

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TEXTRON SPECIALIZED VEHICLES, INC.,
Petitioner,

v.

SZ DJI TECHNOLOGY CO. LTD.
Patent Owner.

IPR2023-01198
Patent 10,640,224 B2

Before FRANCES L. IPPOLITO, NATHAN A. ENGELS, and
JOHN R. KENNY, *Administrative Patent Judges*.

KENNY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Textron Specialized Vehicles, Inc. (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–17 (the “challenged claims”) of U.S. Patent No. 10,640,224 B2 (Ex. 1001, the “’224 patent,” “challenged patent”) pursuant to 35 U.S.C. § 311 *et seq.* Paper 2 (“Pet.”). SZ DJI Technology Co. Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

To institute an *inter partes* review, we must determine that the information presented in the Petition shows “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). For the reasons set forth below, upon considering the Petition, the Preliminary Response, and the evidence of record, we determine the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims.

Accordingly, we do not institute *inter partes* review.

A. Related Matters

The parties identify the following related district court litigation (“Related Litigation”): *SZ DJI Technology Co. Ltd. V. Textron Specialized Vehicles Inc.*, Case No. 1:23-cv-00055 (DE). Pet. 2; Paper 6, 2.

B. Challenged Patent

The ’224 patent relates to the field of unmanned aerial vehicles, and more particularly, to a method, a device, and a system for controlling a motor. Ex. 1001, 1:14–16. The ’224 patent explains in its background section that:

In conventional technologies, a battery supplies power to an electronic speed controller (ESC), such that the ESC outputs

a voltage to a motor and thus control a speed of the motor. The ESC receives a throttle signal sent from a flight controller. An increased high-level pulse width, i.e., an increased high-level pulse time duration, of the throttle signal may indicate that a higher rotation speed of the motor may be needed by the flight controller.

However, a voltage of the battery continuously decreases during the discharging process. Compared with an original system consistent with full voltage of the battery, the voltage outputted from the ESC to the motor decreases as the battery voltage decreases, when the ESC receives a same throttle signal. Thus, the rotation speed of the motor decreases. When an unmanned aerial vehicle performs actions that need high mobility, issues of slow response often occur, and the unmanned aerial vehicle has decreasing power during a flight.

Id. at 1:20–36.

Figure 6 of the '224 patent is shown below:

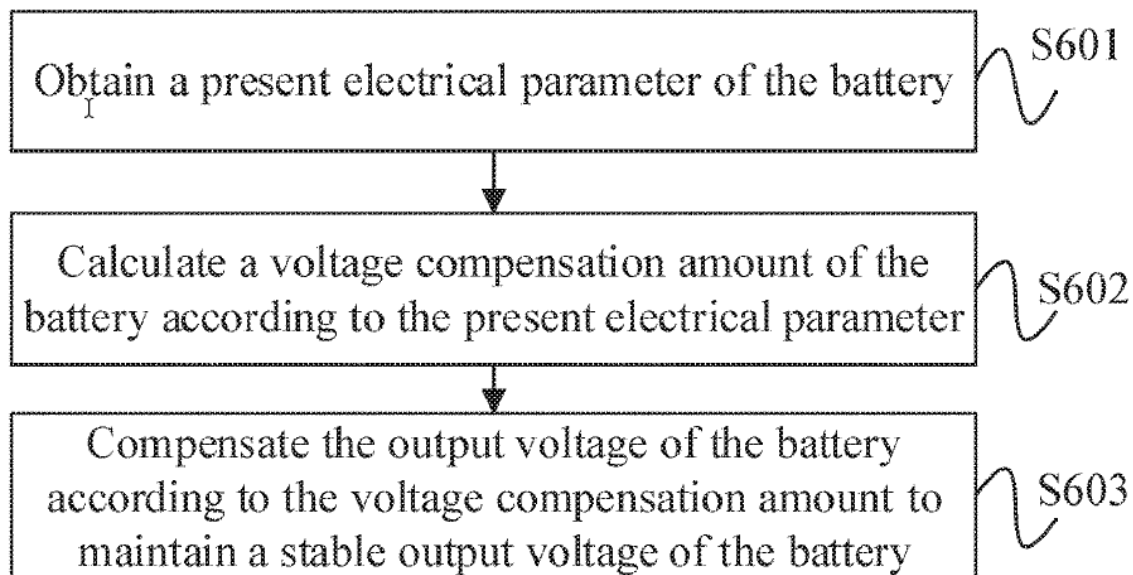


FIG. 6

Figure 6 above is a flowchart of an exemplary motor control method. *Id.* at 2:13–15. Figure 7 of the '224 patent is shown below:

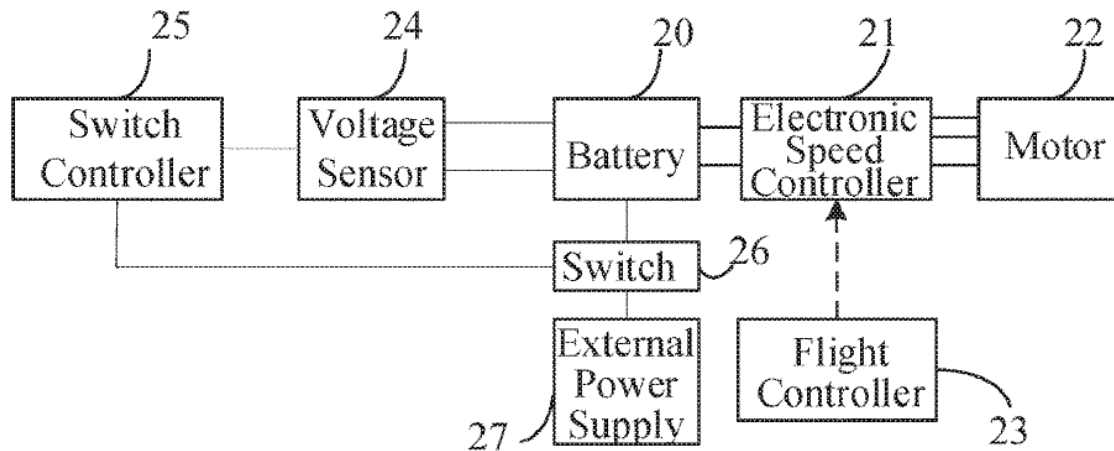


FIG. 7

Figure 7 above is a topological diagram for an exemplary motor control method. *Id.* at 2:16–18.

In Step 601 of the method of Figure 6, a present electrical parameter of a battery is obtained. Ex. 1001, 7:34–35. The present electrical parameter of the battery includes at least one of a present charge quantity of the battery, a present voltage of the battery, a present output electrical current of the battery, or a present internal resistance of the battery. *Id.* at 7:36–39.

In Figure 7, voltage sensor 24 is coupled to the power supply, i.e., the battery, in parallel. Ex. 1001, 7:42–44. Through voltage sensor 24, the output voltage of the battery may be detected in real time or periodically. *Id.* at 7:44–46. As shown in step 602 of Figure 6, a voltage compensation amount of the battery is calculated according to the present electrical parameter. *Id.* at 7:47–48. The voltage compensation amount may be equal to a difference between the full battery voltage and the present battery voltage. *Id.* at 7:51–53.

As shown in step 603 of Figure 6, the output voltage of the battery is compensated according to the voltage compensation amount to maintain a stable output voltage of the battery. *Id.* at 7:61–64.

C. Challenged Claims

Petitioner challenges claims 1–23. Pet. 1. Claims 1, 9, and 12 are independent. Claims 1 and 9 read:

1. [1pre]¹ A method for controlling a motor comprising :
 - [1a] obtaining a present electrical parameter of a battery;
 - [1b] calculating a compensation amount of a control signal of the motor according to the present electrical parameter; and
 - [1c] modifying the control signal according to the compensation amount.

9. [9pre] A method for controlling a motor comprising :
 - [9a] obtaining a present electrical parameter of a battery;
 - [9b] calculating a compensation amount of a control signal of the motor according to the present electrical parameter; and
 - [9c] compensating an output voltage of the battery according to the voltage compensation amount to maintain the output voltage of the battery stable.

Ex. 1001, 14:4–10, 56–62.

D. Asserted Challenges to Patentability and Prior Art

Petitioner challenges claims 1–17 based on the grounds in the table below.

¹ We include the designations set forth in the Petition for the preambles and limitations of claims 1 and 9.

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)
1A	1–4, 6–8, 12–17	102	Takashi ²
1B	1–8, 12–17	103	Takashi
2A	9–11	102	Onishi ³
2B	9–11	103	Onishi
3A	9–11	103	Kim ⁴
3B	9–11	103	Kim

Pet. 5.

Petitioner relies on a declaration with proffered expert testimony from Dr. Regan Zane (Ex. 1002).

II. LEVEL OF SKILL AND CLAIM CONSTRUCTION

A. Level of Skill in the Art

Petitioner proposes that an ordinarily skilled artisan would have a B.S. degree in electrical engineering, computer engineering, or equivalent training or job experience, along with 1–2 years of experience in any of the fields of power electronics, motor control systems, and battery systems for electric motor applications. Pet. 8. Further, Petitioner asserts that additional education could compensate for less practical experience and vice versa. *Id.* Patent Owner has not challenged Petitioner’s definition for an ordinarily skilled artisan. *See generally* Prelim. Resp. At this stage, Petitioner’s

² JP 1994253415 A (Ex. 1005). Certified Translation of which is Ex. 1004. All cites to Takashi are to its certified translation (Ex. 1004) unless otherwise noted.

³ JP201193653A (Ex. 1007). Certified Translation of which is Ex. 1006. All cites to Onishi are to its certified translation (Ex. 1006) unless otherwise noted.

⁴ US 8,330,419 B2 (Ex. 1008).

definition appears consistent with the level of skill reflected in the Specification and in the asserted prior art references. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Thus, for purposes of this Decision, we adopt Petitioner’s definition.

B. Claim Construction

The Petition and the Preliminary Response do not request that we expressly construe any claim term. Pet. 15; Prelim. Resp. 5–6. Further, on this record, we determine that no claim term requires an express construction for the purpose of determining whether to institute *inter partes* review. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

III. ANALYSIS OF ASSERTED GROUNDS

A. Ground 1A: Asserted Anticipation by Takashi

Petitioner asserts that Takashi anticipates claims 1–4, 6–8, and 12–17. Pet. 5.

1. Takashi

Takashi “relates to a motor control device of a battery vehicle and in particular to a device that enables obtaining a constant sense of operation regardless of battery charge state.” Ex. 1004 ¶ 1. Takashi explains that battery vehicles use motors that are “rotation driven by a chopper circuit intermittently operated by a pulse signal,” and “the rotation speed thereof is controlled using the duty of the pulse signal.” *Id.* ¶ 2. The “maximum rotational speed of the motor is defined depending on battery voltage and for

this chopper control method, the motor maximum rotational speed for a constant duty changes based on voltage” of the battery. *Id.* ¶ 4.

Takashi discloses “a motor control device of a battery vehicle and in particular to a device that enables obtaining a constant sense of operation regardless of battery charge state.” Ex. 1004 ¶ 1. Figure 1 of Takahashi is shown below:

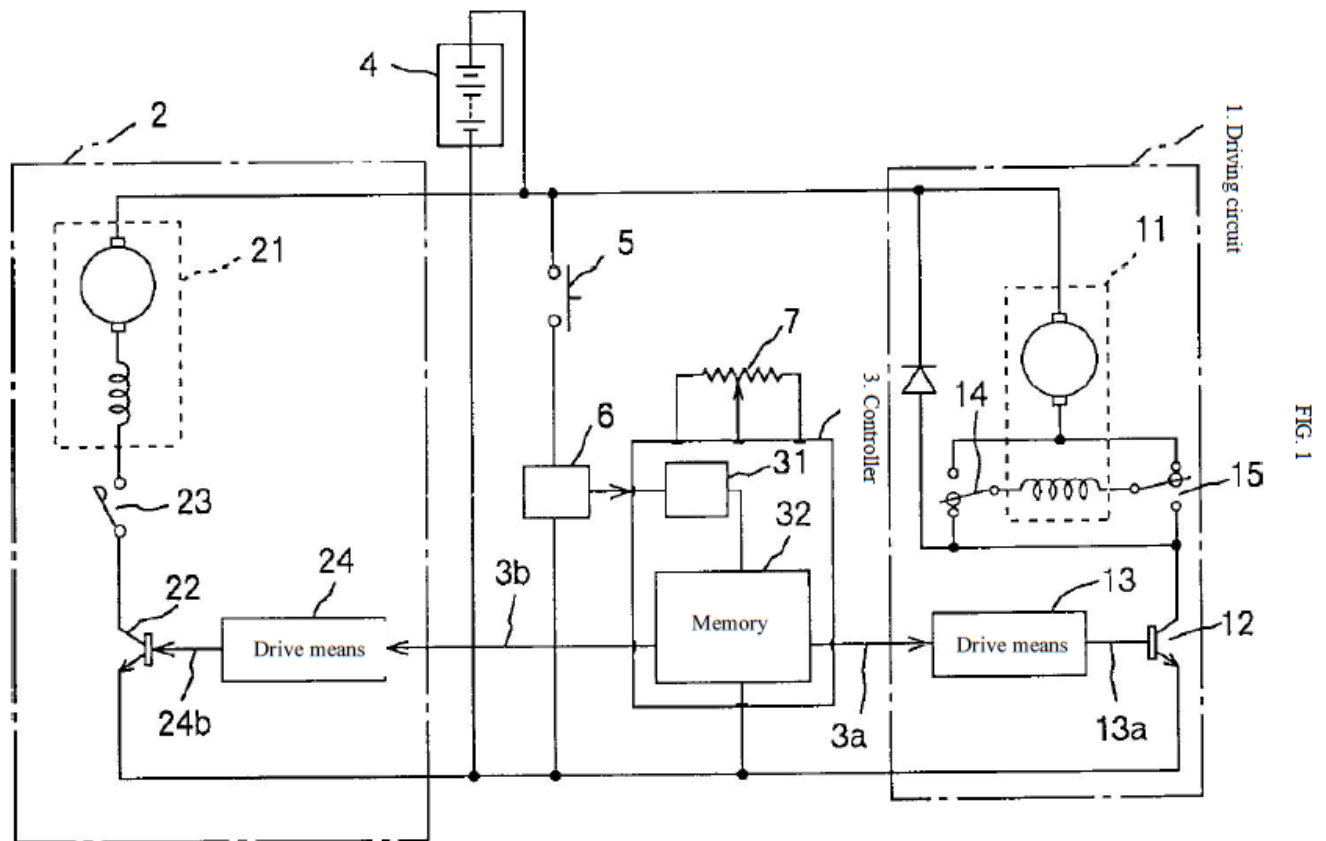


Figure 1 above is a configuration diagram illustrating a motor control device of an electric forklift. *Id.* at 4. In Figure 1, Takashi’s “controller 3 has detecting means 31 for detecting the output of the constant voltage power supply circuit 6 as the voltage of the battery 4.” *Id.* ¶ 12. “Each of the detection values of the detecting means 31 is process[ed] using duty setting

means for commanding each of the duties of the pulse signals 13a and 24b in the driving circuit 1 and the cargo handling circuit 2.” *Id.*

Figure 2 of Takashi is shown below:

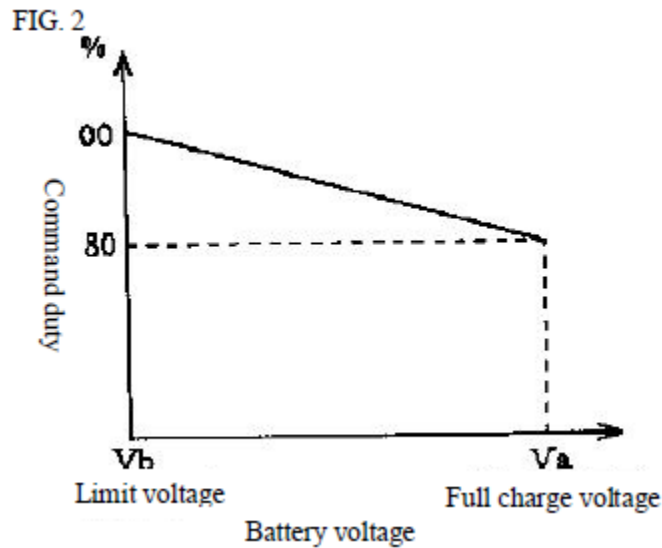


Figure 2 above is a characteristics diagram illustrating battery voltage vs. duty control characteristics. Ex. 1004, 4. Takashi’s “duty setting means reads and controls from the memory 32 [in Figure 1], control characteristics (Fig. 2) in which command duty 1 is increased inversely proportional to voltage characteristics where the voltage of the battery 4 drops from fully charged voltage characteristic to the limit voltage at 80% discharge.” *Id.*

¶ 13.

2. Claim 1

Petitioner contends that Takashi discloses every limitation of claim 1. Pet. 15–25. Patent Owner asserts, among other things, that Petitioner has not sufficiently shown that Takashi discloses limitation 1b: calculating a compensation amount of a control signal of the motor according to the present electrical parameter. Prelim. Resp. 8–19. We agree with Patent Owner.

Petitioner argues that “Takashi’s use of duty setting means to read pre-calculated command duties stored in memory and/or calculate a percent command duty according to the detected battery voltage discloses ‘calculating a compensation amount.’” Pet. 19. For the command duties at issue, Petitioner relies on Takashi’s disclosure of a “detecting means for detecting battery voltage and duty setting means for commanding that the duty of the pulse signal be increased inversely proportional to a voltage drop” of the battery. *Id.* (citing Ex. 1004 ¶ 7). Petitioner indicates that “[Figure] 2 of Takashi illustrates a method by which a command duty is increased inversely proportional to battery 4 voltage drop starting with a fully charged voltage V_a to the limit voltage V_b (in this example, 80% discharge).” *Id.* at 19–20. Petitioner further argues that Takashi discloses reading this command duty from memory (32), such that when the battery is fully charged, the command duty read for control signal 3b is 80%, and when the battery is 80% charged, the command duty read for control signal 3b is 100%. *Id.* at 20 (citing Ex. 1004 ¶¶ 14–15); Ex. 1004 ¶ 13. The command duty for control signal 3b, which is illustrated in Figure 2, is supplied to drive means 24 of cargo loading circuit 2, shown in Figure 1. *Id.*; Ex. 1004 ¶¶ 14–15. Petitioner also argues that data read from memory 32 is used to supply a control signal 3a to the drive means 13 of driving circuit 1, which is shown in Figure 1. Pet. 20–21 (citing Ex. 1004 ¶ 13).

As mentioned, Petitioner argues that Takashi’s use of duty setting means to read pre-calculated command duties stored in memory discloses “calculating a compensation amount.” Pet. 19. Petitioner, however, does not explain why reading pre-calculated command duties stored in memory constitutes calculating command duties based on a present electrical

parameter. *Id.* at 19–21. Dr. Zane similarly does not provide such an explanation. Ex. 1004 ¶¶ 64–69. The term “pre-calculated,” given its ordinary usage, indicates that the duty cycles have been calculated before they have been read from memory, which means they are not calculated based on a present electrical parameter. Thus, Petitioner has not sufficiently shown that reading pre-calculated command duties stored in memory constitutes calculating command duties based on a present electrical parameter.

As mentioned, Petitioner further argues that Takashi discloses calculating “a percent command duty according to the detected battery voltage, which discloses ‘calculating a compensation amount.’” Pet. 19. Petitioner asserts that paragraph 17 of “Takashi discloses for some embodiments the ‘control characteristics of the duty command to the driving circuit 1 are written to the memory 32 in advance’ (i.e., the characteristics are calculated in advance) and in other embodiments, ‘the same control characteristics may be calculated through computation.’” *Id.* at 21 (quoting Ex. 1004 ¶ 17). For background, paragraphs 9–16 of Takashi disclose a fork-lift embodiment, with a driving circuit 1 and cargo handling circuit 2, that reads command duties stored in memory 32. Ex. 1004 ¶¶ 9–16. Paragraph 17 discloses that, in this fork-lift embodiment, control characteristics for the command duties of driving circuit 1 can alternatively be calculated:

Note that in the embodiment described above, control characteristics of the duty command to the driving circuit 1 are written to the memory 32 in advance but in another embodiment, the same control characteristics may be calculated through computation. This would be calculating each command duty and accelerator depression angle data for the offset setting point O as well as command duty relative to each accelerator depression

angle based on the detection value of battery voltage corresponding to duty gradient.

Ex. 1004 ¶ 17. As indicated above, paragraph 17 discloses that the command duties for driving circuit 1 can be calculated. *Id.* The command duties that Petitioner has shown constitute the recited compensation amount, however, are the command duties for control signal 3b for cargo handling circuit 2, which are illustrated in Figure 2. Pet. 19–20; Ex. 1004 ¶¶ 14–15. Although Petitioner argues that Takashi discloses command duties for control signal 3a in driving circuit 1, Petitioner does not explain how the command duties for control signal 3a for driving circuit 1 constitute the recited compensation amounts. Pet. 20–21. Dr. Zane similarly does not explain how the command duties for control signal 3a for driving circuit 1 constitute the recited compensation amounts. Ex. 1002 ¶¶ 64–69. Thus, Petitioner has not shown that the calculation of command duties for driving circuit 1 constitute the recited calculating a compensation amount of a control signal of the motor according to the present electrical parameter. Further, Petitioner has not argued that paragraph 17 of Takashi discloses calculating the command duties for cargo circuit 2, and paragraph 17 has no such disclosure. Pet. 21; Ex. 1004 ¶ 17. Thus, Petitioner has not sufficiently shown that Zane discloses calculating a compensation amount of a control signal of the motor according to the present electrical parameter.

Accordingly, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that Takashi anticipates claim 1.

3. Claims 2–4, 6–8, and 12–17

For independent claim 12, Petitioner relies on its showing for claim 1.⁵ Pet. 42–45. Further, dependent claims 2–4, 6–8, and 13–17 each depend directly or indirectly from either claims 1 or 12. Ex. 1001, 14:11–16:24. Therefore, for the reasons for expressed for claim 1, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that Takashi anticipates claims 2–4, 6–8, and 12–17.

B. Ground 1B: Asserted Obviousness over Takashi

Petitioner asserts that claims 1–4, 6–8, and 12–17 would have been obvious over Takashi. Pet. 5. For this ground, Petitioner sets forth the same analysis for claim 1 as for Ground 1A. *Id.* at 15–25. Thus, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that claim 1 would have been rendered obvious by Takashi.

As mentioned, for independent claim 12, Petitioner relies on its showing for claim 1. Pet. 42–45. Further, dependent claims 2–4, 6–8, and 13–17 each depend directly or indirectly from either claims 1 or 12. Ex. 1001, 14:11–16:24. Therefore, for the reasons expressed for claim 1, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that claims 2–4, 6–8, and 12–17 would have been obvious over Takashi.

C. Ground 2A: Asserted Anticipation by Onishi

Petitioner asserts that Onishi anticipates claims 9–11. Pet. 5.

1. Onishi

Onishi discloses “a storage battery system that maintains a constant terminal voltage until the remaining capacity is exhausted, even if the

⁵ The Petition also addresses an additional limitation of claim 12. Pet. 42–45.

terminal voltage of the storage battery drops due to advancement of discharge of the storage battery.” Ex. 1006 ¶ 7. The storage battery system maintains a constant direct current output voltage applied to a load 40 by controlling a switching power converting device 30 that performs charging and discharging between the storage battery and a capacitor based on a switching signal from a control block 50. *Id.* ¶ 10.

Figure 1 of Onishi is shown below:

[FIG. 1]

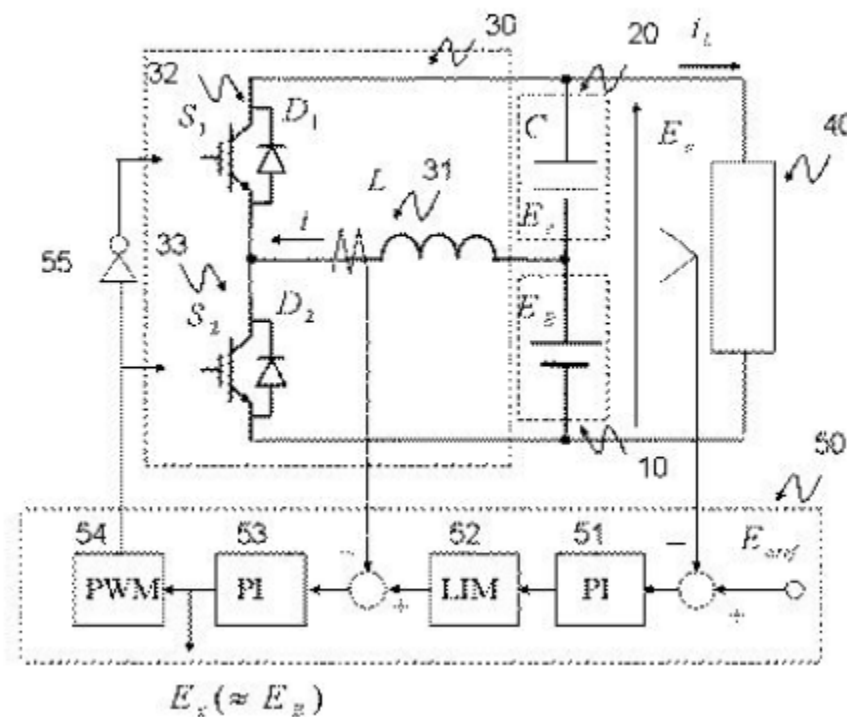


Figure 1 above “shows a main circuit configuration and control system of an active storage battery system.” Ex. 1006 ¶ 19. In Figure 1, “[w]hen the storage battery voltage 10 drops below the reference voltage due to discharge to the load, the energy of the storage battery 10 is transferred to the capacitor 20 by the switching power converting device 30, and the drop is compensated

by the charging voltage of the capacitor 20 that is connected in series.” *Id.*

¶ 11. The storage battery may be used as a power source for driving an electric vehicle motor (ACM). *Id.* ¶ 24. Figure 7 of Onishi is shown below:

[FIG. 7]

Active storage battery

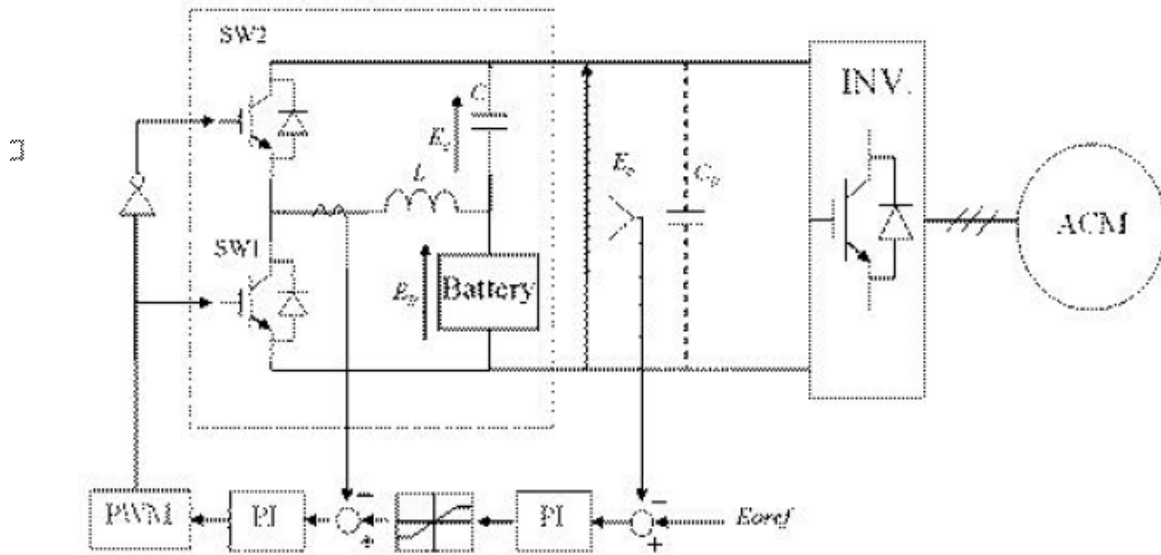


Figure 7 above “shows an application example of a secondary battery for an inverter that drives an AC motor for an electric vehicle.” Ex. 1006 ¶ 19.

2. Claim 9

Petitioner contends that Onishi discloses every limitation of claim 9. Pet. 51–63. Patent Owner argues, among other things, that Petitioner has not sufficiently shown that Onishi discloses limitation 9b: calculating a voltage compensation amount of the battery according to the present electrical parameter. Prelim. Resp. 28–29. We agree with Patent Owner.

Petitioner argues that Onishi calculates a voltage compensation amount of the battery according to the present electrical parameter. Pet. 56. Petitioner argues that the difference between voltages E_0 and E_{0ref} is the voltage compensation amount. *Id.* Petitioner further asserts that the

difference between voltages E_0 and E_{0ref} is input into controller block 51 and that as a result the voltage compensation amount will be negative if E_0 is above E_{0ref} and positive if E_0 is below E_{0ref} . *Id.* at 56–57. Petitioner contends that this result means that Onishi calculates the voltage compensation according to E_0 . *Id.* at 57.

Patent Owner argues that Petitioner has not shown that Onishi performs any calculation of the difference between E_0 and E_{0ref} . Prelim. Resp. 29. We agree. Although Petitioner has shown that the input to controller block 51 will be negative if E_0 is above E_{0ref} and positive if E_0 is below E_{0ref} , that positive or negative signal merely informs controller block 51 whether E_0 or E_{0ref} is larger. Pet. 56–57; Ex. 1002 ¶ 123. Neither Petitioner nor Dr. Zane sufficiently explain why merely comparing E_0 and E_{0ref} to determine which is larger and informing controller block 51 of that result constitutes calculating the difference between them (which Petitioner argues is the voltage compensation amount). Pet. 56–57; Ex. 1002 ¶ 123. Determining which of two items is larger does not necessarily require calculating their difference. For example, an amusement park can enforce height restrictions for rides without calculating the difference between the ride's minimum required height and a potential passenger's height. An attendant can simply observe whether the potential passenger's height exceeds the height of a bar. Further, neither Petitioner nor Dr. Zane explains how, other than by providing a positive or negative signal to the input to controller block 51, Onishi purportedly calculates the difference between E_0 and E_{0ref} . Pet. 56–57; Ex. 1002 ¶ 123.

Accordingly, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that Onishi anticipates claim 9.

3. Dependent Claims 10 and 11

Dependent claims 10 and 11 each depend directly or indirectly from claim 9. Ex. 1001, 14:63–15:11. Therefore, for the reasons expressed for claim 9, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that Onishi anticipates claims 10 and 11.

D. Ground 2B: Asserted Obviousness over Onishi

Petitioner asserts that claims 9–11 would have been obvious over Onishi. Pet. 5. For claim 9, Petitioner presents the same analysis for this ground as for Ground 2A. *Id.* at 51–63. Thus, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that claim 9 would have been rendered obvious by Onishi.

As mentioned, claims 10 and 11 each depend directly or indirectly from claim 9. Ex. 1001, 14:63–15:11. Therefore, for the reasons expressed for claim 9, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that claims 9–11 would have been obvious over Onishi.

E. Ground 3A: Asserted Anticipation by Kim

Petitioner asserts that Kim anticipates claims 9–11. Pet. 5.

1. Kim

Kim describes a “reconfigurable battery system” that can be used to control a motor, for example, of an electric vehicle. Ex. 1008, 11:34-44, 12:32–36; *id.* at 1:21-2:5. Kim’s battery system includes a “battery pack” with “battery circuits 30a–30n” each having “an associated control module 20a–20n” and a “battery cell 32a.” *Id.* at 4:22-27, 4:42-67. Control units 20a–20n configure the switches in the plurality of battery circuits to form different circuit arrangements by switching the battery cells in series or parallel with neighboring cells or by bypassing certain cells. *Id.* at 5:1-25.

Figure 1 of Kim is below:

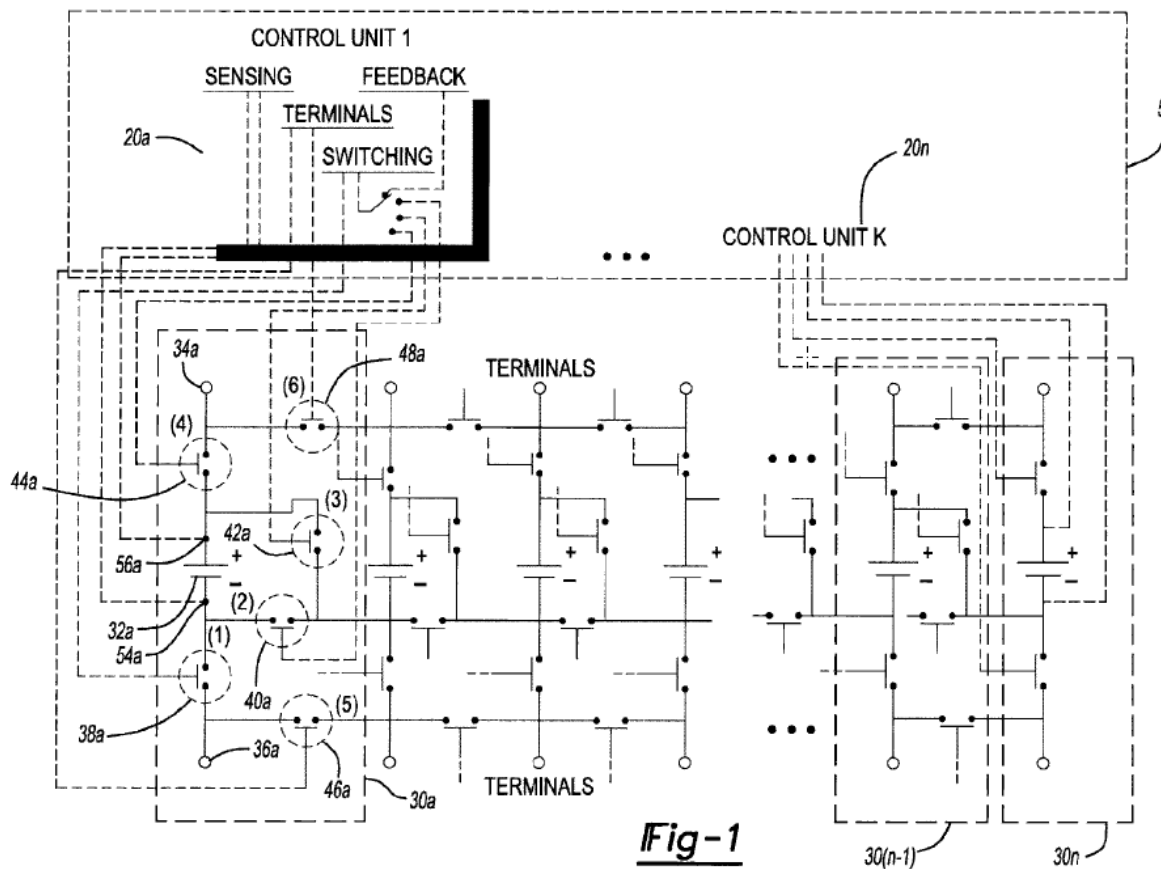


Figure 1 is a reconfigurable battery system. Ex. 1008, 2:66–67.

During operation, a respective control module “monitors changes in the . . . voltage of its battery cells via sensing devices 54a–54n and 56a–56n” and “controls switches in the battery circuit in accordance with the operational state.” Ex. 1008, 5:60–6:16. For example, if the supply voltage of a battery pack is less than a demand voltage, Kim’s battery system may trigger a “reconfiguration event” that “causes a controller to change the topology of the battery circuits” according to “one of two policies.” *Id.* at 6:40–7:10, 8:11–19. If the “constant-voltage keeping policy” is applied, the battery connectivity is reconfigured to compensate for the voltage drop below

the demand voltage or above an upper bound and keep the supply voltage constant. *Id.* at 6:65–7:42, 8:11–19, 15:45–16:7.

2. Claim 9

Petitioner sets forth how it contends Kim discloses every limitation of claims 9–11. Pet. 66–76. Patent Owner argues, among other things, that Petitioner has not sufficiently shown that Kim discloses limitation 9b: calculating a voltage compensation amount of the battery according to the present electrical parameter. Prelim. Resp. 32–34. We agree with Patent Owner.

Petitioner argues that “controller 50 of Kim’s battery system obtains the supply voltage of the battery pack (*e.g.*, the present electrical parameter of the battery).” Pet. 69. Petitioner further argues that Equation 4 of Kim illustrates that controller 50 then compares the measured supply voltage (*e.g.*, $V_a * n_s$) of the battery pack to a demand voltage V_d and calculates the difference between the supply voltage and demand voltage. *Id.*

Kim has the following description of Equation 4:

At each monitoring interval (Δt), the controller 50 also checks the average Voltage and triggers a reconfiguration event unless

$$V_d \leq V_a * n_s < V_d + \alpha. (4)$$

holds, where α specifies an upper bounds of voltage unbalancing. It can be observed that α is tuned based on the granularity in supply voltage. The reconfiguration event causes the controller to change the topology of the battery circuits. A reconfiguration event typically occurs when a battery cell is determined to be faulty.

Ex. 1008, 6:40–50.

Petitioner argues that Equation 4 can be rewritten as $0 \leq V_a * n_s - V_d < \alpha$ by subtracting V_d from all three terms. Pet. 69. Further, Petitioner asserts

that if the supply voltage is less than the demand voltage V_d ($V_a * n_s - V_d < 0$) or greater than the sum of the demand voltage and alpha ($V_a * n_s - V_d > \alpha$)—“where α specifies an upper bounds of voltage unbalancing”—the battery pack connectivity is reconfigured (e.g., by bypassing faulty cells and connecting healthy battery cells in a series chain) to compensate for the difference (e.g., $V_a * n_s - V_d$) below zero or above α (e.g., a voltage compensation amount of the battery) and thereby keep the supply output voltage constant. *Id.* at 69–70. Petitioner argues that thus an ordinarily skilled artisan would understand that Kim discloses calculating a voltage compensation amount of its battery pack according to the present electrical parameter. *Id.* at 70.

We disagree. Although Petitioner has shown that Kim discloses making the comparison shown in Equation 4, Petitioner has not shown that the comparison involves calculations of a voltage compensation amount. Pet. 69–70; Ex. 1002 ¶¶ 137–138. As discussed with respect to Ground 2A, a comparison of two items does not necessarily require a calculation of their difference. Further, even Kim were to disclose calculating the terms in Equation 4, Equation 4 itself does not disclose the subtraction of V_d from $V_a * n_s$, which Petitioner argues is the recited compensation amount. Ex. 1008, 6:40–50; Pet. 69. Although Petitioner demonstrates that an ordinarily skilled artisan could arrive at that subtraction through a simple mathematical operation, that does not establish that an ordinarily skilled artisan would have necessarily done so or have been motivated to do so, and Petitioner has not established such necessity or motivation. Pet. 69–70; Ex. 1002 ¶¶ 137–138; *see, e.g., Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (which holds that even obviousness requires more than

the mere capability of reaching the claimed invention); *In re Giannelli*, 739 F.3d 1375, 1380 (Fed. Cir. 2014)

Accordingly, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that Kim anticipates claim 9.

3. Dependent Claims 10 and 11

Dependent claims 10 and 11 each depend directly or indirectly from claim 9. Ex. 1001, 14:63–15:11. Therefore, for the reasons expressed for claim 9, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that Kim anticipates claims 10 and 11.

F. Ground 3B: Asserted Obviousness over Kim

Petitioner asserts that claims 9–11 would have been obvious over Kim. Pet. 5. For claim 9, Petitioner presents the same analysis for this ground as for Ground 3A. Pet. 66–72. Thus, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that claim 9 would have been rendered obvious by Kim. As mentioned, claims 10 and 11 each depend directly or indirectly from claim 9. Ex. 1001, 14:63–15:11. Therefore, for the reasons expressed for claim 9, we determine that Petitioner has not demonstrated a reasonable likelihood of proving that claims 9–11 would have been obvious over Kim.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition, we determine that Petitioner has not demonstrated a reasonable likelihood of success in proving that at least one claim of the '224 patent is unpatentable.

Therefore, we do not institute an *inter partes* review on the asserted grounds as to any challenged claim.

V. ORDER

It is

ORDERED that the Petition is denied as to all challenged claims of the '224 patent, and no *inter partes* review is instituted.

IPR2023-01198
Patent 10,640,224 B2

For PETITIONER:

Brian Oaks
MCDERMOTT WILL & EMERY
boaks@mwe.com

Jeffery Becker
Harrison Rich
Morgan Mayne
BAKER BOTTS L.L.P.
jeff.becker@bakerbotts.com
harrison.rich@bakerbotts.com
morgan.mayne@bakerbotts.com

For PATENT OWNER:

Matthew Argenti
Richard Torczon
WILSON SONSINI GOODRICH & ROSATI
margenti@wsgr.com
rtorczon@wsgr.com