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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. IPR2024-00388
U.S. Patent No. 8,291,243

**PATENT OWNER GRAPHITE CHARGING COMPANY LLC'S
PRELIMINARY RESPONSE**

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List of Exhibits

Exhibit Number	Exhibit Title
2001	<i>Federal Holidays</i> , U.S. OFFICE OF PERSONNEL MANAGEMENT, https://www.opm.gov/policy-data-oversight/pay-leave/federal-holidays/#url=2024
2002	<i>Members</i> , UNIFIED PATENTS (last visited May 22, 2024), https://www.unifiedpatents.com/members
2003	<i>Tesla Inc. Annual Income Statement</i> , WALL STREET JOURNAL (last visited May 22, 2024), https://www.wsj.com/market-data/quotes/TSLA/financials/annual/income-statement
2004	<i>Non-Final Office Action</i> , Ex Parte Reexamination Control No. 90/019,303 (Apr. 11, 2024)
2005	Parallel District Court Litigation Docket
2006	Dkt. No. 64 of the Parallel District Court Litigation Docket

I. INTRODUCTION

Petitioner Tesla, Inc. (“Petitioner” or “Tesla”) filed this Petition for *Inter Partes* Review (“IPR”) of Claims 1-20 of U.S. Patent No. 8,291,243 (EX1001, “the ’243 Patent”), which was accorded a filing date of February 14, 2024 (the “Petition”). (Paper 3, at p. 1). Pursuant to 37 C.F.R. § 42.107(a), Patent Owner Graphite Charging Company, LLC (“Graphite” or “Patent Owner”) submits the following Preliminary Response setting forth the reasons why an IPR should not be instituted. In accordance with 37 C.F.R. § 42.107(a), Patent Owner files this Preliminary Response within the three month period following the date of the notice dated February 27, 2024 for the Petition. (*See Federal Holidays*, U.S. OFFICE OF PERSONNEL MANAGEMENT (last visited Apr. 30, 2024), <https://www.opm.gov/policy-data-oversight/pay-leave/federal-holidays/#url=2024> (noting that Monday, May 27, 2024 is Memorial Day, a Federal holiday) (EX2001)); *see also* 37 C.F.R. § 1.7 (“When the day, or the last day fixed by statute or by or under this part for taking any action . . . in the United States Patent and Trademark Office falls . . . on a Federal holiday . . . the action may be taken . . . on the next succeeding business day which is not . . . a Federal holiday.”).

Petitioner fails to meet its “burden for proving a proposition of unpatentability by a preponderance of the evidence,” 35 U.S.C. § 316(e), for the following reasons.

1. First, Petitioner's obviousness challenge in Ground 1 fails because Wang does not teach all the elements of independent claims 1, 11, 15, and 18; because Petitioner fails to include relevant evidence in its Petition; and because Petitioner did not provide the required analysis for the motivation to combine and reasonable expectation of success for a single prior art reference.

2. Second, Petitioner's obviousness challenge in Ground 2 fails because the asserted references do not teach the challenged claims' elements; because the claims challenged in Ground 2 depend from those challenged in Ground 1; and because Petitioner failed to provide the required analysis for motivation to combine and reasonable expectation of success for multiple prior art references.

3. Third, Petitioner's anticipation challenge in Ground 3 fails because Cooley does not teach all of the elements of the independent challenged claims.

4. Fourth, due to the parallel ex parte reexamination, the Board should terminate the Petition under 35 U.S.C. § 315(d).

5. Fifth, the Petition should be discretionarily denied under the *General Plastic* factors contrary to Petitioner's assertions, because, upon a holistic review of all seven factors, five of the factors weigh against institution, and two are neutral.

6. Sixth, the Petition should be discretionarily denied under the *Fintiv* factors because, upon a holistic review of all six factors, three factors weigh in favor of denial of the Petition, while the remaining three are neutral.

For these and the additional reasons provided in this Preliminary Response, the Board should deny institution of the Petition.

II. BACKGROUND

A. The '243 Patent.

The '243 Patent was filed on October 24, 2008. It has four independent claims (claims 1, 11, 15, and 18) and sixteen dependent claims.

The '243 Patent is titled “Adaptive Computing Responsive to Environmental Conditions,” and addresses systems and methods for adapting the power consumption of a computational device in response to environmental conditions. (EX1001, 1:6-9). All computer usage requires energy, and, depending on the energy source, this energy usage may increase greenhouse gases. (*Id.* at 1:22-24). Both the United States Government and information technology industries have recognized the importance of efficient computing, also known as green computing, in order to reduce greenhouse gas emissions from energy and power consumption. (*Id.* at 1:13-15, 24-27). In particular, large computer systems impose heavy burdens on power grids, and the energy cost of running such systems can exceed the cost of the system hardware over its useful life. (*Id.* at 1:31-34). As of the filing date of the '243 Patent, efforts to reduce energy usage of a computer system were configured to operate only on a localized level; the amount of energy saved at this local level was ultimately

nullified by the continued use of highest-cost and most environmentally-degrading energy at peak energy demand times. (*Id.* at 1:49-55).

As such, the '243 Patent provides systems and methods for adapting the power consumption of a computational device in response to environmental conditions, including local and global demands on a power grid. (EX1001, at 1:59-61, 2:56-59). The system analyzes operating environmental condition data acquired from an operating environment feed that is relevant to the generation of electric power. (*Id.* at 1:61-64). The data is then analyzed to determine whether there is a high electric power demand indication. (*Id.* at 1:63-64). If the analysis determines there is a high electric power demand indication, then the computational device will reduce an amount of electric power consumption by adjusting the power demand of the computer system and/or physical infrastructure that houses the computer system. (*Id.* at 1:64-67, 2:59-62). Doing so reduces the need to use or bring online inefficient and/or expensive smaller power plants, thereby reducing pollution and lowering the cost of energy. (*Id.* at 4:27-31).

Operating environmental condition data relevant to the generation of electric power includes the spot price of electricity; a rate of change of electricity price; weather conditions; time of day; or facility type energy use (e.g., household, building, or company), among others. (EX1001, at 4:50-57).

B. Petitioner's Asserted Grounds.

Petitioner presents three grounds for *inter partes* review based on the following three references:

Record Citation	Reference	Shorthand Name¹
EX1005	WO 2006/096854	Wang
EX1006	Current Supply Demand Report for Alberta, Canada (Feb. 17, 2005)	AESO Report
EX1007	U.S. Patent No. 9,052,904	Cooley

Petitioner argues that claims 1-20 of the '243 Patent are either anticipated or rendered obvious based upon these three grounds, and rely on various combinations of the three references described above as well as the Declaration of C. Arthur MacCarley, Ph.D., P.E. (EX1003). Petitioner's grounds are summarized below.

Ground	Reference(s)	Basis	Claims Challenged
1	Wang	§ 103	1-20
2	Wang and AESO Report	§ 103	2, 12-14, and 20
3	Cooley	§ 102	1, 3, 11, 15, and 18

¹ The Petition applies shorthand names to reference the prior art asserted in the Petition's grounds. Patent Owner uses Petitioner's convention for ease of reference.

C. The '243 Patent's Prosecution History.

The '243 Patent was filed on October 24, 2008. The patentee responded to enablement and indefiniteness claim rejections by amending the claims to clarify that “the high electric power indication” is indicative of a “high demand for electric power *from* the power grid system,” and “is determined by *analyzing* operating environmental condition data from an operating environment feed input.” (EX1002, at p. 31 (emphasis in original)). Further, the patentee also amended the claims to clarify that “the *computational devices* automatically reduce *their* amounts of consumption of electric power *from* the power grid system in response to the analyzing/determining the high electric power demand indication.” (*Id.* (emphasis in original)). In the Notice of Allowance, the Examiner allowed the claims of the '243 Patent for the following reasons:

Independent claims 1, 11, 15, and 18 are considered to be allowable, particularly due to the limitations that a computational device reduces its power consumption based on an indication of high demand for electricity on the power grid. Art exists that teaches that reducing power consumption based on various factors such as user input (U.S. Patent No. 7,353,413), how efficiently the device is utilizing the power (U.S. Patent No. 7,349,828), and the device's workload (U.S. Patent No. 6,859,882 and U.S. Patent No. 7,533,283), and art exists that manages a power grid based on demand (U.S. Patent No. 7,171,287). However, they do not teach a device reducing its power consumption based on an indication of high demand for electricity on the power grid. This limitation, when considered with each of the claims in its entirety, renders the independent claims allowable.

Dependent claims 2-10, 12-14, 16-17, and 19-20 inherit the allowable subject matter from their parent claims, and are likewise allowable.

(EX1002, at p. 12).

III. ORDINARY LEVEL OF SKILL IN THE ART

For purposes of this Preliminary Response, Patent Owner generally does not contest the level of ordinary skill in the art as stated by Petitioner. (*See* Petition, at p. 11). However, Patent Owner disputes Petitioner’s characterization of a POSA’s knowledge of prior art principles, including green computing principles and use-based power-consumption adaptations. This dispute arises because Petitioner’s detailed discussion of the POSA’s knowledge concerning these principles appears only within the expert declaration, (*See* EX1003, at ¶ 20), rather than in the main text of the Petition. Such presentation constitutes an improper incorporation by reference. Therefore, it should not be taken into account when assessing the level of ordinary skill in the art. (*See* Section VI, *infra*).

