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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 14/273,325   | 05/08/2014  | David Cun            | H1140625US01<br>(30992-281) | 5037             |
| 118665   | 7590        | 01/28/2019           | EXAMINER                    |                  |
| Armstrong Teasdale LLP (HPT)<br>7700 Forsyth Blvd.<br>Suite 1800<br>St Louis, MO 63105 |             |                      | LUDWIG, PETER L             |                  |
|  |             |                      | ART UNIT                    | PAPER NUMBER     |
|  |             |                      | 3687                        |                  |
|  |             |                      | NOTIFICATION DATE           | DELIVERY MODE    |
|  |             |                      | 01/28/2019                  | ELECTRONIC       |

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* DAVID CUN

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Appeal 2018-000318<sup>1</sup>  
Application 14/273,325  
Technology Center 3600

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Before ERIC B. CHEN, JEREMY J. CURCURI, and ADAM J. PYONIN,  
*Administrative Patent Judges.*

PYONIN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject all pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> "The real party in interest in connection with the instant appeal is Honda Motor Co., Ltd." App. Br. 1.

STATEMENT OF THE CASE

The Application is directed “to battery electric vehicles (EVs),” and to “charging control systems that reduce the charging time of EVs at charging stations to reduce congestion at charging stations.” Spec. ¶¶ 1–2. Claims 9–17 and 24–34 are pending. App. Br. 1. Claim 9, the sole independent claim, is reproduced below for reference (emphases and line numbering added):

1           9.     An electric vehicle charging control system comprising:  
2                 a battery for operating the electric vehicle, the battery  
3                 configured to be charged by a charging connection to a charging  
4                 station;  
5                 a user interface associated with the electric vehicle, the  
6                 user interface having a display and a user input device;  
7                 a controller for controlling charging of the electric vehicle,  
8                 the controller receiving a state of charge of the battery;  
9                 a communication system communicating with the  
10                charging station without establishing the charging connection  
11                with the charging station, the communication system receiving  
12                *charging information* from the charging station relating to a type  
13                of billing model used by the charging station, wherein the type  
14                of billing model is one of a plurality of different types of billing  
15                models;  
16                *wherein the controller determines the type of billing model*  
17                *used by the charging station based on the charging information,*  
18                *the controller configured to receive charging information*  
19                *associated with the plurality of different types of billing models;*  
20                and  
21                wherein, after *the charging information* is received, the  
22                controller determines a charging profile based on the determined  
23                type of billing model used by the charging station, *the controller*  
24                *configured to determine a different charging profile for each of*  
25                *the plurality of different types of billing models,* the charging  
26                profile being adjustable based on operator inputs to the user input  
27                device to change at least one of an operator desired charging time  
28                and an operator desired post-charging battery state of charge,  
29                wherein the controller controls charging of the battery according  
30                to the charging profile.

### THE EXAMINER'S REJECTIONS

The following is the prior art relied upon by the Examiner in rejecting the claims on appeal:

|                         |                    |               |
|-------------------------|--------------------|---------------|
| Boll                    | US 5,623,194       | Apr. 22, 1997 |
| Aziz                    | US 7,370,013 B1    | May 6, 2008   |
| Brandon, II ("Brandon") | US 2011/0121790 A1 | May 26, 2011  |
| Lee                     | US 8,422,654 B1    | Apr. 16, 2013 |
| Gadh                    | US 2013/0179061 A1 | July 11, 2013 |

Claims 9–17 and 24–34 stand rejected under 35 U.S.C. § 112(b) as being indefinite for lacking sufficient antecedent basis. Final Act. 2.

Claims 9–16, 27, 28, and 34 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Gadh. Final Act. 3.

Claims 17 and 24–26 stand rejected under 35 U.S.C. § 103 as being obvious over Gadh and Lee. Final Act. 8.

Claims 29, 30, and 32 stand rejected under 35 U.S.C. § 103 as being obvious over Gadh and Aziz. Final Act. 9.

Claim 31 stands rejected under 35 U.S.C. § 103 as being obvious over Gadh, Aziz, and Brandon. Final Act. 11.

