

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner

v.

GRANITE VEHICLE VENTURES LLC,
Patent Owner

Case IPR2025-01034
Patent 12,037,004
(Claims 1-9, 29-39)

**PATENT OWNER'S PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107**

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EXHIBIT LIST

Exhibit	Description
EX2001	Complaint for Patent Infringement, <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 1, Case No. 2:24-cv-01007-JRG, (E.D. Texas, December 6, 2024)
EX2002	Docket Sheet for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , Case No. 2:24-cv-01007-JRG
EX2003	First Amended Docket Control Order for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 42, Case No. 2:24-cv-01007-JRG, (E.D. Texas, April 10, 2025)
EX2004	Docket Control Order for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 38, Case No. 2:24-cv-01007-JRG, (E.D. Texas, March 27, 2025)
EX2005	Second Amended Docket Control Order for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 94, Case No. 2:24-cv-01007-JRG, (E.D. Texas, August 15, 2025)
EX2006	Plaintiff's Notice of P.R. 3-1 and P.R. 3-2 Disclosures, for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 49, Case No. 2:24-cv-01007-JRG, (E.D. Texas, April 28, 2025)
EX2007	Defendants' Notice of Compliance Regarding Patent Rule 3-4(a) Disclosures for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 58, Case No. 2:24-cv-01007-JRG, (E.D. Texas, May 8, 2025)
EX2008	Defendants' Notice of Compliance Regarding Patent Rule 3-3 and 3-4 Invalidity Contentions, <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 74, Case No. 2:24-cv-01007-JRG, (E.D. Texas, June 5, 2025)
EX2009	Defendant's Invalidity Contentions served June 4, 2025
EX2010	Declaration of Blaine A. Larson in Support of Discretionary Denial Brief
EX2011	Protective Order for <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 52, Case No. 2:24-cv-01007-JRG, (E.D. Texas, April 28, 2025)
EX2012	Notice of Broadened Sotera Plus Stipulation of Defendant Tesla, Inc., <i>Granite Vehicle Ventures LLC v. Tesla, Inc.</i> , DKT No. 88, Case No. 2:24-cv-01007-JRG, (E.D. Texas, July 24, 2025)
EX2013	Patent Owner Statutory Disclaimer, filed August 22, 2025
EX2014	42 Federal District Court Cases for District Court Judge Rodney Gilstrap (Lex Machina)

Granite Vehicle Ventures LLC (“Patent Owner”) respectfully requests the Board deny institution in this proceeding because the Petition filed by Tesla, Inc. (“Petitioner”) does not have a reasonable likelihood of prevailing on any claim of U.S. Patent No. 12,037,004 (“the ’004 patent”) challenged in this IPR.

I. INTRODUCTION

Petitioner cannot prevail on any of the remaining claims of the ’004 patent that are challenged in this proceeding, namely claims 1-9 and 29-39. These claims are largely directed to inventions used in self-driving vehicles (“SDVs”) that generate “weighted voting result[s]” using weights comprising “active learning data.” Petitioner failed to show that the cited art discloses or renders obvious either of these limitations. The Grounds set forth in the Petition rely on combinations using a large number of alleged prior art references—no less than four references, and as many as *thirteen*. Unsurprisingly, Petitioner failed to show *how* or *why* an ordinary artisan would have combined all these references to achieve the particular features claimed. Moreover, despite the large number of references cited, Petitioner still could not find all the limitations of the claims in the art.

First, Petitioner fails to show that any reference discloses *transferring driver controls to manual control*, a limitation recited by all three independent claims challenged in this proceeding. The *McNew* reference (on which the Petition relies for this limitation) does not disclose *transferring driver controls to manual control*

because *McNew's* driver keeps manual control at all times. In fact, *McNew* teaches that its “semi-autonomous” lane trace control (“LTC”) system only works if the driver maintains manual control. If the driver does not do so, the LTC system shuts off. In addition, *McNew* fails to disclose *transferring driver controls* because the only control *McNew* addresses is steering, and the claims require multiple *driver controls*, including engine throttle and braking, as well as steering.