IV. CLAIM CONSTRUCTION

For purposes of this Preliminary Response, Patent Owner states that no express construction is necessary at this stage. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those 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)).

However, Petitioner’s means-plus-function claim construction analysis for the “processing means” claim limitations in Claims 18 and 19 is fundamentally flawed and should not be considered by the Board.² Claim construction of a means-plus-function claim limitation involves two steps: 1) determining the claimed function, and 2) identifying “the corresponding structure in the written description of the patent that performs that function.” *Aristocrat Techs. Australia Pty Ltd. v. Multimedia Games, Inc.*, 266 F. App’x 942, 944 (Fed. Cir. 2008) (internal citations omitted). Petitioner’s construction is flawed because it only identifies the corresponding structure for the “processing means” claim limitation. (Petition, at p. 12). Petitioner fails to properly identify the function of the “processing means,”

² For the purposes of this Preliminary Response, Patent Owner is solely addressing Petitioner’s hypothetical means-plus-function argument and does not currently take a position on whether the “processing means” constitutes a means-plus-function claim or its construction. Accordingly, Patent Owner reserves the right to propose alternative claim constructions in subsequent proceedings, both here and in parallel litigation.

stating that “the claims include *no corresponding function.*” (*Id.* at pp. 11-12 (emphasis added)).

Moreover, to the extent Petitioner relies on paragraph 37 of its expert declaration to support its claim construction arguments, the topics discussed in that paragraph did not appear in the text of the Petition itself, thereby constituting an improper incorporation by reference, which should not be considered. (*See* Section VI, *infra*).

Thus, despite Petitioner’s “caution,” (*See* Petition, at p. 11), Petitioner’s failure to identify a function for the identified structure of the “processing means” claim term leads to the necessary conclusion that Petitioner’s proposed means-plus-function claim construction must fail under 37 C.F.R. § 42.104(b)(3). *See* 37 C.F.R. § 42.104(b)(3) (noting that “the construction of the claim must identify the specific portions of the specification that describe the structure, material, or acts *corresponding to each claimed function.*” (emphasis added)).

V. THE ASSERTED PRIOR ART

Petitioner relies upon three references to support its contention that the challenged claims of the ’243 Patent are obvious or anticipated. For the reasons stated below, none of Petitioner’s asserted art supports its Grounds, as significant differences exist between the ’243 Patent and this prior art.

For purposes of this Preliminary Response, while Patent Owner generally does not challenge Petitioner’s description of the prior art (*See* Petition, at pp. 4-6), Patent Owner disputes Petitioner’s characterization of the Examiner’s awareness of the asserted prior art and their relevancy during prosecution of the ’243 Patent. This dispute arises because Petitioner’s detailed discussion of the Examiner’s awareness of each asserted prior art reference, whether they were listed in the ’243 Patent, and their ultimate relevancy during prosecution of the ’243 Patent appears only within the expert declaration, (*See* EX1003, at ¶¶ 26 (Wang), 28 (AESO Report), 34 (Cooley)), rather than in the main text of the Petition. Such presentation constitutes an improper incorporation by reference. Therefore, it should not be taken into account when assessing the level of ordinary skill in the art. (*See* Section VI, *infra*).

A. Wang.

Wang provides systems and methods of energy management, and to manage power grid peak energy load “on the basis of tariff information originating either directly or indirectly from a utility company or a utility related company, such as an energy marketer, load distributor, or independent market operator.” (EX1005, 1:5-9).

B. AESO Report.

The AESO Report was “Last Update[d]” on February 17, 2005, and provides the Current Supply Demand Report for the Alberta Region for coal, gas, hydro, and

wind power. (EX1006). Starred values indicate “that the value listed is, at this time, net to grid rather than Total Net Generation.” (*Id.*). The Report also carries the following disclaimer: “The above information is presented as a reasonable estimate of the Alberta Supply & Demand status at the time indicated (data presented are instantaneous measurements, not integrated values).” (*Id.*).

As indicated above, for purposes of this Preliminary Response, Patent Owner generally does not challenge Petitioner’s description of the AESO Report. (Petition, at pp. 5-6). However, Patent Owner disputes the applicability of the AESO Report as prior art under 35 U.S.C. § 102(b), and its availability to the public. This dispute arises because Petitioner’s detailed discussion of the AESO Report’s express inclusion of data regarding fossil-fuel-powered plants (EX1003, at ¶ 29), the POSA’s access to the AESO Report (*id.* at ¶¶ 29-31), the POSA’s motivation to obtain the AESO Report (*id.* at ¶ 31), the instructions detailing how the POSA could obtain the AESO Report (*id.* at ¶¶ 31-33), and reference to EX1018, the affidavit from the Internet Archive confirming the public availability (*id.* at ¶ 33), appears only in the text of the expert declaration, rather than in the main text of the Petition. (*Compare* Petition, at pp. 5-6, with EX1003, at ¶¶ 28-33).

Such presentation constitutes an improper incorporation by reference. *ZTE Corp. v. Contentguard Holdings, Inc.*, IPR2013-00136, Paper 31, at p. 2 (PTAB Nov. 5, 2013) (“[A] party may not make its case within the declaration of an expert

and state in the motion itself that readers should simply refer to the presentation in the declaration.”). Therefore, it should not be taken into account when assessing the public accessibility of the AESO Report, whether there was ample motivation to combine, and the AESO Report’s applicability to the challenged claims. (See Section VI, *infra*).

Ultimately, because Petitioner’s arguments concerning the public accessibility of the AESO Report should not be considered, Petitioner has failed to carry its burden that the AESO Report is prior art under 35 U.S.C. § 102(b). Even if the expert declaration is considered, which it should not, Petitioner has provided no documentary evidence that the February 17, 2005 AESO Report was available to, viewed, or downloaded by the interested public or a POSA before the October 24, 2008 priority date other than its expert’s testimony. (See EX1003, at ¶¶ 29-33).

Further, Petitioner’s reliance on search engines, without any documentary evidence, to argue that the AESO Report would have been publicly available is also improper, as Petitioner fails to provide any evidence that “a query of a search engine ***before the critical date***, using any combination of search words, would have led to [the AESO Report] appearing in the search results.” *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1349-50 (Fed. Cir. 2016) (emphasis added); (EX1009, at ¶¶ 32-33). Indeed, the Federal Circuit previously held in *Blue Calypso, LLC v. Groupon*,

Inc. that such actions failed to prove the public accessibility of a reference under 35 U.S.C. § 102(b), 815 F.3d at 1349-50. The Board should do so again here.

C. Cooley.

Cooley provides systems and methods for “determining whether to reschedule tasks on computing devices based on power-availability information for a power grid.” (EX1007, 1:28-30).

VI. LEGAL STANDARD

“[T]he petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)). This burden never shifts to the Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

The Board has previously declined to consider “argument[s] [that are] raised solely in [an expert] Declaration but not also in the Petition . . . for purposes of [the Institution] Decision.” *Dep’t of Justice v. Discovery Patents*, IPR2016-01035, Paper 11, at pp. 8-9 (PTAB Nov. 15, 2016). Such activity can amount to an impermissible incorporation by reference under 37 C.F.R. § 42.6(a)(3) that is not entitled to consideration by the Board. *Apple Inc. v. ContentGuard Holdings, LLC*, IPR2015-00446, Paper 11, at p. 16 (PTAB July 10, 2015); *see also Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1372 (Fed. Cir. 2023). For example, in *Apple Inc. v.*

ContentGuard Holdings, the Board denied institution of a petition that used its expert declaration to “vastly expand [the petition’s] thin analysis and reasoning.” IPR2015-00446, Paper 11, at p. 16 (citing *Cisco Sys., Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12, at pp. 7-10 (PTAB Aug. 29, 2014) (informative)). Further, in *Cisco Sys., Inc. v. C-Cation Techs., LLC*, the Board denied institution of a petition that offered a single paragraph of conclusory argument on motivation to combine before following it with a footnote that:

Cit[ed] to [multiple paragraphs and pages] of [the expert’s] Declaration . . . indicating the combinations would have been “well within the ordinary creativity of a person of ordinary skill in the art” and providing reasons why one would have combined the teachings of the references.

IPR2014-00454, Paper 12, at p. 9 (also holding that “[t]his practice of citing the Declaration to support conclusory arguments that are not otherwise supported in the Petition . . . amounts to incorporation by reference.”).

Prohibiting “incorporation of arguments from other documents serves various policy goals, including to ‘minimize the chance that an argument may be overlooked’ and to ‘eliminate[] abuses that arise from incorporation and combination.’” *Parus Holdings*, 70 F.4th at 1372 (internal citations omitted); see also *id.* (Incorporation “by reference amounts to a self-help increase in the length of the [] brief,” and “is a pointless imposition on the court’s time.” (quoting *DiSilva v. DiLeonardi*, 181 F.3d 865, 866-67 (7th Cir. 1999))).