Claim 33 stands rejected under 35 U.S.C. § 103 as being obvious over Gadh and Boll. Final Act. 11.

### ANALYSIS

We have reviewed the Examiner's rejections in light of Appellant's arguments, considering only those arguments Appellant actually raised in the Briefs. Except as indicated below with respect to the obviousness rejection of dependent claim 17, we disagree with Appellant that the

Examiner erred and adopt as our own the findings and reasons set forth by the Examiner. We highlight and address specific issues for emphasis, in the order presented in the Appeal Brief.

*A. Anticipation*

Appellant argues the Examiner errs in finding Gadh anticipates claim 9, because Gadh does not disclose the limitations relating to the claimed “plurality of different types of billing models.” *See* App. Br. 4. Particularly, Appellant contends “throughout the disclosure, ***Gadh references only a single type of billing model*** that uses a cost per kilowatt-hour (\$/kWh) model to calculate the cost for charging an electric vehicle.” App. Br. 6.

In the Answer, the Examiner finds “that the different billing models could also be ‘[t]he cost per kWh of charge at the charging station may be static or dynamic’” as disclosed by Gadh. Ans. 5 (citing Gadh ¶ 15). Appellant argues this portion of Gadh does not disclose the disputed claim limitations, because “the ‘static’ and ‘dynamic’ costs referenced in paragraph [0015] of Gadh relate to whether the cost per kWh charged at an EV charging station is fixed or varied,” and “***different costs per kWh are not different types of billing models – they are different rates for the same type of billing model*** – namely, a per-unit-energy billing model.” Reply Br. 2.

“The correct inquiry in giving a claim term its broadest reasonable interpretation in light of the specification is . . . an interpretation that corresponds with what and how the inventor describes his invention in the specification, *i.e.*, an interpretation that is ‘consistent with the

specification.” *In re Smith Int’l, Inc.*, 871 F.3d 1375, 1382–83 (Fed. Cir. 2017) (citations omitted). Here, Appellant’s Specification provides examples, but no definition, of a billing model: “charging stations may have one or more of the following billing models available for charging the EV 100, such as a free billing model, a flat fee billing model, a bill-per-unit-energy billing model, a bill-per-unit-time billing model, or another billing model.” Spec. ¶ 30.

Consistent with the Specification, we agree with the Examiner that Gadh discloses a plurality of different types of billing models, within the meaning of the claim. Gadh’s costs are per unit energy for the electricity, as Gadh discloses “a nearby charging station pushing realtime charging information to the smart phone 402 resulting in a cost per kWh.” Gadh ¶ 97. Gadh, however, discloses two “billing models” using these costs, as the pricing may be static *or* dynamic. Gadh ¶¶ 15, 61. Contrary to Appellant’s argument, these are not merely different rates for the same type of billing model (*see* Reply Br. 2) as more than just the rate changes—in Gadh, the underlying scheme of billing (static versus dynamic rates) differs. Thus, corresponding with what and how the invention is described in the specification, Gadh’s disclosure of charging a static price per unit energy is a different type of billing model from Gadh’s disclosure of dynamically pricing the unit energy. *See* Ans. 5; *see also* Spec. ¶ 36 (“The charging station 200 may have other billing models and some billing models may be a combination of the billing models listed above, such as a billing model that

charges a connection fee and then a fee per quantity of electricity or a fee per time.”).

Accordingly, we are not persuaded the Examiner errs in finding Gadh discloses the limitations of independent claim 9. *See* Ans. 2–5.

*B. Obviousness*

Claim 17 depends from claim 9, and further recites (emphasis added):

wherein the electric vehicle is a first electric vehicle, and wherein *the communication system receives a congestion signal from the charging station when a second electric vehicle is waiting for charging* by the charging station while the first electric vehicle is connected to the charging station by the charging connection, the user interface prompting an operator of the first electric vehicle that the second electric vehicle is waiting for charging by the charging station after the congestion signal is received.

The Examiner finds Gadh in view of Lee teaches or suggests the claim, as Lee teaches a conference calling system “where the administrator can be notified of users waiting for user, where the signal received from the at least one user waiting is the congestion signal.” Final Act. 9 (citing Lee, Fig. 3B); *see also* Ans. 6.