Second, the Petition fails to establish any of the grounds of challenge because it fails to show a motivation to combine *McNew's* alleged *transferring* with the autonomous operations of the *Attard* reference. The Petition relies on purported, unspecified similarities between *McNew* and *Attard*, but any cosmetic similarities are outweighed by the significant, relevant differences (which Petitioner ignores). Because *McNew* requires a driver to maintain control at all times, it teaches shutting down its “semi-automatic” system to force the driver to exercise control over the vehicle. In contrast, *Attard* teaches an autonomous SDV, which Petitioner contends does not even need a human driver to control the driver controls. In the context of *Attard*, it makes no sense to force a driver to exercise control, as *McNew* teaches. Petitioner’s generic assertions of improvements and advantages are legally insufficient to show that an ordinary artisan would reach a different conclusion.

Third, claims 2-5, 8, 9, and 31-36 would not have been obvious because, contrary to the Petition, none of the relied-upon references (*Gunderson*, *Kang*,

Schunder, and *Attard*) teaches *active learning data*. The Petition relies on an incorrect and overly broad interpretation of *active learning data*, which it implicitly construes to mean any data from a source external to the SDV. This reads the word “learning” out of the claims, and also ignores the express limitation that the *active learning data* comes from “other SDVs.” None of the cited references teaches using data for “learning,” and Petitioner does not attempt to argue otherwise. Petitioner also makes no effort to show that any of *Gunderson*, *Kang*, and *Schunder* disclose data coming from “other SDVs.”

For at least these reasons, the Board should deny institution and terminate this proceeding.

II. BACKGROUND OF THE '004 PATENT

The '004 patent is titled “Controlling Driving Modes of Self-Driving Vehicles,” EX1001 at (54), and generally relates to “controlling whether self-driving vehicles operate in autonomous mode or manual mode.” *Id.* at 1:27-28. The '004 patent names Michael S. Gordon, James R. Kozloski, Ashish Kundu, Peter K. Malkin, and Clifford A. Pickover as inventors. *Id.* at (72). The '004 patent claims priority through a chain of continuation applications to a non-provisional application filed September 25, 2015, *id.* at (63), and issued on July 16, 2024. *Id.* at (45).

The '004 patent describes its disclosure as relating “specifically to the field of self-driving vehicles” or SDVs, which it describes as, e.g., “vehicles that are able to

autonomously drive themselves through private and/or public spaces.” *Id.* at 1:24-25, 1:29-31. “[A]t any point in time[,] the SDV may be in autonomous mode or manual mode.” *Id.* at 6:16-17. “While in manual mode, SDV 202 operates as a traditional motor vehicle, in which a human driver controls the engine throttle, engine on/off switch, steering mechanism, braking system, horn, signals, etc. found on a motor vehicle.” *Id.* at 6:39-42. “While in autonomous mode, SDV 202 operates without the input of a human driver, such that the engine, steering mechanism, braking system, horn, signals, etc. are controlled by the SDV control processor 303,” which is “under the control of the SDV on-board computer 301.” *Id.* at 6:49-53.

The ’004 patent also relates “to the field of controlling whether self-driving vehicles operate in autonomous mode or manual mode.” *Id.* at 1:26-28. The patent teaches that, to determine the mode in which the SDV should operate in certain embodiments, the SDV can calculate both the competence level of the vehicle’s control processor and the competence level of the human driver. *Id.* at 10:7-13, 10:61-11:6. Then, for example, “a query is made as to which competence level is higher: the control processor competence level (CPCL) or the human driver competence level (HDCL).” *Id.* at 11:58-61. Based on the results of said query, the SDV either remains in autonomous mode or switches to manual mode. *Id.* at 11:61-67.

Although the ’004 patent has several points of novelty over Petitioner’s combinations of references, for purposes of this preliminary response, Patent Owner

will focus on certain limitations present in every independent claim. For example, claim 1 recites, in part:

1. A computer program product for controlling a driving mode of a self-driving vehicle (SDV), the computer program product comprising a non-transitory computer readable storage medium having instructions that, when executed, cause at least one data processing apparatus to perform operations comprising:

. . .

determining, using the fault remediation table, a second corrective action associated with the second fault, wherein the second corrective action comprises decreasing a speed of the SDV and *transferring driver controls to manual control*; *autonomously controlling the driver controls without requiring the human driver to control the driver controls* when no fault has occurred, wherein the driver controls comprise: engine throttle, steering mechanism, and braking system; . . .