The Board cannot cure a Petitioner’s deficient motivation to combine an asserted combination of references; rather, the Board must make its institution decision based on what the Petition presents and not what it could have reasonably contained had it been reformulated. *In re Magnum Oil Tools Int’l Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (holding that the Board cannot “adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during [a post-grant proceeding].”) Indeed, the Board cannot “deviate from the grounds in the petition and raise its own” invalidity theories. *Sirona Dental Sys. GmbH v. Institut Straumann AG*, 892 F.3d 1349, 1356 (Fed. Cir. 2018).

Ultimately, “[t]he Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition . . . 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); *accord* 37 C.F.R. § 42.108(c).

VII. GROUND 1: WANG DOES NOT RENDER THE CHALLENGED CLAIMS OBVIOUS

A patent claim is deemed non-obvious if even a single element of the claim is absent from the prior art. As the court noted in *CFMT, Inc. v. YieldUp Int’l Corp.*, “[o]bviousness requires a suggestion of all limitations in a claim.” 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974)). Similarly, in *Garmin Int’l, Inc. v. Patent of Cuozzo Speed Techs. LLC*, the PTAB

declined to institute an IPR under 35 U.S.C. § 103 due to the absence of all claim limitations in the prior art. IPR2012-00001, Paper 15, at p. 15 (PTAB Jan. 9, 2013).

A reference should be evaluated holistically, considering all it teaches, not merely the described invention or preferred embodiments, as clarified in *In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012) (internal citation omitted). Thus, attempting to cherry-pick teachings from different embodiments, as Petitioner does, is improper. This principle is supported in *BlephEx, LLC v. Myco Indus., Inc.*, where the court held that “[i]t is not enough that the prior art reference includes multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention....” 24 F.4th 1391, 1400-02 (Fed. Cir. 2022).

Like all obviousness analyses, single-reference obviousness requires “some rational underpinning explaining why a person of ordinary skill in the art would have arrived at the claimed invention.” *In re Stepan Co.*, 868 F.3d 1342, 1346 (Fed. Cir. 2017); *Cisco Sys., Inc. v. Bockstar Techs. LLC*, IPR2014-01192, Paper 10, at p. 13 (PTAB Feb. 2, 2015).

While a patent claim can be “obvious in light of a single prior art reference if it would have been obvious to modify that reference to arrive at the patented invention,” single-reference obviousness is “less common” and only applicable in “appropriate circumstances.” *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016). “The mere fact that the prior art can be modified does not make the

modification obvious unless the prior art suggests the desirability of the modification.” *In re Urbanski*, 809 F.3d 1237, 1243 (Fed. Cir. 2016) (internal citation omitted); *In re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989) (denying application of single-reference obviousness where the record lacked evidence that the modification would be “desirable”).

A. Petitioner Does Not Provide Sufficient Evidence or Arguments in Its Petition to Support a Finding of Obviousness Under Wang for the Challenged Claims.

Petitioner has not substantiated its assertion that the claim limitations are obvious under Wang. The Petition lacks the “particularity” needed to pinpoint the grounds and evidence as required in IPR proceedings. This necessity for specificity was highlighted in *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, where the court stressed “the utmost importance” in clearly identifying “‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” 821 F. 3d 1359, 1369 (Fed. Cir. 2016). Additionally, Petitioner’s reliance on expert testimony from a declaration to address deficiencies in the Petition undermines its position; such reliance is an improper incorporation by reference of arguments that do not appear in the Petition, requiring its denial. (See Section VI, *supra*).

1. Claim 1[P].

For claim 1[P], Petitioner fails to adequately discuss how Wang’s teachings satisfy the requirements of the preamble.³ (Petition, at pp. 12-14). Specifically, any argument regarding the applicability of Wang’s disclosure not being “limited to household applications,” (See EX1003, at ¶ 52), should be disregarded, as this represents an improper incorporation by reference of arguments not presented within the Petition itself. (See Section VI, *supra*).

2. Claim 1[A].

Petitioner does not meet the elements of claim 1[A] because it does not argue in the Petition how Wang teaches several claim elements. For example, Petitioner provides argument and expert testimony unsupported by documentary evidence about the definition of the operating environment feed input claim term (Petition, at p. 19 & EX1003, at ¶ 67), that a POSA would have used real-time grid-load data to make accurate power consumptions (EX1003, at ¶ 70), and that a POSA would have

³ For the purposes of this Preliminary Response, Patent Owner does not address whether the preamble of claim 1, or any other claim in the ’243 Patent is limiting for Ground 1 or any other Grounds. (See Petition, at p. 12). Patent Owner reserves the right to argue whether the preamble of any claims are limiting in future proceedings.

found it obvious to provide data about critical weather warnings to a smart appliance (*Id.*, at ¶ 71).

The expert's testimony in the following paragraphs of the expert declaration also cannot be found in the Petition:

- (EX1003, ¶ 57): Grid status and reliability data is of course relevant to the power grid and its generative capabilities. Weather event data may regard weather events that can hinder the grid's ability to produce power or that are associated with high demand for electric power. And CRM data may be suggestive of customers' demand for electricity;
- (*Id.*, ¶ 59): Wang's UMC receivers and display devices can both be used to acquire data and adjust power consumption based on the data;
- (*Id.*, ¶ 61): The main machine interface and appliance sensors and actuators suggest they are part of the refrigerator;
- (*Id.*, ¶ 64): The UMC receiver acquiring data regarding power pricing and grid status sufficiently teaches limitation 1[A], and that it would have been obvious to a POSA to modify Wang's UMC receivers to also acquire these other types of data;
- (*Id.*, ¶ 66): The user can acknowledge the information and otherwise interact with the display using a button;

- (*Id.*, ¶ 70): that AESO data updated its real-time grid load data every two minutes, that a POSA would have used this data to make accurate power-consumption decisions based on the data, and responded quickly to indications inherent to the data about grid demand;
- (*Id.*, ¶ 71): Wang provides data regarding critical weather warnings to the display following publication, and that it would have been obvious to a POSA to provide this data to a smart appliance.

Therefore, the Board should disregard this extensive list of statements in deciding whether Wang teaches the elements of Claim 1[A]. Taking these above considerations into account, Wang does not teach the elements of Claim 1[A] because the Petition does not provide evidence at least as to how the UMC receiver of Wang sufficiently acquires operating environmental condition data, thereby requiring denial of Ground 1.

3. Claim 1[B].

Regarding the high demand for electric power from the grid system and the operating environmental condition data, Petitioner argues that:

Given that tariffs function to discourage energy use during high periods of demand, a POSA would have understood the power pricing increase as indicative of a high demand for electric power from the electric grid system. . . . Further, a POSA would have understood the set-point adjustments as requiring or at least strongly suggesting a determin[ation] [of] an indication of a high demand for electric power.

(Petition, at p. 27 (citing EX1003, ¶ 84)).

In determining cessation of the on-peak event, Wang's devices analyze operating environmental condition data to make determinations regarding demand for electric power. . . . These teachings further underscore the obviousness of such a technique.

(*Id.* (citing EX1003, ¶ 85)).

However, paragraphs 84 and 85 of the expert declaration do not provide any documentary evidence to support this assertion. (See EX1003, ¶¶ 84, 85). Additionally, the expert declaration's argument that a POSA would have understood the display analyzing the operating environmental condition data to determine an indication of a high demand for electric power to be a prerequisite for the display providing the grid-status indications is neither cited nor referenced in the Petition. (EX1003, at ¶ 87). Consequently, this reliance on the expert declaration amounts to an improper incorporation by reference of arguments, and therefore, should not be considered by the Board in evaluating this ground. (See Section VI, *supra*).

4. Claim 2.

Claim 2 is not obvious under Wang for the same reasons as Claim 1, because Claim 2 depends from Claim 1. Additionally, Petitioner provides no intrinsic or extrinsic documentary evidence to support its following obviousness arguments for Claim 2:

Power grids commonly use “peaking plants” during periods of peak demand. Ex-1003 ¶98-99. Generally, peaking plants are smaller, fossil-fuel-powered plants that can be brought online quickly. *Id.* Given high cost and emissions issues, utilities tend not to bring peaking plants online except when necessary. *Id.* A peaking plant coming online was thus a well-understood indication of high demand on a power grid. Ex-1003 ¶100.

(Petition, at p. 34). Additionally, Petitioner argues, without any support from the intrinsic evidence, that the ’243 Patent’s claims and specification do not provide express guidance about the definition of the word “small,”⁴ (*Id.* at p. 35). Petitioner also speculates that a POSA would have found it “obvious to configure a smart appliance to receive and make power-consumption determinations based on data regarding peaking plants (i.e., small-size fossil fuel plants) coming online, which is improper. (*Id.* at p. 36).

While the expert declaration argues that the smart appliances in Wang were not limited to receiving only the AESO data discussed in Wang, and could receive additional data found in the AESO Report, that argument was first neither cited nor presented in the Petition. (EX1003, at ¶ 107). Further, this argument is problematic,

⁴ As in Section IV, *supra*, Patent Owner does not currently take a position on the definition of “small,” and whether the intrinsic evidence supports any such definitions. Accordingly, Patent Owner reserves the right to propose alternative claim constructions in subsequent proceedings, both here and in parallel litigation.

because it confuses the grounds under which Claim 2 is challenged under Ground 1 (solely under Wang, (Petition, at p. 7), with that of Ground 2, *infra*. Muddying these grounds renders it impossible to identify the evidence with particularity to evaluate the obviousness of Claim 2 under this ground, as required. Thus, Claim 2 is not obvious.

5. Claim 3.

Claim 3 is not obvious under Wang for the same reasons as Claim 1, because Claim 3 depends from Claim 1. Petitioner's expert also argues that "a POSA would have found it obvious to not determine indication of the high demand [for power] based on the lower tariff data (between T₃ and T₄).” (EX1003, at ¶ 111). However, once again, this argument is neither included nor referenced in the Petition. Therefore, the Board should exclude this argument when evaluating whether Wang teaches the elements of claim 3. (*See* Section VI, *supra*).

6. Claim 4.

Claim 4 is first not obvious under Wang for the same reasons as Claim 1, because Claim 4 depends from Claim 1. Petitioner also attempts to argue, with no documentary or evidentiary support outside its expert declaration, that a POSA would have been motivated to try using RSS to accomplish transmission of XML data over the Internet, and that there would be a reasonable expectation of making

such an implementation. (EX1003, at ¶ 117). Thus, the Board should not consider such conclusory argument when evaluating Claim 4 for obviousness under Wang.

7. Claim 5.

Petitioner attempts to argue, without documentary or evidentiary support outside the expert declaration, that a POSA would have been familiar with the relationship between grid reliability and weather conditions, such that extreme temperatures can result in heavy demand for power from the grid system; that Wang provides smart appliances with data relating to critical weather warnings; and that a POSA would have found it obvious to use the critical weather warning information in connection with Wang's load-shedding decisions. (Petition, at pp. 41-42 & EX1003, 120). Thus, the Board should not consider such conclusory argument when evaluating Claim 5 for obviousness under Wang.

8. Claim 6[B].

Petitioner presents the following argument for Claim 6[B] that is not present in the Petition:

Given Wang's teachings . . . it was – at a minimum – obvious to also store random updated power tariff information (as well as associated energy tariff-to-temperature set point correspondence in an internal state table. . . . Storing information in a state table was one of many known ways to configure data stored in memory.

(EX1003, at ¶ 128). Therefore, the Board should exclude this argument when evaluating whether Wang teaches the elements of claim 6[B]. (See Section VI, *supra*).

9. Claim 7.

Claim 7 is not obvious under Wang for the same reasons as Claim 1, because Claim 7 depends from Claim 1. Petitioner also provides no documentary evidence or support in either its Petition or expert declaration that Wang expressly instructs POSAs to use the AESO data on individual renewal energy producers to inform the system's power-curtailement decisions. (Petition, at p. 51 & EX1003, ¶ 138). Thus, the Board should not consider such conclusory argument when evaluating Claim 7 for obviousness under Wang.

10. Claim 8.

Petitioner argues, without other documentary or evidentiary support, the following for Claim 8:

- (Petition, at p. 55 & EX1003, ¶ 145): Wang teaches different types of data used to collectively adjust energy-consumption patterns, such that a POSA would have been motivated to weigh the data and thereby make aggregated findings concerning power-grid demand;
- (Petition, at p. 56 & EX1003, ¶ 146): that Claim 8 would have been obvious to try as weighted functions of linear combinations are one of a finite number

of known methods for correlating and analyzing data. Further, given the strong correlation between the data in Wang and the amount of demand on an electric grid, that a POSA could have weighed said data in a linear combination to further improve Wang's system with a reasonable expectation of success;

- (Petition, at p. 56 & EX1003, ¶ 148): Petitioner's and its expert's assumption that an aggregate feed refers to a feed for delivery of the high demand indicator, as well as other information.
- (Petition, at p. 57): a POSA would have found it obvious to illuminate a symbol responsive to determining that the linear combination is above a certain threshold.

Neither intrinsic nor extrinsic support is provided for these arguments; thus, they should not be considered by the Board.

11. Claim 9.

Claim 9 is not obvious under Wang for the same reasons as Claim 1, because Claim 9 depends from Claim 1. Petitioner also provides no documentary evidence or support in either its Petition or expert declaration that a "POSA would have found it obvious to determine rate of change of price of electricity based on real-time pricing data." (Petition, at p. 60 (citing EX1003, at ¶ 158)).

Further, Petitioner's expert also makes several arguments that are neither referenced nor included in the Petition. For example, solely the expert declaration argues that a POSA would have understood Wang's tariff data as constituting data that comprises a spot price value of electricity and that Wang's teachings on the spot price value is enough to render claim 9 obvious under Wang. (EX1003, at ¶¶ 156-157). The expert also solely argues in the expert declaration that Wang teaches a rate of change of electricity price, and that a POSA would have found it obvious to determine the rate of change of electricity price based on real-time pricing data. (*Id.*, at ¶ 158). Thus, the Board should not consider these arguments when analyzing whether Wang teaches the elements of Claim 9. (*See* Section VI, *supra*).

12. Claim 10.

Claim 10 is not obvious under Wang for the same reasons as Claim 9, because Claim 10 depends from Claim 9. Petitioner also provides no intrinsic or extrinsic evidence for its contention that "based on common knowledge regarding dryers with fluff modes, or fan-only dry modes, that a POSA would have understood the dryer could be configured to operate its heater element (i.e., a nonessential service) only when the spot price of electricity is low." (Petition, at p. 62). Such unsubstantiated speculation should not be accepted by the Board, and it is evident that Petitioner's argument for Claim 10 lacks the particularity required for instituting an IPR.

13. Claim 11[P].

The expert declaration includes several arguments that are neither referenced nor included in the Petition. For example, Petitioner's expert argues solely in the expert declaration that Figure 17 of Wang refers to appliances with embedded transceivers, as opposed to embedded receivers. (EX1003, at ¶ 172). This embodiment, according to the expert, is a variation on the UMC receiver embodiment, by adding a "transmitter for transmitting signals." (*Id.*). This is an improper incorporation by reference of additional teachings and embodiments of Wang, and the Board should not consider these arguments when analyzing whether Wang teaches the elements of Claim 11[P]. (*See* Section VI, *supra*).

14. Claim 11[A].

Petitioner provides no documentary evidence to support its argument in both the Petition and its expert declaration that "a POSA would have had a motivation to use the topology as a master to the UMC receivers for handling data acquisition, data processing, and demand determinations, at least because it was just applying a technique known to Wang's other embodiments and doing so in the master-slave paradigm." (Petition, at pp. 67-68 & EX1003, ¶ 177). The Board should not consider this conclusory evidence when analyzing Claim 11[A] for obviousness under Wang.

15. Claims 11[B]-11[D].

Petitioner provides no documentary evidence to support its argument in both the Petition and its expert declaration that the automatic reduction in power

consumption is caused by the computer infrastructure “when Wang’s topology acts as a master 1700 to the smart appliances for power curtailment purposes” and that such an addition was an design and/or implementation choice. (Petition, at p. 68 & EX1003, ¶ 178). The Board should not consider this conclusory evidence when analyzing Claim 11[B]-11[D] for obviousness under Wang.

16. Claims 12-14.

Petitioner provides no documentary evidence to support its argument in either the Petition or its expert declaration that claims 12-14 “do not preclude” “[a]dditionally, or alternatively . . . that the meters 1502 and the smart appliances (with their embedded transceivers) each qualify as aspects of the computer infrastructure provided by Limitation 11[A].” (Petition, at pp. 69-70 (citing EX1003, at ¶¶ 180-81)). The Board should not consider this conclusory evidence when analyzing Claims 12-14 for obviousness under Wang.

17. Claim 15[P]-15[A].

Petitioner provides no documentary evidence to support its argument in either the Petition or its expert declaration that a POSA would have understood that: 1) embedded program code stored in non-volatile memory means the instructions can be stored in the non-volatile memory (EX1003, at ¶ 186); and 2) transceivers embedded in smart appliances include microprocessors with instructions for receiving electrical grid data and communicating electrical load information that

could equally apply to the appliance-embedded UMC receiver system. (*Id.*, at ¶ 187). These arguments should be deemed conclusory, and improper evidence for evaluating the obviousness of claims 15[P] and 15[A].

Further, Petitioner’s expert argues that “Wang suggests the system may also include local random-access memory (RAM) (i.e., an additional computer-readable storage medium).” (EX1003, at ¶ 185). Once again, this argument is neither present nor cited in the Petition. Therefore, the Board should exclude this argument when evaluating whether Wang teaches the elements of claim 15. (*See* Section VI, *supra*).

18. Claims 16-17.

Like claims 12-14, Petitioner also provides no documentary evidence to support its argument in either the Petition or its expert declaration that claims 16-17 “do not preclude” “[a]dditionally, or alternatively . . . that the meters 1502 and the smart appliances (with their embedded transceivers) each qualify as aspects of the computer infrastructure provided by Limitation 15[A].” (Petition, at pp. 73-74 (citing EX1003, at ¶ 191)).

19. Claim 18[P] and 18[A]-18[C].

Petitioner fails to establish the elements of Claim 18 because it does not argue in the Petition how Wang teaches several key claim elements. For example, for the processing means, Petitioner merely states in a footnote that “if processing means is in means-plus-function format, Wang’s application processor 416 is an equivalent

thereto as it performs the same function in the same way for the same result as the patent's corresponding structure.” (Petition, at p. 75 n.5). However, as discussed in Section IV, *supra*, Petitioner admitted that the claims include no corresponding function, and did not include any discussion of function at all in the Petition.⁵ Instead, it solely discloses the corresponding and specific functions to the structure in its expert declaration. (EX1003, at ¶ 193). As established in prior sections, to consider arguments that are only introduced in a document separate from the Petition constitutes an improper incorporation by reference (*See* Section VI, *supra*); thus, these arguments about the functions associated with the corresponding structure should be credited no weight by the Board.

20. Claim 20.

The argument presented by Petitioner for Claim 20 that does not incorporate the analysis of previous claims is the expert's interpretation of the claim term operating environment feed data as “the operating environmental condition data.”

⁵ Similar to Section IV, Patent Owner is solely addressing Petitioner's hypothetical means-plus-function argument, and does not currently take a position on whether the “processing means” constitutes a means-plus-function claim. Accordingly, Patent Owner reserves the right to propose alternative claim constructions in subsequent proceedings, both here and in parallel litigation.

(EX1003, at ¶ 200). Once again, this argument is neither present nor cited in the Petition. Thus, the Board should not consider this argument when analyzing whether Wang teaches the elements of claim 20. (*See* Section VI, *supra*).

Ultimately, Petitioner was not without recourse by leaving certain arguments to support its Wang obviousness ground only in its expert's declaration. Petitioner could have sought leave to waive the 14,000 word-count requirement under 37 C.F.R. § 42.24(a)(2), or adjusted its Petition to include these arguments, but did not. *Parus Holdings*, 70 F.4th at 1372-73. As such, given the numerous substantive disclosure deficiencies underlying Petitioner's Ground 1 arguments, the Board should deny Ground 1.

B. Petitioner Fails to Provide the Required Reasonable Expectation of Success Analysis for Ground 1.

Even in cases involving single-reference obviousness, petitioners must demonstrate both a motivation to combine elements and reasonable expectation of success. *In re Stepan Co.*, 868 F.3d at 1346 n.1 (holding that irrespective of the approach—whether combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference—a motivation for such combinations and a reasonable expectation of their successful implementation are essential). This ensures that a skilled artisan would indeed arrive at the claimed invention. *Id.*

Unsupported attorney argument is used to establish a reasonable expectation of success. (*Id.* at pp. 77-78). Such unsubstantiated argument cannot provide a reasonable expectation of success. Therefore, Ground 1 should be denied.

VIII. GROUND 2: WANG IN VIEW OF THE AESO REPORT DOES NOT RENDER THE CHALLENGED CLAIMS OBVIOUS

Each claim challenged in Ground 2 depends directly from one of the independent claims 1, 11, or 18 challenged in Ground 1. In addition to the reasons set forth below, the Petition fails to meet its burden on Ground 2 for similar reasons as those detailed for Ground 1 concerning independent claims 1, 11, and 18. (See Section VII, *supra*).

A. Petitioner Failed to Provide the Required Reasonable Expectation of Success.

Petitioner's brief reasonable expectation of success argument must fail for two reasons. First, Petitioner provides no argument at all about reasonable expectation of success in the Petition; indeed, the heading for this section of the petition is merely titled "Motivation to Combine." (Petition, at pp. 78-79). This failure to establish the reasonable expectation of success is fatal to the Petition. *In re Stepan Co.*, 868 F.3d at 1346 n.1. Second, Petitioner shows that the reasonable expectation of success analysis is irrelevant, when Wang already discloses functions and data similar to the data disclosed in the AESO Report.

B. Challenged Claims 2, 12-14, and 20 Are Non-Obvious Under This Ground Because They Depend from Unchallenged Independent Claims.

As discussed above, dependent claims 2, 12-14, and 20 respectively depend from independent claims 1, 11, and 18, which were not challenged as obvious under the combination of Wang and the AESO Report. Petitioner thereby implicitly concedes that independent claims 1, 11, and 18, along with their respective dependent claims, are non-obvious, aligning with the principle that “[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988).

Petitioner’s argument that dependent Claims 13 and 14 are “analogous to Claims . . . 5 and 9, respectively,” (Petition, at p. 82) further supports this finding, because dependent Claims 5 and 9 were not challenged as obvious under Wang and the AESO Report.

Additionally, in regard to Claim 2, arguments concerning: 1) the obviousness of configuring Wang’s smart appliance to receive data about peaking plants and fossil fuels in order to make determinations regarding the power grid demands (EX1003, at ¶ 209); and 2) that contemporaneous copies of the AESO website include additional published data about fossil fuel plants (*Id.* at ¶ 210) introduced by Petitioner’s expert are absent from the Petition. These discussions about the POSA’s understanding of claim 2 and the applicability of fossil fuel plants to meeting power

grid demands should not be accepted by the Board, as it would constitute an improper incorporate by reference of arguments to the Petition. (See Section VI, *supra*). Petitioner also lacks evidentiary support both in the Petition and its expert declaration about the specific motivation to combine and reasonable expectation of success of Wang and the AESO Report for claim 2 (Petition, at p. 81 & EX1003, ¶ 211) and that a POSA would have looked to the MCR and TNG values to determine when coal plants are coming online to provide power to the power grid system. (Petition, at p. 81 & EX1003, ¶¶ 212-213). This should be deemed conclusory and insufficient as evidence when evaluating claim 2 under Ground 2. See *TQ Delta LLC, v. Cisco Sys., Inc.*, 942 F.3d 1352, 1358 (Fed. Cir. 2019) (“Conclusory expert testimony does not qualify as substantial evidence.”) (internal citation omitted)

Claims 12 and 20 are also non-obvious for the same reasons as Claim 2. (*Id.* (noting that Claim 12 and Claim 20 “is . . . analogous to Claim 2”)).

IX. GROUND 3: COOLEY DOES NOT ANTICIPATE THE CHALLENGED CLAIMS

Under 35 U.S.C. § 102, a claim is anticipated only if “a single prior art reference disclose[s] each and every limitation of the claimed invention, either expressly or inherently.” See *Tf3 Ltd. v. Tre Miliano*, 894 F.3d 1366, 1374 (Fed. Cir. 2018). Thus, the analysis for anticipation “must be conducted on a limitation by limitation basis.” *Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997).

If a prior art reference does not explicitly disclose a specific element of the claim, it may still anticipate if that element is inherently disclosed in the reference. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *see also Guangdong Alison Hi-Tech Co. v. ITC*, 936 F.3d 1353, 1363 (Fed. Cir. 2019) (internal citations omitted). However, inherency must *not* be based on probabilities or possibilities; “[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268-69 (Fed. Cir. 1991) (quoting *In re Oelrich*, 666 F.2d 578, 581 (C.C.P.A. 1981)).

A. Petitioner Fails to Provide Adequate Evidence or Arguments Supporting Anticipation Under Cooley for the Challenged Claims.

Petitioner has not substantiated its assertion that the challenged claims are anticipated under Cooley, at least because, similar to Ground 1, Ground 3 lacks the particularity needed to pinpoint the grounds and evidence, as required in IPR proceedings, and improperly relies on and incorporates by reference expert testimony from a declaration to address arguments that do not appear in the Petition, requiring its denial. (*See* Section VI, *supra*). For example, any argument about Cooley’s relevance and applicability to this IPR is solely discussed in the expert declaration (EX1003, at ¶ 217), and should be dismissed, as it constitutes an improper incorporation by reference.

1. Claim 1[A].

Petitioner fails to establish the elements of claim 1[A] because it does not argue in the Petition how Cooley teaches several key elements. First, Petitioner attempts to argue that Cooley anticipates claim 1[A] with unsupported expert testimony about a POSA's understanding that implementation at scale would also result in implementation in households, buildings and companies (Petition, at p. 85 & EX1003, ¶ 228); and that a POSA would know that utility companies or power grids would publish information relating to current load utility on the internet. (Petition, at p. 88 & EX1003, ¶ 232). Such unsupported expert testimony should be considered conclusory.

Additionally, Petitioner's expert provides several arguments that are neither included nor referenced in the Petition. These include the examples of environmental inputs taught in the '243 Patent and how Cooley also teaches this information through its power-availability information (EX1003, at ¶ 226), that census data would also be considered statistical data (*Id.*, ¶ 227), that a POSA would understand that the use of blow dryers and light bulbs are affected by weather conditions and time of day, (*Id.*, ¶ 229), and the POSA's understanding of the meaning of environment operating feed input (*Id.*, ¶ 231). Thus, the Board should exclude these arguments when determining whether Cooley teaches Claim 1[A].

2. Claim 1[C].

Petitioner's expert provides arguments that are neither included nor referenced in the Petition, such as the fact that Cooley's computing system includes "any single or multi-processor computing device or system capable of executing computer-readable instructions." (EX1003, at ¶ 241). Thus, the Board should exclude this argument when determining whether Cooley teaches Claim 1[C].

3. Claim 3.

Petitioner also fails to establish the elements of claim 3 at least because Petitioner provides only unsupported, conclusory argument for its contention that a POSA would have understood that a postponed task need to be performed later. (Petition, at p. 92 & EX1003, at ¶ 245).

4. Claim 11[P].

Regarding Claim 11[P], Petitioner's expert provides argument neither included nor referenced in the Petition, including that all the components could be deployed, managed, or serviced by a service provider, such as an Internet or cell phone service provider that offers to perform these service functions. (EX1003, at ¶ 249). Another argument solely disclosed in the expert declaration includes that "the steps disclosed herein" include adapting the power consumption of a computational

device in response to environmental conditions, “as explained for Preamble 1[P].”⁶ (*Id.*, at ¶ 251). Thus, the Board should exclude these arguments when determining whether Cooley teaches Claim 11[P].

5. Claims 11[B]-[D].

Regarding these claims, Petitioner argues that they are configured “to perform substantially the same operations recited in 1[A]-[C].” (Petition, at p. 96). Thus, Cooley does not anticipate Claims 11[B]-[D], and therefore, claim 11 as a whole, for the same reasons discussed above as Claims 1[A] and 1[C]. In addition to this, Petitioner’s expert also provides argument neither included nor referenced in the Petition that Cooley’s task-permit module “may represent software modules configured to run on one or more computing devices such as . . . portions of exemplary network architecture.” (EX1003, at ¶ 255). This amounts to an improper incorporation by reference, and should not be considered by the Board.

⁶ As with Ground 1, Patent Owner does not address whether the preamble of claim 1, 11, or any other claim in the ’243 Patent is limiting for Ground 1 or any other Grounds. (See Petition, at pp. 83, 93). Patent Owner reserves the right to argue whether the preamble of any claims are limiting in future proceedings.

6. Claim 15.

Similar to Claims 11[B]-[D] discussed above, Petitioner argues that Claims 15[B]-[D] “are analogous to 1[A]-[C] and are therefore anticipated for similar reasons.” (Petition, at p. 98). Thus, Cooley does not anticipate Claims 15[B]-[D], and therefore, claim 15 as a whole, for the same reasons discussed above as Claims 1[A] and 1[C].

7. Claim 18.

Regarding the “processing means” element of these claim limitations of claim 18, Petitioner notes in a footnote that if “processing means is in means-plus-function format, Cooley’s processor is an equivalent thereto as it performs the function in same way for the same result as the patent’s corresponding structure.” (Petition, at p. 100 n.7). However, as discussed in Section IV, *supra*, Petitioner admitted that the claims include no corresponding function, and did not include any discussion of function at all in the Petition.⁷ Instead, it solely discloses the corresponding function

⁷ Similar to Section IV and Ground 1, Patent Owner is solely addressing Petitioner’s hypothetical means-plus-function argument, and does not currently take a position on whether the “processing means” constitutes a means-plus-function claim. Accordingly, Patent Owner reserves the right to propose alternative claim constructions in subsequent proceedings, both here and in parallel litigation.

to the structure in its expert declaration. (EX1003, at ¶ 265). As established in prior sections, considering arguments that are only introduced in a document separate from the Petition constitutes an improper incorporation by reference (*See* Section VI, *supra*); thus, these arguments about the functions associated with the corresponding structure should be credited no weight by the Board.

Consequently, this ground must fail because Petitioner does not substantiate the anticipation claim with appropriate evidence as required under 37 C.F.R. § 42.104(b)(3) and § 42.104(b)(4) (which mandates the identification of equivalent structures and functions in the asserted references). All claims challenged in this ground share the same result as claim 18, because, as Petitioner admits, claim 18 includes analogous limitations to claim 1 and is anticipated for similar reasons as claim 1. (*See* Petition, at p. 101). Claim 3 depends from claim 1, and, as indicated above, Claims 11 and 15 are also analogous to Claim 1. Therefore, these analogous claims also include by analogy the “processing means” claim term at issue here.

X. DENIAL OF THE PETITION UNDER § 315(d) IS APPROPRIATE

When there are parallel proceedings pending before the Patent Office — such as IPR and a reexamination — “the Director may determine the manner in which the *inter partes* review or other proceeding or matter may proceed, including providing for stay, transfer, consolidation, **or termination** of any such matter or proceeding.” 35 U.S.C. § 315(d) (emphasis added). The Director ordered an *ex parte*

reexamination of the '243 Patent on December 12, 2023. (Petition, at p. 1). In view of the finite resources of the Board and the co-pending ex parte reexamination, the Director should deny the Petition under 35 U.S.C § 315(d).

XI. DISCRETIONARY DENIAL UNDER § 314(a) IS APPROPRIATE UNDER THE GENERAL PLASTIC FACTORS

In *General Plastic*, the Board recognized “the potential for abuse of the review process by repeated attacks on patents.” *General Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19, at p. 17 (PTAB Sept. 16, 2017) (precedential) (“*General Plastic*”). The Board’s intent for formulating the General Plastic factors “was to take undue inequities and prejudices to Patent Owner into account.” *Id.* The “fairness concerns discussed in *General Plastics*” also apply when the later-filed petition is filed by a different petitioner and “favor[] denying institution.” *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11, at pp.12-13 (Apr. 2, 2019) (precedential) (“*Valve*”).

Patent Owner responds to Petitioner’s reliance on *General Plastic* and states that the *General Plastic* analysis favors Patent Owner, not Petitioner. *General Plastic* articulates a list of seven factors the Board considers in evaluating whether to exercise its discretion under section 314(a) to deny a follow-on petition challenging a previously-challenged patent. *General Plastic*, at p. 16. Each of the factors “is to be considered and weighed according the facts of the particular case,” and no single factor is dispositive. *Netapp, Inc. v. Realtime Data LLC*, IPR2017-

01354, Paper 16, at p. 11 (PTAB Nov. 14, 2017). As seen below, five of the General Plastic factors weigh against institution, and two are neutral. Thus, the Petition should be denied.

A. General Plastic Factor 1.

For the first *General Plastic* factor, “application of the *General Plastic* factors is not limited solely to instances when multiple petitions are filed by the same petitioner.” *Valve*, at p. 2; *see also id.* at pp. 12-13, 15 (noting that the same efficiency and fairness concerns *General Plastic* addresses are implicated when a different petitioner files a follow-on petition). At the very least, different petitioners may still be treated as the same under *General Plastic* when they share a “significant relationship.” *Id.* at pp. 9-10.

Tesla, Petitioner for this IPR, is a paying member of Unified Patents. (*Members*, UNIFIED PATENTS (last visited May 22, 2024), <https://www.unifiedpatents.com/members> (identifying Tesla as a member of Unified Patents and requiring companies with more than \$20 million in revenue to pay between \$50,000 to \$490,000 in subscription fees) (EX2002)); (*Tesla Inc. Annual Income Statement*, WALL STREET JOURNAL (last visited May 22, 2024), <https://www.wsj.com/market-data/quotes/TSLA/financials/annual/income-statement> (identifying Tesla as earning \$96.773 billion in revenue in fiscal year 2023) (EX2003)). Meanwhile, Petitioner provides no documentary evidence

supporting its argument that it is unrelated to Unified Patents. (Petition, at p. 8). Previously, the Board has held that “Unified’s subscription fees provide an incentive to challenge patents asserted against its members.” *See Toyota Motor Corp. v. Intellectual Ventures II LLC*, IPR2022-00708, Paper 12, at p. 10 (PTAB Oct. 10, 2022). The Board should consider such an incentive to create a significant relationship between Unified Patents and Petitioner.

But even if the Board finds that Petitioner’s actions did not create an implicit relationship with Unified, the Board may still exercise its discretion to deny institution when other *General Plastic* factors weigh in favor of denial. *See United Fire Protection Corp. v. Engineered Corrosion Solutions, LLC*, IPR2018-00991, Paper 18, at p. 13 (PTAB. Oct. 10, 2019) (“The potential for abuse of follow-on petitions exists not only with overlapping petitions by the same petitioner....”); *see also Code200, UAB v. Bright Data Ltd.*, IPR2022-00861, Paper 18, at p. 5 (PTAB Aug. 23, 2022) (precedential) (“*General Plastics* factor 1 must be read in conjunction with factors 2 and 3.”). For example, in *Unified Fire*, the Board exercised its discretion to deny institution of a follow-on petition even though it found a lack of substantial relationship between the two petitioners, because the third and fifth General Plastic Factors “weigh[ed] . . . in favor of invoking its discretion to deny institution.” *United Fire*, IPR2018-00991, Paper 10, at pp. 15, 17 (PTAB Nov. 15, 2018); *see also Ericsson Inc. v. Uniloc 2017, LLC*, IPR2020-00420, Paper

7, at p. 13 (PTAB June 18, 2020) (finding “factor five urges in favor of denying the [p]etition” despite the follow-on petition being filed by a party unrelated to the first petition). Here, as explained below, both the third and fifth *General Plastic* factors weigh against institution. Thus, this factor weighs against institution.

B. General Plastic Factor 2.

The second factor considers whether “at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it.” *General Plastic*, at p. 9. Here, as established above for Factor 1, Unified Patents and Petitioner are related, contrary to Petitioner’s assertions otherwise. (See Petition, at p. 8). Petitioner’s reliance on the *LG* case for this factor is also unpersuasive, as mentioned in the Petition at p. 8, at least because the Board in *LG* found this factor was neutral, since the petitioner in that case presented no evidence in the record indicating whether it “should have been able to find the references relied on in the Petition at the time of filing the prior petitions by exercising reasonable diligence.” *LG Elecs., Inc. v. Bell N. Research, LLC*, IPR2020-00319, Paper 15, at p. 9 (PTAB June 23, 2020).

Petitioner also could have explained “why a reasonably diligent search could not have uncovered the newly applied prior art,” *General Plastics*, at p. 20, but did not. As such, much like in *General Plastics* and *LG*, the record here “is devoid of any explanation why [a] Petitioner could not have found the newly asserted prior art

in any earlier search(es) through the exercise of reasonable diligence.” *Id.* Petitioner also did not attempt to “argue that there were any changed circumstances that reasonably justified its new prior art searches and associated filing of follow-on petitions.” *Id.* Thus, at worst, this factor should be considered neutral.

C. General Plastic Factor 3.

The third *General Plastic* factor evaluates the extent to which a Petitioner had the opportunity to “tailor its arguments to address issues identified by the Patent Owner and/or the Board during a prior proceeding.” *NetApp*, IPR2017-01354, Paper 16, at p. 11. Petitioner not only had the chance to study the filed request for reexamination that was filed on November 21, 2023, but also the Board’s reasons for granting the ex parte reexamination, which was mailed on December 12, 2023; both these events in the ex parte reexamination proceedings occurred at least two to three months prior to the filing of this IPR. Further, contrary to Petitioner’s assertions, (Petition, at p. 9), the Board has made substantive statements about the prior art in the ex parte reexamination by issuing a non-final office action. In a non-final office action, the Board issued two grounds of rejection:

- A section 102(b) rejection of Claims 1, 3, 5, 9-11, 15, and 18 of the ’243 Patent under U.S. Patent No. 7,274,975 to Miller (“Miller”); and
- A section 103(a) rejection of Claims 4, 6, 16, and 19 under Miller in view of U.S. Patent No. 7,246,014 to Forth et al. (“Forth”).

(*Non-Final Office Action*, Ex Parte Reexamination Control No. 90/019,303, at pp. 5-15 (Apr. 11, 2024) (EX2004)). Notably, the Examiner in the ex parte reexamination rejected all the claims challenged under the Cooley anticipation ground discussed above, and only added dependent claims 9-10. (*Compare id.* at p. 5, *with* Petition at p. 7). The Board may consider this ex parte reexamination record, “including the number of Office Actions and Board Decisions” when considering whether to exercise its discretion to deny institution. *See Kayak Software Corp. v. IBM Corp.*, CBM2016-00075, Paper 16, at pp. 12-13 (PTAB Dec. 15, 2016) (“While length of prosecution and the numbers of Office Actions and Board Decisions do not, by themselves, definitively mandate for or against institution on a particular ground, on these facts, we are persuaded that they do weigh heavily against institution of the prior art grounds proffered by Petitioner.”). Thus, given the similarity in the prosecution record of the ex parte reexamination and the Cooley ground for this IPR, this factor weighs against institution.

D. General Plastic Factor 4.

Under this factor, the Board considers “the length of time that elapsed between the time that petitioner learned of the prior art asserted in the second petition and the filing of the second petition.” Petitioner provides no evidence or support for its contention that this factor weighs in favor of institution because it filed this IPR before the deadline for invalidity contentions has been set in the parallel litigation.

(See Petition, at p. 9). Nor does it provide any evidence as to when it learned of Wang, the AESO Report, and Cooley. (See *id.*). The record only shows that it waited until nearly three months from November 24, 2023, the date the ex parte reexamination was filed against the '243 Patent, to file this IPR challenging all claims of the '243 Patent, including the overlapping claims asserted in the ex parte reexamination. Thus, this factor weighs against institution.

E. General Plastic Factor 5.

The fifth *General Plastic* factor evaluates whether the petitioner provides an adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent. Petitioner provides no evidence to support its arguments that it has no involvement with the ex parte reexamination and that it pursued its unpatentability grounds in this IPR with reasonable diligence. (Petition, at p. 9). Here, Petitioner provides no evidence whatsoever as to when it first learned of, or reasonably could have learned of, Wang, the AESO Report, and Cooley, and when it discovered these references in relation to those relied on in the ex parte reexamination. To the extent that any reasonable explanation existed for Petitioner's delay, "it was incumbent upon Petitioner to identify those circumstances to the Board in the Petition itself." *Seki S.P.A. v. CM2W JSC*, IPR2020-01636, Paper 9, at pp. 9-10 (PTAB Jan 7, 2021) (finding factors four and five in favor of exercising

the Board’s discretion to deny institution). Thus, this factor weighs against institution.

F. General Plastic Factor 6.

The sixth *General Plastic* factor considers “the finite resources of the Board,” and is generally an efficiency consideration. *General Plastic*, at pp. 16-17. Generally, “having multiple petitions challenging the same patent . . . is inefficient and tends to waste resources.” *Videndum Production Solutions, Inc. v. Rotolight Limited*, IPR2023-01218, Paper 9, at p. 17 (PTAB Jan. 25, 2024). These efficiency considerations also apply to a follow-on petition from a different entity. *Id.*

Here, Petitioner’s Petition challenges all claims of the ’243 Patent, including those that were challenged in the ex parte reexamination, as discussed above under the third *General Plastic* factor. Further, while Petitioner argues that the Board has the authority to stay the currently-pending reexamination, (Petition, at p. 9), “multiple, staggered petition filings . . . are an inefficient use of the . . . Board’s resources.” *FedEx Corp. v. Intellectual Ventures II, LLC*, IRP2017-02039, Paper 9, at p. 11 (PTAB Feb. 21, 2018). Since the ex parte reexamination and this IPR address many of the same claims, the Board would be required to address overlapping issues based on “two different evidentiary records,” wasting significant Board resources. *Club Champion, LLC v. True Spec Golf LLC*, IPR2019-01569, Paper 9, at pp. 10-11 (PTAB Mar. 17, 2020); see also *Longi Green Energy Tech. Co. et al. v. Hanwha*

Solutions Corp., IPR2020-0047, Paper 18, at p. 12 (PTAB Apr. 27, 2020) (finding that a five-month delay between petitions addressing non-overlapping claims “weigh[s] in favor of invoking our discretion to deny institution” due to “a significant impact on the Board’s resources” in addressing overlapping issues). Thus, this factor weighs against institution.

G. General Plastic Factor 7.

Petitioner notably did not include *General Plastic* factor 7 in its analysis. (See Petition, at pp. 8-9). This factor is the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than one year after the date on which the Director notices institution of review. *General Plastic*, at p. 16. This factor appears to be neutral under the present facts.

XII. DISCRETIONARY DENIAL UNDER § 314(a) IS APPROPRIATE UNDER THE *FINTIV* FACTORS

The *Fintiv* factors “relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11, at 5-6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). When evaluating the *Fintiv* factors, the Board takes “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review,” recognizing that “there is some overlap among these factors” and that “[s]ome facts may be relevant to more than

one factor.” *Id.* at 6. No single factor is determinative. *Apcon, Inc. v. Gigamon Inc.*, IPR2020-01579, Paper 9, at p. 33 (Mar. 16, 2021).

The Board first considers whether the *Fintiv* factors weigh in favor of denying institution; if so, the Board must also determine whether the Petition presents compelling merits. See *CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 4 (PTAB Feb. 27, 2023) (precedential) (“In circumstances where . . . the Board’s analysis of *Fintiv* factors 1-5 favors denial of institution, the Board shall then assess compelling merits.”).

A. *Fintiv* Factor 1: Likelihood of a Stay.

For factor 1, the likelihood of a stay, there is currently no stay in effect contrary to Petitioner’s assertions, nor is one pending. *Fintiv* cautions against speculating whether a district court would grant a stay if requested. *Samsung Electronics Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01093, Paper 11, at p. 12 (PTAB Jan. 8, 2024) (discussing *Fintiv*, Paper 15, at p. 12 (PTAB May 13, 2020) (informative)). This is because courts “grant a stay based on the facts of each specific case.” *Intel Corp. v. VLSI Tech. LLC*, IPR2020-00158, Paper 16, at p. 7 (PTAB May 20, 2020). District courts possess discretion in deciding whether to stay proceedings when a defendant has filed an IPR petition. *Murata Machinery USA v. Daifuku Co., Ltd.*, 830 F.3d 1357, 1362 (Fed. Cir. 2016); *Cf.* 35 U.S.C. § 315(a)(2).

Petitioner did not disclose that the parallel district court action remains unstayed,⁸ with no motion to stay either pending or previously filed. (See Parallel District Court Litigation Docket (EX2005)). This contradicts the assertions in the Petition. (See Petition, at p. 10).

Given the specific circumstance of the parallel district court litigation, particularly the absence of consideration for a motion to stay, this factor is neutral at worst. See *Cisco Sys, Inc. v. Oyster Optics, LLC*, IPR2021-00238, Paper 10, at p. 11 (PTAB June 1, 2021).

B. Fintiv Factor 2: Proximity of the Court’s Trial Date to the Board’s Projected Deadline for a Final Written Decision.

For factor 2, which concerns the proximity of the district court’s trial date to the Board’s projected deadline for a Final Written Decision, the Board typically refrains from “speculat[ing] about Petitioner’s motion to transfer the proceeding . . . and any impact that may have on the trial date, should the motion be granted.” *GlobalFoundries Inc. v. UNM Rainforest Innovations*, IPR2020-00984, Paper 11, at

⁸ The parties previously agreed to stay “all merits-based fact discovery . . . until resolution of Defendant’s Motion to Transfer” (*Graphite Charging Company LLC v. Tesla, Inc.*, 3:24-cv-02717-VC, Dkt. No. 36, ¶ 5.f (W.D. Tex. Dec. 6, 2023)). Because the District Court resolved the Motion to Transfer on April 25, 2024, (see *id.* at Dkt. No. 61), the stay on merits-based discovery is resolved.

p. 15 (PTAB Dec. 9, 2020) (finding *Fintiv* factor 2 weighed in favor of exercising discretion to deny institution of the petition, and instituting the petition for other reasons).

Although Petitioner suggests that the expected trial date in the parallel district court litigation will occur well after the Board’s Final Written Decision, primarily because the merits-based case was stayed when the Petition was filed (*see* Petition at p. 10), the recent resolution of the Motion to Transfer and the court’s recent actions in the parallel litigation suggest otherwise. Specifically, the court has required the parties to file their joint Case Management Statement on June 21, 2024, and scheduled the Initial Case Management Conference to June 28, 2024. (EX2005, Dkt. No. 71). The parties must also meet and confer to discuss their initial disclosures and discovery plan by July 16, 2024, and make their initial disclosures by July 30, 2024. (*Id.*, Dkt. No. 64, at p. 1 (noting that “Counsel must comply with the dates listed below.”)).⁹ Thus, this factor weighs against institution.

C. *Fintiv* Factor 3: Investment in the Parallel Proceeding by the Court and the Parties.

This factor evaluates the extent of the court and parties’ investment in the parallel proceeding to assess whether “the ... proceeding is more advanced . . . and

⁹ Out of an abundance of caution, Patent Owner attaches Dkt. No. 64 of the parallel litigation as a separate exhibit EX2006. (EX2006, at p. 1).

instituting would lead to duplicative costs.” *Fintiv*, at pp. 19-20. The critical element here is the actual investment made by the parties in the district court litigation at the time of IPR institution decision. *See Verizon Bus. Network Servs. LLC v. Huawei Techs. Co.*, IPR2020-01292, Paper 13, at pp. 14-15 (PTAB Jan. 25, 2021); *Fintiv*, at pp. 5-6. As discussed above, the motion to transfer has been resolved, and the court in the parallel litigation has required the parties to comply with several discovery deadlines in June and July 2024. Notably, these discovery deadlines are before the Board’s August 9, 2024 institution decision deadline. *See* 35 U.S.C. § 314(b)(1) (“The Director shall determine whether to institute an inter partes review . . . within three months after receiving a preliminary response to the petition.”). Thus, because substantive merits-based discovery will have occurred before the institution decision, this factor weighs against institution.

D. *Fintiv* Factor 4: Overlap Between the Issues Raised in the Petition and the Parallel Proceeding.

Factor 4 significantly influences the decision to deny institution of an IPR when there is substantial overlap between the issues in the IPR petition and those in the parallel litigation. In this case, all claims asserted in the parallel litigation are also contested here in the IPR. (*See generally* Petition); *Fintiv*, at p. 13.

Petitioner’s assertion that “the Final Written Decision here will ***likely*** trigger estoppel ***before trial***” (Petition, at p. 10 (emphasis added)) also fails to mitigate any concern of potentially conflicting decisions and duplicative efforts between the

district court and the Board, at least because it is not a clear stipulation “that, **if IPR is instituted**, [Petitioner] will not pursue in the District Court Litigation any ground raised or that could have been reasonably raised in an IPR.” *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12, at p. 18 (PTAB Dec. 1, 2020) (precedential as to § II.A) (emphasis added); *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24, at pp. 11-12 (PTAB June 16, 2020) (informative).

Indeed, because the estoppel statute only precludes parties from raising such grounds “[w]hen IPR proceedings **result in a final written decision**....” *Cal. Inst. Of Tech. v. Broadcom Ltd.*, 25 F.4th 976, 989 (Fed. Cir. 2022) (discussing 35 U.S.C. § 315(e)(2)) (emphasis added), Petitioner’s assertion does not prevent Petitioner from asserting these same invalidity grounds in the parallel litigation through its invalidity contentions or expert discovery **before** the Board issues a Final Written Decision. The lack of a clear stipulation also leaves open the possibility that Petitioner may use different printed publications and system combinations not asserted in the Petition, thus not aligning with the exact estoppel provisions of 35 U.S.C. § 315(e). Consequently, instituting an IPR under these circumstances would not provide a quicker and more cost-effective alternative to litigation, tipping this factor against institution. *Fintiv*, at p. 13.

E. Fintiv Factor 5: The Parties in Both Proceedings Are Identical.

The fifth *Fintiv* factor, which considers whether the parties in the IPR and the parallel litigation are identical, significantly supports denial of institution. See *Samsung Electronics*, IPR2023-01093, Paper 11, at p. 18; *Intel Corp. v. VLSI Tech. LLC*, IPR2020-00112, Paper 15, at p. 13 (PTAB May 19, 2020). This factor is strongly affirmed when the same parties are involved in both proceedings, as consistent rulings have highlighted. *Id.*; *Fintiv*, at p. 15 (“Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial.”). In this case, the identity of parties in both the IPR and district court litigation underscores a strong preference for denial of institution. Petitioner’s reliance on the *Amazon* case for this factor is unpersuasive, as mentioned in the Petition at pp. 10-11, due to its lack of precedential or informative status.

F. Fintiv Factor 6: Other Circumstances Impacting the Board’s Exercise of Discretion, Including the Merits

The sixth *Fintiv* factor involves “a balanced assessment of all relevant circumstances in the case, including the merits,” to determine “whether to exercise discretion to deny institution under § 314(a).” *Verizon*, IPR2020-01292, Paper 13, at pp. 17-18 (internal citation omitted). The merits of the case must not only be strong from a subjective standpoint but also objectively compelling enough to counterbalance the other *Finitiv* factors. See *Samsung Electronics Co., Ltd. v. Ancora Technologies, Inc.*, IPR2020-01184, Paper 11, at p. 24 (PTAB Jan. 5, 2021).

As previously detailed, Patent Owner has outlined significant shortcomings across all three grounds of Petitioner’s arguments, evidencing that the Petition lacks sufficient merit to proceed. These identified deficiencies reinforce the view that the merits of the Petition do not reach the threshold of being “compelling,” which starkly contrasts with Petitioner’s assertions. (Petition, at p. 11). Moreover, “[i]f the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favor[ing] denial are present.” *Fintiv*, at p. 15. Given that four of the first five *Fintiv* factors actively support denial and the remaining factor is at worst neutral, this factor further endorses a decision against institution. *Id.*, at p. 6.

XIII. CONCLUSION

For the reasons set forth above, Patent Owner respectfully requests that the Board deny this Petition.

Respectfully submitted,

Dated: May 28, 2024

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**CERTIFICATE OF TYPE-VOLUME LIMITATIONS
UNDER 37 C.F.R. § 42.24**

Pursuant to 37 C.F.R. § 42.24(d), Counsel for Patent Owner Graphite Charging Company, LLC hereby certifies that the foregoing **PATENT OWNER GRAPHITE CHARGING COMPANY, LLC'S PRELIMINARY RESPONSE** complies with the type-volume limitation of 37 C.F.R. § 42.24(b)(1). According to Microsoft Office Word 2016's word count, this Preliminary Response contains approximately 12,676 (up to 14,000) words, exclusive of the parts exempted as provided in 37 C.F.R. § 42.24(a).

Respectfully submitted,

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**CERTIFICATE OF SERVICE
UNDER 37 C.F.R. § 42.6(e)(4)**

The undersigned hereby certifies that a copy of the foregoing Patent Owner's Preliminary Response was served on May 28, 2024, by filing this document through the Patent Trial and Appeal Board End to End System as well as delivering a copy via electronic mail upon the following email addresses for the attorneys of record for the Petitioner: Tesla-Graphite243-IPR@morganlewis.com and pmargulies@tesla.com.

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