

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner,

v.

GRAPHITE CHARGING COMPANY LLC,
Patent Owner.

Case No. IPR2024-00387

U.S. Patent No. 8,103,391

**PETITIONER'S REPLY TO
PATENT OWNER'S RESPONSE TO PETITION
OF U.S. PATENT NO. 8,103,391 (CLAIMS 1-20)**

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PETITIONER’S EXHIBIT LIST (new exhibits in *italics*)

<u>Exhibit</u>	<u>Description</u>
Ex-1001	U.S. Patent No. 8,103,391 to Ferro <i>et al.</i> (“’391 Patent”)
Ex-1002	U.S. Patent No. 5,596,258 to Kimura <i>et al.</i> (“Kimura”)
Ex-1003	U.S. Patent No. 5,650,710 to Hotta (“Hotta”)
Ex-1004	U.S. Patent No. 5,659,240 to King (“King”)
Ex-1005	U.S. Patent No. 5,696,367 to Keith (“Keith”)
Ex-1006	U.S. Patent No. 5,548,200 to Nor <i>et al.</i> (“Nor”)
Ex-1007	Prosecution History of the ’391 Patent
Ex-1008	U.S. Patent No. 6,614,204 to Pellegrino <i>et al.</i> (“Pellegrino”)
Ex-1009	Declaration of Expert C. Arthur MacCarley, Ph.D., P.E.
Ex-1010	Curriculum Vitae of Expert C. Arthur MacCarley
Ex-1011	SAE Standard J1772 (Revised Nov. 2001)
Ex-1012	Federal Court Management Statistics—Profiles (Sept. 30, 2023)
Ex-1013	Motion for Extensions of Time (Jan. 26, 2024)
Ex-1014	District Court Complaint (Aug. 4, 2023)
Ex-1015	Reserved
Ex-1016	Reserved

Ex-1017	Reserved
Ex-1018	Reserved
Ex-1019	Reserved
<i>Ex-1020</i>	<i>U.S. Patent No. 8,918,657 to Cameron et al. (“Cameron”)</i>
<i>Ex-1021</i>	<i>Copy of January 9, 2025 Deposition Transcript of Dr. Kirk W. Cameron</i>
<i>Ex-1022</i>	<i>Copy of Excerpt from Wiley Electrical And Electronics Engineering Dictionary Published 2004.</i>
<i>Ex-1023</i>	<i>Copy of Excerpt from The Authoritative Dictionary of IEEE, Published 2000.</i>
<i>Ex-1024</i>	<i>Exhibit 14 as cited in Patent Owner’s Complaint in District Court Case No. DCA-3-24-cv-02717</i>
<i>Ex-1025</i>	<i>U.S. Published Patent Application No. 2009/017780 to Lowenthal (“Lowenthal”)</i>
<i>Ex-1026</i>	<i>Errata to Ex-1012 (Cameron Deposition)</i>

I. INTRODUCTION

Confronted with overwhelming evidence that claims 1-20 of the '391 Patent are unpatentable in view of two separate primary references: Kimura and Keith, Patent Owner ("PO") in its Patent Owner's Response ("POR") asks the Board to rewrite claims to tip-toe across strong prior art. But claim construction does not allow PO to rewrite its claims, nor does it countenance reading what the specification calls "illustrative embodiments" into the claims (as PO attempts to do). Once PO's claim-construction arguments are rightly dismissed, the POR is largely vacuous.

II. CLAIM CONSTRUCTION

A. PO's Lexicography Arguments Fail

PO argues for lexicography as to three of four *interruption* terms in the claims. POR 19-27. PO is wrong.

Far from definitional or otherwise limiting language, the specification references each *interruption* term only in the context of representative embodiments. *See, e.g.*, Ex-1001, Abstract ("In **one embodiment**, the one or more interruptions include at least one of a device capability interruption, a preference interruption, and a data services interruption."); 2:8-10 (similar); 10:35-38 (similar); 2:28-29 ("FIG. 5 is a **block diagram of interruptions in accordance with an illustrative**

embodiment”); 13:4-5 (similar).¹ And the specification mandates that the “terminology used herein is for the purpose of **describing particular embodiments only** and is **not intended to be limiting** of the invention.” Ex-1001, 15:29-31.

PO also avoids the prosecution history, where no lexicography was argued and the Examiner applied unrebutted understandings of the *interruption* terms that are unlike its purported lexicography positions. *Infra* Section I.B.

Lacking intrinsic support (let alone the “sufficiently clear” lexicography that the law requires), PO’s only option was to misconstrue the specification. *Multiform Desiccants v. Medzam*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). As revealed by its expert, PO had to overlook reference numerals in the specification to even attempt to find purported definitions.

Q: Are you **overlooking the reference number** there, **506**, since it’s referring to something specific in the figure. It’s not using the phrase data services interruption.

[PO’s Expert:] ... We know already at this point in the patent that Figure 5 is exemplary and to that means **you read it without the 506**. In a sense, its defining what data interruption is more generally. 506 is an instantiation or example.

¹ Emphasis added, unless indicated otherwise. *Italicized* language (excluding case cites or citation signals) refers to claim language (Pet. 7).