Appellant argues the Examiner’s obviousness rejection is in error, because “Lee is non-analogous art, and does not disclose a congestion signal as recited in [c]laim 17.” Reply Br. 3. Particularly, Appellant argues “Lee would not have logically commended itself to an inventor’s attention in addressing problems associated with congestion at electric vehicle charging stations because Lee is not related to congestion”; instead, Lee addresses the problem of people waiting to join a conference call by “sending a

notification to a chairperson indicating the presence of one or more participants that are waiting to join the conference call.” App. Br. 9–10.

We are persuaded the Examiner errs. Appellant’s Specification describes congestion signals as “relat[ing] to other EVs using the charging station 200 or desiring to use the charging station 200.” Spec. ¶ 40; *see also* Spec ¶ 49. This comports with the applicable plain and ordinary meanings of congestion: to concentrate in a small or narrow space; clog (i.e., to fill beyond capacity).<sup>2</sup> Lee’s signal, which “indicates an amount of time that a given 45 participant has been waiting,” is not a congestion signal. Lee 6:14–15. Rather than indicating the conference call is filled beyond capacity (i.e., congested), such signal indicates that the conference has at least a required minimum number of people and is ready to start. *See* Lee 6:60–66.

Accordingly, we do not sustain the Examiner’s rejection of dependent claim 17.

### *C. Indefiniteness*

The Examiner finds claim 9 is indefinite, because it is unclear if the third recitation of “charging information” is “the same ‘charging information’ or different ‘charging information’” as the other recitations of “charging information.” Final Act. 2.

Appellant argues “one of ordinary skill in the art would readily understand what is claimed by [c]laim 9 when the claim is read in its entirety,” because “the term ‘charging information’ appears in line 14 as part

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<sup>2</sup> *See* MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/congestion> (last visited January 3, 2019); MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/clog> (last visited January 3, 2019).

of the phrase ‘charging information associated with the plurality of different types of billing models,’ which is the first instance of this phrase in [c]laim 9.” App. Br. 12. Appellant contends “[t]he Section 112 rejection of [c]laim 9 appears to be based on a reading of [c]laim 9 that considers the term ‘charging information’ in isolation, separate from the immediately succeeding phrase.” App. Br. 13.

We are not persuaded the Examiner errs. Claim 9 recites “charging information” in lines 12, 17, 18, and 21, as shown above on page 2 of this Decision. The third recitation of charging information (line 18), does not start with “the.” Thus, we agree with the Examiner the claim is not clear as to whether this is the same or a different type of charging information as the other recitations. Ans. 6. It is inconsequential that the third recitation is part of the phrase “charging information associated with the plurality of different types of billing models,” because this phrase further limits the charging information without explaining whether it is the same or different as the other charging information limitations. Moreover, if Appellant wishes to claim a third recitation of “charging information” that is the same or different from the other recitations, the claims can be amended during prosecution to clearly reflect such a requirement. *See In re Prater*, 415 F.2d 1393, 1404–05 (CCPA 1969) (During prosecution, “the applicant may then amend [the] claims, the thought being to reduce the possibility that, after the patent is granted, the claims may be interpreted as giving broader coverage than is justified.”).

Accordingly, we sustain the Examiner’s indefiniteness rejection of independent claim 9.

### CONCLUSION

We sustain the Examiner's 35 U.S.C. § 112(b) rejection of independent claim 9, and claims 10–17 and 24–34 which depend thereon.

We sustain the Examiner's 35 U.S.C. § 102(a) rejection of independent claim 9. Appellant advances no further substantive argument on dependent claims 10–16 and 27–34. *See* App. Br. 8, 11, 12.

Accordingly, we sustain the Examiner's rejections of these claims for the same reasons discussed above.

We do not sustain the Examiner's 35 U.S.C. § 103 rejection of dependent claim 17, or claims 24–26 which depend thereon.

### DECISION

The Examiner's decision rejecting claims 9–17 and 24–34 is affirmed.

The Examiner's decision is affirmed because we have affirmed at least one ground of rejection with respect to each claim on appeal. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED