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, *inter partes* review of claims 1–5, 7–11, and 14–16 of U.S. Patent No. 10,819,135 B2 is instituted on all grounds raised 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; the trial will commence on the entry date of this decision.

FOR PETITIONER:

David A. Caine
Michael J. Sebba
Jessica C. Kaiser
ARNOLD & PORTER KAYE SCHOLER LLP
david.caine@arnoldporter.com
michael.sebba@arnoldporter.com
jessica.kaiser@arnoldporter.com

FOR PATENT OWNER:

Bradley D. Liddle
Scott Breedlove
Michael Pomeroy
Daniel Schmid
CARTER ARNETT PLLC
bliddle@carterarnett.com
sbreedlove@carterarnett.com
mpomeroy@carteramett.com
dschmid@carterarnett.com

Frederick A. Tecce
ALTIMA ADVISORS/ATTORNEYS, LLC
fred.tecce@altimaadvisors.com