Ex-1021, 94:3-16.² PO’s belief in its alleged lexicography positions appears half-hearted, since it did not even attempt to argue that *device capabilities interruption* was a specially defined term, despite the appearance of a similar specification example to that relied on to prop up its other *interruption* constructions. Ex-1001, 13:11-15.

Revealingly, PO has no case law support behind its lexicography position propped up by its misinterpretation of the specification.³ The Board—as it has done before—should reject PO’s purported lexicography positions. *See, e.g., Yita, v. Macneil IP*, IPR2023-00172, Paper 70, 18-20 (rejecting lexicography and declining “to limit the scope of claim by importing aspects of [the] embodiment into the claim.”); *Resmed, v. New York University*, IPR2022-00994, Paper 68, 30 (no

² PO’s expert had a definitions sections in his patents “to make it clear to the reader.” Ex-1021, 132:10-11 (discussing Ex-1020). He agreed that does not exist here and indicated the “authors of the ’391 patent decided to do it a different way,” *id.*, yet he must revise what the authors wrote to even find purported definitions.

³ Confusingly, PO mentions “disavowal” as support for its lexicography arguments (POR 21 (“inventors disavowed...”), 24-25 (same)). That is a different doctrine (*Thorner v. Sony*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) and, regardless, PO shows no disavowal either.

“implied lexicography” where the expert “reads portions of the specification and extrapolates).

B. PO’s *Interruption* Constructions are Wrong

With lexicography rejected, PO’s *interruption* constructions are exposed as committing the “cardinal sin” of claim construction. *Laitram v. NEC*, 163 F.3d 1342, 1347 (Fed. Cir. 1998). Even PO’s expert admitted that examples in the specification should not be used to limit the claims’ scope, testifying that it would be “ill-advised” to “generalize [FIG. 4] across the entire patent, description, claims, and everything.” Ex-1021, 67-68:14-9. Worse still, PO seemingly ignored the specification’s clear mandate that its embodiments are non-limiting: “the description of the present invention has been presented for purposes of illustration and description ***but is not intended to be exhaustive or limited to the invention in the form disclosed.***” Ex-1001, 15:44-50; *see also id.*, 3-4:62-2; 7:31; 10:51-52; 13:5, 13:49; 14:48. (labeling figures “illustrative embodiments”).

As explained below for each of PO’s *interruption* constructions, the Board should disregard them (even if considered as something other than lexicography).

1. *Data Services Interruption* Has No “Third Party” Requirement.”

PO improperly engrafts a third-party requirement on “data services” based off an example of an example in the specification (the description for the illustrative

embodiment of Figure 5, which references the illustrative embodiment of Figure 3). PO's construction must be discarded for at least four reasons.

First, PO ignores the plain language of a *data services interruption*, which specifies nothing about the type of data or the type of services, let alone anything about third parties. While PO might wish it utilized different claim language, it did not and claim construction is not a claim-redrafting opportunity. *In re Rambus*, 694 F.3d 42, 47 (Fed. Cir. 2012) (noting that if a party “wanted to limit the memory device to a single chip component, it could have expressly done so. It did not, and this court will not do so here.”). Claim 6 further specifies that *the data services interruption originates from a failure in data transmission*, which again omits specifying the type of data, type of services, or anything about third parties. The claim language is against PO's limiting construction.

Second, PO's construction would exclude preferred embodiments. For example, the specification explains that data services interruption 506 “may be caused by power outages, broken transmission lines, **or any other problems** preventing a data service from exchanging information with other components of an electric vehicle transaction infrastructure.” Ex-1001, 14:42-46. Those “other components” are depicted in Figure 3 and include components from parties to the charging transaction, not solely third parties, including additional “services” that provide “data” from those local parties.

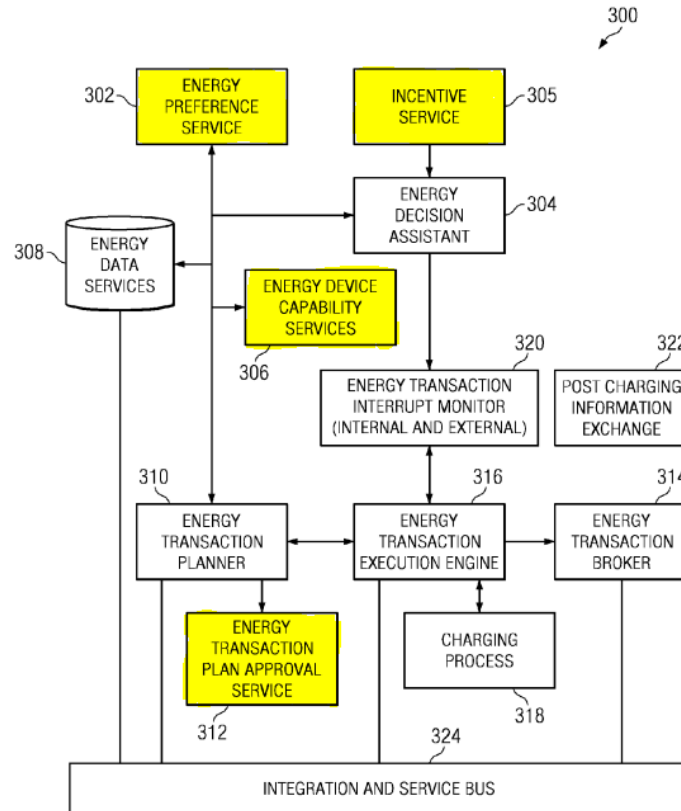


FIG. 3

Ex-1001, Fig. 3.

For example, the energy preference service 302, “provides preference information associated with the electric vehicle... and other parties to the transaction.” Ex-1001, 7:61-64; the energy device capability services 306, “may include ... information associated with the capabilities and requirements of the electric vehicles of the charging system.” *Id.*, 8:36-37; *see also id.* 8:48-54. Yet PO’s construction would exclude embodiments where interruptions may be caused by “other problems preventing a data service from exchanging information with other components of an electric vehicle transaction infrastructure,” including local problems impacting communication with energy data services 308 as well as

communications with the local data services depicted in Figure 3. POR 21-22. By excluding preferred embodiments, PO commits legal error. *See, e.g., SynCor v. Artesyn*, 709 F.3d 1365, 1378-79 (Fed. Cir. 2013) (“claim construction that **excludes the preferred embodiment is rarely, if ever, correct...**”).

Third, PO’s position that energy data services 308 is the only example of data services is inconsistent with the specification itself. POR 20-21. PO’s relied-upon portion of the specification makes clear that “[d]ata service sources are sources of data, **such as, for example, energy data services 308** in FIG. 3” (Ex-1001, 13:38-46). Energy data services 308 are one example of data service sources, they are not the only example (as Figure 3 shows). Moreover, the claim does not state **energy** data services interruptions, the patentee selected a broader term of *data services interruption* and did not limit that to a type or a source of the data.

Fourth, the Examiner during prosecution mapped the claimed data services interruption to “manual inputs from [a] user via user interface” (Ex-1007, 55). A user is not a third party, as PO’s expert explained. Ex-1021, 157: 11-13. (“[PO’s Expert] ... so since a **user** is part of the energy transaction, they are **not a third party**.”). PO’s construction is thus further incorrect because it contradicts the prosecution history. *Cordis Corp. v. Medtronic*, 339 F.3d 1352, 1359–60 (Fed. Cir. 2003) (prosecution history did not support narrowly construing the claim term where examiner’s remarks regarding prior art referenced a broader understanding).

2. *Manual Override Interruption* is not Limited to a User Instruction

PO's construction of *manual override interruption* is not a construction at all, but a bending-over-backwards attempt to exclude "mere opening and closing of a switch" (POR 24). PO's construction is wrong for at least three reasons.

First, PO again ignores the claim's plain language. Indeed, its construction reads out every word of the plain language such that "*manual*," "*override*," and "*interruption*" are nowhere to be found. POR 24 (offering construction of "an instruction that causes energy transaction execution engine to terminate the charging process, which a user may generate during the flow of electricity by interacting with a user interface," where 'instruction' means 'an encoding of a series of operational steps specifying the details to be executed according to those operational steps.")). The plain language does not specify who causes the interruption (yet PO limits to "a user"), where the interruption is caused (yet PO limits to "a user interface"), nor anything about the "series of operational steps" that PO adds.

Second, the specification portions related to Figures 4 and 7 that PO cites are "illustrative embodiment[s]" (Ex-1001, 10:50-53; 14:17-21) that do not support its limiting construction. That a "user" generates an example of manual override interruption 422 using a user interface is described using optional "may" language. (Ex-1001, 12:26-36 (thrice stating "user 420 **may** generate manual override interruption 422...")). PO's support for limiting its *manual override interruption* as

an “instruction” (which does not appear in the claim itself) is nonexistent or, at best, conclusory testimony devoid of evidentiary support. POR 24.⁴

Third, the prosecution history contradicts PO’s position as the Examiner applied a broader understanding of *manual override interruption* that is inconsistent with PO’s narrowing. The Examiner indicated that a *manual override interruption* “can consist of **any sort of input by the user** that results in access being denied.” Ex-1007, 55. This broad understanding does not exclude opening and closing of a switch (or any other type of input by the user or other parties), so the prosecution history cuts against PO’s position. *See, e.g., Cordis*, 339 F.3d 1352, at 67.

3. *Preference Interruption* are Not Limited to “User-Specified Preferences.”

⁴ There is no direct support provided when PO offers two different—and equally unsupported—definitions for “instruction” (POR 24). Any purported support appears on the next page—yet the testimony cited there verbatim repeats the brief and provides no evidentiary support. The declaration notably has numerous portions that appear to have been copied-pasted from the POR. For example, the declaration’s internally cross-referenced sections only appear in the POR. Its expert disingenuously labeled these as “typos.” Ex-1021, 31:17-18; *see also id.*, 17:2-4; 19:3-15; 23:6-12; 28:2; 30: 4-11; 31:3. (PO expert identifying more “typos”).

PO attempts to restrict *preference interruption* to “user-specified preferences” based on the illustrative embodiment of Figure 5, and worse still, conveniently applies a broader definition when asserting infringement. PO’s construction is wrong for at least three reasons.

First, PO once again ignores the claim’s plain language. This interruption is based on a preference, and the claim does not further limit its scope to any particular party that specified the preference, let alone to the one particular party (the user) that PO wants. Furthermore, claims 5 and 12 indicate that the preference is *selected by a participant to the charging process* and do not limit that participant to a user. Claim differentiation cuts against PO’s position.

Second, PO overlooks embodiments in the specification that are not so narrow. For example, in the same paragraph that PO relied on for its construction, the specification states, “**other parties may also specify preferences**, the violation of which results in identification of preference interruption 504.” Ex-1001, 13:31-32. Yet PO’s construction would exclude preferences specified by “other parties.” POR 25-26. PO’s expert conceded that “other parties may also specify preferences (Ex-1021, 114:18) and that “other parties” include the “user, the attendant... the charging station, the charging facility. The utility company.” *Id.*, 115:9-12. PO’s attempt to exclude a preferred embodiment is improper. *SynCor*, 709 F.3d at 1378-79.

Third, PO alleged that for infringement a *preference interruption* could be “dynamic load management configurations, and/or a specific charge.” Ex-1014, 19-20. But dynamic load management configurations are not user specified; instead, “dynamic Power Management continuously monitors the available power in your panel and adjusts your Wall Connector charge rate based on electrical usage in your home,” and therefore are set by firmware. Ex-1014, 19-20 (*citing* Ex-1024). PO’s nose-of-wax antics are another reason to reject its construction. *See CommScope v. Dali Wireless*, 10 F.4th 1289, 1299 (Fed. Cir. 2021) (patentee cannot use inconsistent claim interpretations for infringement and invalidity).

C. Nothing Limits the Claimed *Request* or *Response* to PO’s “Message Including a Header and a Body”

1. No Intrinsic Support for Excluding Signals

PO contends that *request* and *response* cannot be signals and must be “messages”—but PO does not stop there—these messages, PO says, must include a “header” and a “body.” POR 27-28. However, claim 1, recites “a *request* signaling a start” and “*response* to...terminate.” There is nothing in the claim language that indicates the request and response must be messages. Further, the claim specifies what the *request* is doing—it is ***signaling a start of the charging process*** and same with *response*, it is ***to terminate the charging process***. The attempt to read out a signal ignores this plain language. *Simpleair v. Sony Ericsson*, 820 F.3d 419, 430 (Fed. Cir. 2016) (explaining that “every word in a claim should be given effect.”).

And nothing in the claim language imposes structural requirements, let alone a header and a body.

PO's entire argument is premised on a single sentence of the specification for each term, related to Figure 4's illustrative embodiment. POR 27-28. By seeking to import the message examples in one illustrative embodiment from the specification into the claims, PO once again commits legal error (*Laitram*, 163 F.3d at 1347) and disregards the specification's mandate that its examples are non-limiting (Ex-1001, 15:44-50; *see also id.* at 3-4:62-2; 7:31, 10:51-52, 13:5, 13:49, 14:48). Further, PO's "header and body" requirements appear nowhere in the specification, which its expert conceded. Ex-1021, 63-64:25-1 ("[PO's Expert]: no, the word header does not appear. The word body does not appear...").

During prosecution, the Examiner mapped *a request signaling a start* to "**user input** through either **a display (80)**, **keyboard (85)** or through **optical reader (100)** to from a remote central processing unit (300) through transceiver." The Examiner did not understand *request* or *response* as limited to a message, let alone a message with a header and a body (nor did the patentee argue for that interpretation). Further, the reference relied on during prosecution (Pellegrino, Ex-1008) does not mention message, header, or body. *See generally* Ex-1008.

2. Extrinsic Evidence Confirms that a Request and a Response are Signals, Not Messages.

Extrinsic evidence also refutes PO's attempt to exclude signals. It says exactly the opposite—both a request and a response are understood to be signals. Indeed, a request is defined as "The automatic emission of the appropriate signals when specified trigger signals are received..." Ex-1022, 418. Similarly, a response is defined as "**signals** or interrupts generated by a device to notify another device of an asynchronous event." Ex-1023, 976.

Because PO's construction is at odds with both intrinsic and extrinsic evidence, the Board should reject it.

D. Claim 7 Does Not Require Identifying an Operational Parameter Before Each New Charging Transaction

Although omitted from the "claim construction" section of the POR, PO still argues that "wherein the one or more interruptions are detected by identifying an operational parameter from the set of operational parameters that conform to the set of predefined interrupt conditions" requires that an operational parameter must be "identified before each new charging transaction." POR 33. This is incorrect.

1. Specification and Prosecution History Contradict PO's Incorrect Construction

PO's position repeats again the cardinal sin of reading examples from the specification into the claims. For claim 7, PO incorporates a pre-charge phase requirement into the claim despite there being no explicit recitation of such. Moreover, even as it relates to the pre-charge phase, PO's arguments are admittedly

about setting “conditions governing the transaction” before each new charging transaction. POR 34-45. The relied-upon portions do not connect those conditions to the operational parameter of claim 7, let alone require identifying the operational parameter before each new charging transaction.

Undeterred, PO attempts to further limit the operational parameter to one that is “changeable.” POR 25. The claim language does not say that, and the specification does not support it either. The specification states, “operational parameters 408 may include, for example, prices of electricity, available incentives, data transmission speeds, connectivity of components to the electric vehicle transaction infrastructure, or deviations from an energy plan.” Ex-1001, 11:24-27. The specification does not say that these are all changeable, nor does it say that this is an exhaustive list of all operational parameters. PO’s changeable requirement is inconsistent with the prosecution history too. Ex-1007, 54 (examiner indicating that “the operational parameters ... include battery or vehicle type.”).

PO’s engrafting of temporal and changeable requirements onto claim 7 is incorrect and should be rejected.

* * * *

In sum, there is no lexicography at all, thereby exposing PO’s claim-construction tactics as reading the specification’s examples into the claims, which is legally improper and must be rejected by the Board to resolve the controversy in

front of it. *Realtime Data v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy”) (cleaned up). Without its constructions, PO’s positions fade fast. *Infra* Sections III-VIII.⁵

III. GROUND 1: KIMURA RENDERS CLAIMS 1, 4-8, 11-15, AND 18-20 OBVIOUS

A. After Rejecting Faulty PO’s Claim-Construction Positions, the Petition’s Showings Stand Unrebutted

PO’s arguments as to independent claims 1, 8, 15, and 20 (POR 27-28) rest **entirely** on its faulty claim-construction position that *request* and *response* cannot be signals, as disclosed in Kimura, and instead must be messages with headers and bodies. PO’s arguments as to claims 5 and 12 (POR 29-30, 36), 6 and 13 (*id.*, 30-33, 36-37), and 7, 14, and 19 (*id.*, 33-35, 37), respectively rely on incorrect claim constructions too. PO raises no standalone arguments against Kimura as to dependent claims 4, 11, and 18, POR 29, 34-35, 37-38. Thus, once its claim-

⁵ PO takes issue with the level of ordinary skill in the art (POR 17-19), but never argues that the level impacts how the Board should understand the arguments.

Petitioner’s positions apply regardless.

construction positions are properly rejected (*supra* Section II), the Petition’s Ground 1 arguments (and supporting expert testimony) stand unrebutted (Pet. 7-51).⁶

B. PO Waived Any Argument on Motivation or Reasonable Expectation of Success for the Kimura Single-Reference Obviousness Ground

PO does not challenge motivation or reasonable expectation of success as to the single-reference obviousness ground in its post-institution response. POR 27-38. As a result, its preliminary arguments on those points should be “deemed waived.”

⁶ PO alleges bias as to Dr. MacCarley (POR 70), which is false. His supporting of students (Ex-2007, 79-80:25-1) reflects a sincere desire for their success, and is not disqualifying bias. He testified that Tesla “didn’t give us money, nor did they offer to give us money.” *Id.*, 81:19-23. Dr. MacCarley is a well-respected professor and has sworn to his financial disinterest here. Ex-1009, ¶¶3-14. Nothing more is required. *See, e.g., Trans Ova v. XY*, IPR 2018-00250, Paper 35, 10 (compensated witness who, as a former board member, may have had an interest in the outcome, was credible because it “was under oath and subject to cross-examination.”); *see also Offshore Technical v. Innovative Pressure*, IPR2020-00923, Paper 43, 16-18. Dr. MacCarley’s testimony, based on decades of experience with electric vehicles (EV) and their control systems, is helpful to the Board and should be credited. PO’s expert has no EV experience. Ex-1021, 37:4-19.

Samsung Elecs. Co. v. Mojo Mobility Inc., IPR2023-01089, Paper 16, 9 (finding waiver of preliminary-response arguments).⁷

IV. GROUND 2: KIMURA-HOTTA RENDERS CLAIMS 2, 5, 9, 12 AND 16 OBVIOUS.

A. PO's Arguments Regarding Claim 2 Fail.

PO mostly relies on its incorrect construction of *manual override interruption*, POR 39-40, to argue against Kimura-Hotta Ground 2. But PO's claim-construction argument is incorrect (*supra* Section II.B.2) and should be disregarded.

PO's only remaining argument for claim 2 is that "Petitioner failed to explain how and why a [POSA] would combine Kimura and Hotta." POR 40. PO is wrong. The Kimura-Hotta Ground 2 first provides an unrebutted express motivation-to-combine position (Pet. 52-53) and then provides alternative ("at a minimum") positions under both obvious-to-try and simple-substitution theories. None of those have been rebutted. PO appears to protest that Hotta's two-stage charging subroutines are purportedly "different from both the '391 patent and Kimura" (POR 40), which is immaterial as Hotta is relied on for teachings related to functions of command keys, not for its charging routines. Pet. 53.

Finally, PO asks the Board to incorrectly disregard the opinions of Petitioner's

⁷ PO likely affirmatively waived these arguments because Petitioner explained why these points were meritless in its pre-institution reply brief (Paper 7, 2-3).

expert on SAE J1772 as “excluded from the Petition” and “arguments incorporated by reference into the Petition are not allowed.” POR 41 (citation omitted). However, PO generally overlooks that the intrinsic record includes a reference to J1772 (Ex-1025 ¶¶0036), and specifically overlooks that the Petition did cite to Dr. MacCarley’s discussion of J1772, so there was no improper incorporation. Pet. 36. And “there is no prohibition on expert declarations that provide more discussion of claim limitations than a petition.” *Samsung v. Netlist*, IPR2022-01427, Paper 48, 61. Indeed, expert testimony must “disclose the underlying facts or data on which the opinion is based” to avoid the testimony being “entitled to little or no weight.” 37 C.F.R. § 42.65(a). That is what the opinions on J1772 do here—helpfully provide additional factual bases underlying the opinions. *Samsung*, Paper 48, 61.

B. PO’s Arguments Regarding Claim 5 Fail.

Against Kimura-Hotta, PO first argues that Hotta does not disclose the interruption being detected during the flow of electricity because “the scheduled time for boarding and using the vehicle are input before the charging begins.” POR 41-42. One problem: the Petition does not rely on Hotta as teaching interruptions during the flow of electricity for the Kimura-Hotta combination. Rather, Kimura supplies the interruptions during the flow of electricity, and Hotta teaches user selection of a preference in a charging process. Pet. 57-59. The combination results in allowing the user of the charging process to indicate preferences. *Id.*

And PO's misunderstanding of the combination carries forward to its second argument. That argument focuses myopically on the scheduled boarding time from Hotta. But that was not the only preference interruption the Petition identified for the Kimura-Hotta combination—instead, the Petition articulated that Hotta teaches “user selection of a preference for a charging process” and then “[a]pplying this to Kimura, it would have been obvious for a POSA to allow for **user selection of preferences, including the voltage, current, and other battery-specific.**” Pet. 58. The primary position in the Petition of the “*preference interruption* (e.g., caused by voltage or current reaching a corresponding threshold), *and the preference interruption is detected from a violation of a preference* (e.g., the corresponding threshold) *selected by a participant to the charging process* (i.e., user selected, per Hotta),” *id.*, 59, stands unrebutted.

C. PO Has No Standalone Arguments for Claims 9, 12, and 16.

Because PO submits no standalone arguments for claims 9, 12, and 16, these claims fall alongside claims 2 and 5.

V. GROUND 3: KIMURA-KING RENDERS CLAIMS 3, 10, AND 17 OBVIOUS.

PO's only argument against Ground 3 is that King's battery temperature, profile, ampere-hours of charge, battery charge profile, and charger status parameters “have nothing to do with monitoring or for detecting interruptions,” and “thus the proposed combination would not meet the limitations of claims 3, 10, and

17.” POR 44-45. But PO misunderstands the combination. As explained (Pet. 60-61), a POSA would have reviewed King’s teaching about non-volatile memory 34 and its use in storing, and would have been motivated to build Kimura’s charger to make use of King’s non-volatile memory 34 to store Kimura’s operational parameters.

Because King’s parameters are not utilized in the Petition’s combination, PO has no substantive response to the combination as argued.

VI. GROUND 4: KEITH ANTICIPATES CLAIMS 1, 2, 4-9, 11-16 AND 18-20

A. Claims 1, 4, 7, 8, 14-15, 18-19, and 20: PO’s Arguments Rest Entirely on Incorrect Claim-Construction Positions.

As to Ground 4, PO’s arguments as to independent claims 1, 8, 15, and 20 (POR 45-46, 58, 60-61) rest **entirely** on its faulty claim-construction position that *request* and *response* cannot be signals, as disclosed in Keith, and instead must be messages with headers and bodies. Likewise, PO’s arguments as to dependent claims 7, 14, and 19 (*id.*, 57-58, 60), rely on an incorrect claim construction too. PO raises no standalone arguments against Keith as to dependent claims 4, 11, and 18 (POR 53, 58-59, 60).

Thus, once its claim-construction positions are properly rejected (*supra* Section II), the Petition’s Ground 4 arguments (and supporting expert testimony) as to claims 1, 4, 7, 8, 14-15, 18-19, and 20 stand unrebutted (Pet. 45-61).⁸

B. Claims 2, 9, and 16: PO’s Arguments Are Meritless.

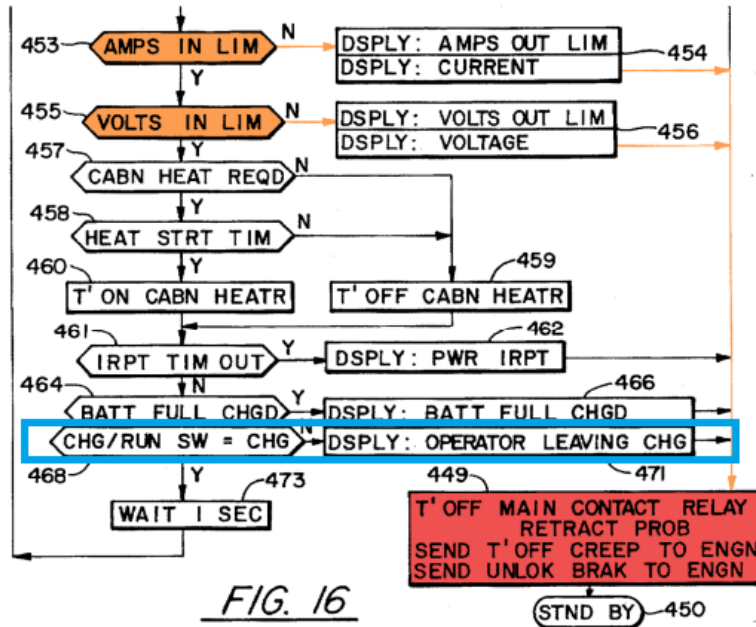
As to claim 2, PO leads with two points (POR 46-49) that rest entirely on its incorrect claim construction for *manual override interruption*. Because the construction is wrong (*supra* Section II.B.2), these points fall too.

PO next posits that “Keith does not disclose that transferring a charge/run switch into the open position causes ETEE to terminate charging process” and that the action of opening Keith’s charge/run switch “stops the charge.” POR 49. This argument requires accepting an unstated and incorrect premise—that the *charging process* and the separately recited *flow of electricity* (Claim 1) are the same thing. They are not—the *charging process* includes the *flow of electricity*, but is not limited to it. To say otherwise would be inconsistent with the specification. *See, e.g.*, Ex-1001, 9:1 (“activities of charging process 318 may include, for example, identification of parties and preferences, the authenticating data, storing data, analyzing data, or any other event or condition that is directly related to or incidental to the exchange of electricity”). Thus, it is immaterial whether the opening of the

⁸ PO is wrong to allege bias as to Dr. MacCarley (POR 70). *Supra* n.5.

charge/ run switch in Keith directly “stops the charge” (as PO says) or whether the ETEE does so. The claims require *sending a response to the energy transaction execution engine to terminate the charging process* and do not expressly require the ETEE to perform the termination of *the charging process*, let alone that the ETEE itself stops the flow of electricity.

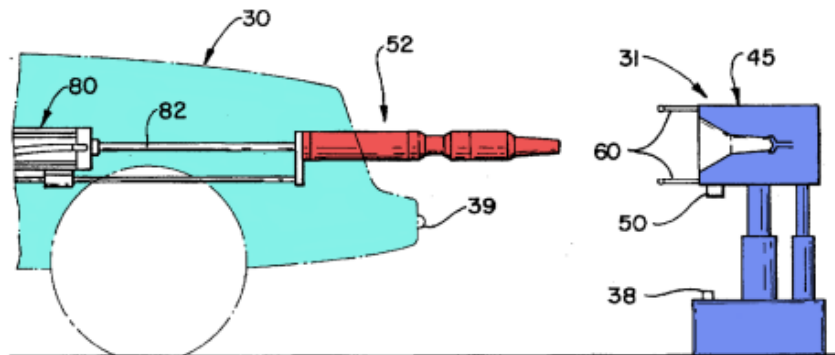
Further, PO’s position about “follow-up actions” being caused “in the vehicle charge computer (ETIM) and not the station charge computer (ETEE)” (POR 49-51) is wrong because (i) it relates to “the close position” of the charge/run switch when the Petition’s challenge related to the open position and (ii) is inconsistent with Keith’s teachings that the “charge will continue until ... the operator transfers the charge run switch 77 into the open position as shown; after that, certain displays are made and the vehicle is reenabled so that it can be withdrawn from the charging station.” Ex-1008, 8:29-34. Figure 16 (reproduced below) also depicts the logic of using these displays (471) after conducting a determination that the charge/run switch is open (468) and that leads to steps (449) at Keith’s station charge computer 34 to terminate the charging process.



Pet. 75 (citing Ex-1001, Fig. 16 (blue box added)).

As was further explained in the Petition:

“When termination step 449 is reached, the vehicle charge computer 72 deenergizes vehicle contact relay 94 and retracts charging probe 52 (red) of vehicle 30 (turquoise) at step 449 of Figure 16. *Id.*, 23:29-41; cf. *id.*, Fig. 19. When computer 34 of the charge station 31 (purple) determines that probe 52 (red) is released, termination occurs. *Id.*”



Pet. 69; *see also* Ex-1005, 23:30-41 (“so the station can check to see that the probe has disembarked before lowering the probe receptacle head 45” and “then the vehicle charge computer 72 reverts to the stop mode of FIG. 3 through a standby transfer point 450.”).

Therefore, PO’s arguments for claims 2, 9, and 16 are meritless.⁹ Keith anticipates a *manual override interruption*, as claimed.¹⁰

C. Claims 5 and 12: PO’s Arguments Are Meritless.

The POR correctly acknowledges the Petition’s explanation that “[o]ne preference interruption in Keith **involves** exhaustion of the cash deposited by the user for charging,” but PO then narrows the example preference to only “charging

⁹ Charge/run switch “be[ing] a discrete switch, or ... a suitable keyboard input through the cockpit keyboard and display system 75” (Pet. 52) is not limited to immediately adjacent sentences, as PO suggests (POR 52). Whether the charge/run switch is part of a user interface or not, its use in Keith anticipates claim 2.

¹⁰ PO’s discussion of Dr. MacCarley’s deposition testimony (POR 52-53) ignores (i) that there is no need for an express construction (*supra* II.B.2.), (ii) “a human being” can be a user, and (iii) that even “some external, decision-making entity” is consistent with how the patent refers to a user. *See, e.g.*, Ex-1001, 12:20-24 (“user 420 may be, for example, a charging station attendant.”).

the battery until the cash deposit is exhausted.” POR 53-54. That was not the Petition’s argument. Instead, the example preference is that the user does not want to incur fees beyond their initial cash deposit, which involves monitoring for exhaustion of the cash deposited as in Keith. And this avoidance of extra fees is just like the example of a preference in the ’391 patent, e.g., “a user may specify a preference for a threshold cost for charging an electric vehicle.” Ex-1001, 13:26-28.

Keith’s example preference is just like the patent’s example preference. Claims 5 and 12 are anticipated.

D. Claims 6 and 13: PO’s Arguments Are Meritless.

PO’s positions that rely on its third-party requirement (POR 54-55) fail because that is not a requirement at all (Section II.B.1). PO also argues that in Keith “the wrong element terminates the charging process,” but as was explained above (Section IV.B), PO conflates the *charging process* with the separately recited *flow of electricity*. Regardless, the charge station computer of Keith does terminate the charging process after Keith’s *data services interruption*—as Keith explains: “the station [including charge station computer] can check to see that the probe has disembarked before lowering the probe receptacle head 45 ... the probe is commanded to be retracted.” *See also* Pet. 69 (“When computer 34 of the charge station 31 ... determines that probe 52 ... is released, termination occurs.”).

VII. GROUND 5: KEITH RENDERS CLAIMS 3 AND 8-19 OBVIOUS

PO's positions against Ground 5 fundamentally ignore that claims 3, 10, and 17 require nothing more than *storing the set of operational parameters in a storage device*—there is no requirement that the recited *storage device* be located at the same device that is performing the monitoring and detection operations (Pet. 96). Because “Keith explicitly states that the vehicle charge computer 72 ‘stores the kilowatt hours [i.e., energy] and cost’” (*id.*), nothing further is required to show that Keith does teach storing. Whether these operational parameters are used for interruption detection (POR 63) is similarly immaterial as claims 3, 10, and 17 also do not say that every stored operational parameter must be used for interruption detection. Even if the claims did require that (they do not), the Petition explained that while the vehicle charge computer 72 might not use the stored operational parameters of kilowatt hours and cost for interruption detection, Keith is clear that the charge station computer 34 does detect interruptions based on these stored parameters. *Id.*

PO is also incorrect to argue over motivation or reasonable expectation of success as to Ground 5. POR 62. Neither is required here. Paper 7, 2-3. The Petition relies on a single embodiment from Keith showing the charge station computer 34, the vehicle charge computer 72, and the charging processes performed by the computers 34 and 72. Pet. 95-99; Ex-1005, 9:6-9 and 9:53-56; *see also id.*, Figures 2-16 (indicating performance of the respective processes by the “STATION”

computer or the “VEHICLE” computer). Further, no motivation is needed when the combination is expressly taught. *Philip Morris v. RAI*, IPR2020-00921, Paper 32, 34. Keith (Ground 5) expressly teaches combining the relied-upon elements. Ex-1005, 9:6-9 and 9:53-56; Pet. 7-51 and 95-99.

VIII. GROUND 6 KEITH-NOR RENDERS CLAIMS 6 AND 13 OBVIOUS

PO’s arguments against Ground 6 (POR 68-70), rest on its attempt to read a third-party example from the specification into the claims in the context of its proposed construction of *data services interruption*. With that position dismissed (Section II.B.1), PO has no other response to Ground 6.

IX. CONCLUSION

Claims 1-20 are unpatentable and the Board should finally cancel them.

Dated: January 31, 2025

Respectfully Submitted,

/ Alexander B. Stein /

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CERTIFICATION OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This petition includes 5,581 words as counted by Microsoft Word and is therefore in compliance with the 5600-word limit established by 37 C.F.R. § 42.24(c)(1). Accordingly, pursuant to 37 C.F.R. § 42.24(d), lead counsel for Petitioner hereby certifies that this PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE TO PETITION OF U.S. PATENT NO. 8,103,391 complies with the applicable type-volume limits.

Dated: January 31, 2025

Respectfully Submitted,

/ Alexander B. Stein /

Alexander B. Stein, Reg. No. 71,397

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(b), I certify that I caused to be served a true and correct copy of the PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE TO PETITION OF U.S. PATENT NO. 8,103,391 and new Exhibits 1020-1026 were sent on the date noted below, via email on Patent Owner's counsel of record in this proceeding.

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