Id. at 21:33-38, 21:65-22:7 (italics added). Claims 29 and 37 each recite similar limitations involving *transferring driver controls to manual control* and *autonomously controlling the driver controls without requiring the human driver to control the driver controls*. *Id.* at 29:8-11, 29:22-26, 31:14-17, 32:3-6. All other challenged claims in this proceeding depend from one of claims 1, 29, or 37.

The '004 patent teaches that, in an embodiment, the SDV utilizes weighted voting “to weight the various variables used in making [a] decision that is triggered by faults.” *Id.* at 8:58-9:4. The patent further teaches an embodiment in which “processor(s) weight each of the sensor readings for different anomalous operational conditions of the vehicle, and then sum the weighted sensor readings for the anomalous operational conditions of the vehicle.” *Id.* at 13:61-14:9. Depending on the outcome of this determination, the SDV could be required to go into autonomous mode, or it could be required to go into manual mode. *Id.* at 14:9-25.

The '004 patent also teaches that, in an embodiment, “active learning is employed so that the system as a whole learns from the experiences of many SDVs and drivers, in different geographies and among cohorts.” *Id.* at 9:6-8. More specifically, “the SDV 202 ‘learns’ about how significant operational anomalies are . . . by taking information from other SDVs and their driving history as well as the driving history of the SDV 202 itself.” *Id.* at 14:26-30. Thus, in certain embodiments, the SDV “learns” about the weight to be given certain detected operational anomalies by using active learning.

III. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner proposes a person of ordinary skill in the art (“POSITA”) “would have had a bachelor’s degree in computer engineering, computer science, electrical engineering, mechanical engineering, physics, or a related field, with at least four

years of experience in the field of vehicle telematics and safety systems, or a master's degree in the same fields with at least three years of experience in the field of vehicle telematics and safety systems.” Petition at 1-2. It is unnecessary for Patent Owner to propose a competing definition at this time because, even under Petitioner's proposed definition, Petitioner has failed to demonstrate a reasonable likelihood of success on any of the challenged claims. Patent Owner reserves the right to propose a different POSITA definition if the Board institutes IPR.

IV. CLAIM CONSTRUCTION: “ACTIVE LEARNING DATA”

The Petition must identify “[h]ow the challenged claim[s] [are] to be construed.” 37 C.F.R. § 42.104(b)(3). Petitioner purports to apply “the plain and ordinary meaning [sic] of all claim terms.” Petition at 5. Instead, Petitioner ignores the plain language of the claims to arrive at an improperly broad construction of the term “active learning data,” which is present in half of the challenged claims. According to Petitioner, “active learning data” can be any data whatsoever, regardless of how it is used or where it comes from. This is inconsistent with the plain language of the claims. First, Petitioner ignores the word “learning” in “active learning data.” Second, Petitioner ignores the requirement, found in every claim, that the “active learning data” must come from “other SDVs.” By completely ignoring these claim elements, Petitioner has failed to show that any reference discloses “active learning data” within the plain meaning of the claims.

Petitioner implicitly construes the term “active learning data” as “any data” that comes from sources other than the self-driving vehicle of the invention, regardless of whether the data is used for “learning” and regardless of whether the data comes from other SDVs. For example, Petitioner argues that *Gunderson’s* “event data for a group of drivers” constitutes “*active learning data from a first cohort (Gunderson’s group of drivers) of other SDVs*” without any evidence or argument that those drivers operate SDVs. *See* Petition at 40-42 (conclusory discussion of *Gunderson*); *see also id.* at 45-46 (“*Kang teaches . . . unit 135 that obtains weather information (weather condition data) from an external source based on the vehicle’s GPS information or using onboard sensors. . . . Thus, Kang teaches weights based on active learning data that is weather condition data, i.e., the clear/rain/snow weights.*”), 47-48 (“*Schunder teaches a vehicle receives weather condition data (active learning data) from a server, which receives weather condition data from other vehicles on the same roadway.*”). Petitioner has no choice but to ignore the plain claim language because none of Petitioner’s references disclose using data for learning, and at least *Gunderson*, *Kang*, and *Schunder* do not disclose data obtained from other SDVs.

A. The Plain Meaning of “Learning”

The word “learning” in the phrase “active learning data” is a claim limitation and has its plain meaning. The claimed “active learning data” must be used for

learning; data that is not used for learning cannot satisfy this “learning” claim limitation. The specification provides examples of active learning:

In one or more embodiments of the present invention, *active learning* is employed so that the system as a whole *learns* from the *experiences of many SDVs and drivers*, in different geographies and among cohorts.

EX1001 at 9:5-8 (emphasis added). This shows “active learning data” is data that enables the system to “learn[] from the experiences” of other SDVs or their drivers.

The specification goes on to provide examples of things the system can learn:

In one or more embodiments of the present invention, the SDV 202 “*learns*” about how significant operational anomalies are. That is, by taking information from other SDVs and their driving history as well as the driving history of SDV 202 itself, SDV 202 is able to autonomously “*learn*” what operational anomalies are significant to the safe operation of SDV 202 (e.g., faulty brakes, faulty throttle controls, tires with little or no tread, etc.) and those which are comparatively insignificant (e.g., a cabin air conditioning system that is low on refrigerant, etc.).

Id. at 14:26-35 (emphasis added). This passage shows an example of the SDV improving its ability to operate by learning from experience about how significant various operational anomalies are. This confirms that the ’004 patent uses the term “learning” in the usual sense to refer to a process of using experience or data to

improve in the future. A person who learns Spanish improves their ability to speak Spanish in the future. A person who learns how to ride a bike improves their ability to ride a bike in the future. An SDV that “learns” from data improves its ability to operate in the future.

The specification also distinguishes “active learning data” from mere “data.” The specification does not use the word “learning” in situations where data inputs are merely used to make one-off (i.e., non-learning) determinations without the system learning or improving its capabilities. For example, the specification describes an embodiment where the SDV uses data from a positioning system to “determine[] a real-time current location” of the SDV. *Id.* at 5:37-40. The specification does **not** describe this one-off determination of position as “learning” because no learning or improvement is occurring. The system is simply using the data to make a one-shot determination about its current position. In another embodiment, the specification describes receiving an “environmental report” via a “data link” and using “the environmental report to describe the current condition of the roadway.” *Id.* at 13:6-24. Again, the specification does **not** describe this process as “learning” and does **not** describe the environmental report data as “active learning data,” because no learning or improvement is happening in this embodiment. The SDV is simply making a one-off determination about the current condition of the roadway using the environmental report data.

Taking these differences into account, the specification and claims confirm that the claim term “learning” has its ordinary meaning and cannot be ignored. Therefore “active learning data” does not simply mean “any data” as the Petition tries to argue. The Petition fails on all challenged claims because it does not identify data in the prior art that is used for “learning” or improvement of the system’s capabilities.

B. The Plain Meaning of “Other SDVs”

Every claim of the ’004 patent that recites “active learning data” recites that such “active learning data” comes from “other SDVs.” *Id.* at 22:23-25, 23:43-45, 24:30-37, 26:41-44, 27:14-17, 29:50-52, 29:65-67. The specification defines “SDV” to mean “Self Driving Vehicle.” *Id.* at 1:29-30. All the remaining claims challenged in this IPR require Petitioner to show that the claimed “active learning data” comes from other self-driving vehicles.

This further undermines Petitioner’s faulty position that “active learning data” can be “any data.” Data that does not come from SDVs but instead comes from other sources (e.g., the internet, GPS satellites, other vehicles that are not capable of self-driving) does not satisfy the plain language of the claims. The Petition again fails on all challenged claims because it does not identify any data that comes from other SDVs.

V. THE PETITION FAILS TO SHOW A REASONABLE LIKELIHOOD OF PREVAILING AS TO ANY CLAIM

The Petition should be denied because it fails to show a likelihood of prevailing as to any of claims 1-9 and 29-39. First, Petitioner fails to show that *McNew* discloses *transferring driver controls to manual* and fails to show that this limitation would have been obvious in the proposed combination. Second, the Petition fails to establish a proper motivation to combine key references, including *McNew* and *Attard*, which are cited as part of the challenges to every claim. Third, the Petition fails to show any reference discloses *active learning data*, which is a requirement of challenged claims 2-5, 8, 9, and 31-36.

A. Petitioner Cannot Prevail on Any of the Challenged Claims Because the Cited Art Does Not Teach *Transferring Driver Controls to Manual*, as Recited in the Claims

All the challenged independent claims—claims 1, 29, and 37—recite *transferring driver controls to manual control* under specific circumstances. EX1001 at 22:1-2, 29:25-26, 32:5-6. The Petition relies on *McNew*’s teachings for this feature. Petition at 33-34; *see id.* at 69-70, 99 (cross-citing for corresponding limitations). More particularly, the Petition relies on *McNew*’s description of a “LTC [lane trace control] system” that can, at most, “center[] the vehicle in a lane without driver input.” EX1006 at 3:61-63; *see id.* at 3:59-4:5 (describing “allowable driving states” of the LTC system). According to Petitioner, *McNew*’s “LTC system includes several

states, including MANUAL (LTC system is on and sensing, but the driver is in control) and OFF (LTC system is off).” Petition at 33. The Petition argues that *McNew* teaches “disengaging” the LTC under certain circumstances, *id.*, but (contrary to Petitioner’s argument) this does not constitute “transferring driver controls to manual control.”

First, *McNew* does not teach ***transferring*** any *driver controls* to the driver’s manual control because the system never controls them in the first place: in fact, the system depends on the **driver** maintaining control at all times. *McNew* teaches that its “semi-autonomous” LTC system **will not operate** without the **driver** having manual control over vehicle steering. For example, *McNew* states that when “the driver is not currently steering the vehicle[,]” the “driver will not be offered the LTC_ACTIVE driving state until the driver demonstrates that he or she is actively steering the vehicle,” and the system will issue a warning to “prompt the driver to demonstrate steering control of the vehicle.” EX1006 at 10:32-44. Thus, *McNew* teaches that the driver must “demonstrate steering control of the vehicle” as a prerequisite to even initiate *McNew*’s “semi-autonomous” LTC_ACTIVE mode. *Id.* If the driver fails to demonstrate control of vehicle steering, *McNew* teaches disengaging or shutting off the LTC system. *Id.* at 5:62-6:25.

McNew teaches that when the vehicle enters the LTC_ACTIVE state, the system is “capable of centering the vehicle in a lane without driver input.” *Id.* at 3:61-

63. However, *McNew* does **not** teach that steering (or any other driver controls) are ceded by the driver or otherwise “transferred” to or from the driver’s manual control.¹ The driver maintains control of all the driver controls (including steering) during the LTC_ACTIVE state and may even be required to exercise that control. For example, any maneuvering that exceeds the LTC system’s limited capabilities—“centering the vehicle in a lane”—requires driver input. *McNew* relies on the driver to steer around any “curve in the road that is too sharp for the LTC system to navigate” and will prompt the driver to do so. *Id.* at 5:6-9. Because the driver always retains control of all the driver controls, no “transfer” of steering control (or any other driver control) occurs when entering or exiting the LTC_ACTIVE state.

Second, even assuming *arguendo* that *McNew* teaches “transferring” steering control to manual (though it does not), such a transfer still would not satisfy the claims. The claims do not recite merely transferring a **single** driver control (such as steering): they recite transferring the “driver controls” (collectively). The claimed *driver controls* must include at least three elements: (1) “engine throttle,” (2)

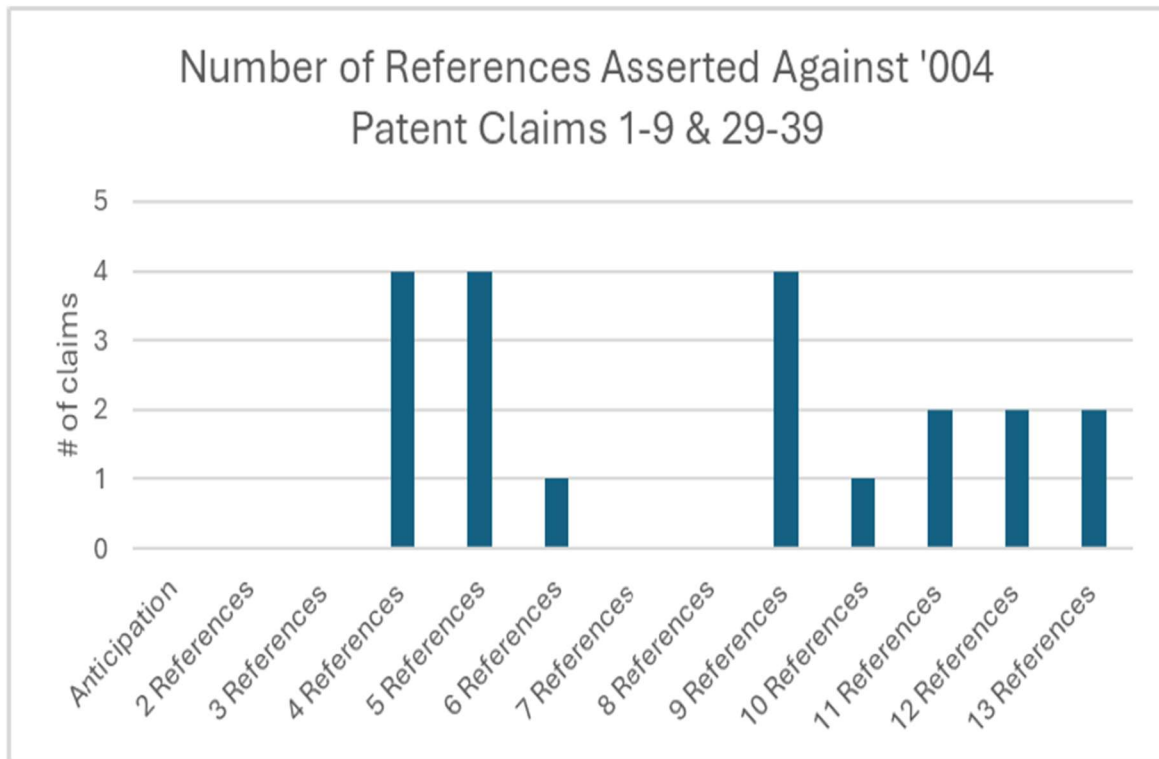
¹ The word “transfer” never appears in *McNew*, underscoring the fact that no “transfer” of the driver controls to or from the driver occurs.

“steering mechanism,” and (3) “braking system.” EX1001 at 22:5-7, 29:10-11.² The claims further recite “autonomously controlling the driver controls without requiring the human driver to control *the driver controls*.” *Id.* at 22:3-5, 29:8-9, 31:13-14 (emphasis added). Hence, the challenged claims require autonomously controlling all the *driver controls* (including **at least** the throttle, steering, and braking) and require transferring all of those *driver controls* to manual control under the recited circumstances. Thus, even if Petitioner could show that *McNew* transfers steering (which Petitioner has not done and cannot do), this still would not teach the “*transferring driver controls to manual control*” limitation.

² While challenged claim 37 does not explicitly recite “engine throttle,” “steering mechanism,” and “braking system,” the term “driver controls” has the same meaning in claim 37 as in the other claims (and Petitioner does not argue otherwise). Thus, the term “driver controls” in claim 37 must necessarily include at least the “engine throttle,” “steering mechanism,” and “braking system” recited in the other challenged claims as components of “driver controls.”

B. Petitioner Cannot Prevail on Any of the Challenged Claims Because the Petition Fails to Show Motivation to Combine the Particular References, Including *Attard* and *McNew*

The Petition’s motivation-to-combine analyses are perfunctory and deficient. This flaw is unsurprising, given the raw number of references (shown in the chart below) involved in the Petition’s scattershot, “see what sticks” approach:



See Petition at 2-4. For example, as noted above, the Petition relies on *McNew*’s teachings for the recited feature of *transferring driver controls to manual control* under the circumstances required by the claim. *Id.* at 33; *see id.* at 69-70, 99 (cross-citing for corresponding limitations). Independent of the fact that *McNew* does not teach this limitation, Petitioner fails to show that an ordinary artisan would have combined *McNew*’s alleged teaching of the *transferring* limitation with the

autonomous vehicle operations of *Attard*. Petitioner's assertions to the contrary are based on hindsight, impermissibly using the claims as a roadmap to recreate the invention from the pieces of the cited art.

As shown above, the driver in *McNew* never loses manual control of the driver controls, so those controls are not *transferred* to manual control. Rather, *McNew* teaches "control signals to shut off the semi-automatic driving system." EX1006 at 6:22-24. Not only do these control signals not teach the claimed *transferring*, Petitioner also fails to show that an ordinary artisan would have been motivated to implement *McNew's* control signals in an SDV with *Attard's* autonomous functionality to achieve the claimed invention. See Petition at 35-36 (generic discussion of combining the two references).

First, Petitioner's rote assertion that the alleged *Hampiholi-Attard* SDV is "similar" to *McNew's*, *id.* at 35, is incorrect. Petitioner relies on *Attard* for teaching an SDV that "operates 'steering, braking, and speed' autonomously" and contends this vehicle does not "require the human driver to control the driver controls." *Id.* at 36. In contrast and as shown above, *McNew* does not teach an SDV, nor does Petitioner allege that it does. Indeed, as described above, *McNew* ensures that the driver is always in control of the driver controls. *McNew* describes "enforcement actions" whose purpose is "to force the driver to comply with previously issued warnings" by, e.g., demonstrating control of the vehicle. EX1006 at 5:62-64; *see id.*

at 5:4-15 (*McNew* requiring a similar demonstration in a different situation). *McNew* even describes the refusal to comply with such warnings as “abusing the system.” *Id.* at 20:7-9.

Petitioner also cannot rely on generic assertions that *McNew*’s teachings would have “improved” the “*Hampiholi-Attard* SDV” or that it the combination would have been “advantageous[.]” *Compare* Petition at 35 with *ActiveVideo Networks, Inc. v. Verizon Commun’cns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (generic and conclusory rationale does not support obviousness).

McNew teaches that the “semi-automatic driving system” should be shut down if the driver does not demonstrate complete control of the driver controls at all times. EX1006 at 6:20-25. By comparison, in *Attard*, automation is the point. *Attard* never teaches or suggests that the SDV shuts down its automation features to force a driver to manually control the driver controls, as *McNew* teaches. To the extent *Attard* contemplates manual control at all, it suggests that **a driver** must actively **take** manual control. EX1004 at 2:55-3:4 (“[A]n alert **may inform** the vehicle [] occupant of a need to resume ... manual control.”) (emphasis added). If *Attard*’s “occupant” does not take control, the vehicle’s computer can disable the vehicle entirely (e.g., “pull over and stop”) but cannot “transfer” any controls. *Id.* at 2:52-54.

When the teachings of the cited art are viewed through the lens of an ordinary artisan at the time of the invention, as the law requires, see *In re Cyclobenzaprine*

Hydrochloride Extended-Release Capsule Patent Litig., 676 F.3d 1063, 1069 (Fed. Cir. 2012) (holding district court “was [] required to consider . . . whether [a limitation missing from the prior art] would have been obvious to one of ordinary skill in the art *at the time of the invention*”) (emphasis added), there is no evidence of a motivation to combine *McNew*’s control signals to shut down the semi-automatic driving system (the alleged *transferring driver controls to manual*) with an SDV using *Attard*’s autonomous controls.

C. Petitioner Cannot Prevail on Grounds 2, 4-5, and 8-10 Because the Cited Art Fails to Teach *Active Learning Data*

Challenged claims 2-5, 8, 9, and 31-36 all require “active learning data” either directly or via dependency. Petition at 106-14. These claims also require the “active learning data” to originate from “other SDVs.” *Id.* Depending on the specific limitation and claim, Petitioner relies on one or more of four references—*Kang*, *Schunder*, *Gunderson*, and *Attard*—to teach using *active learning data* in the manner recited by the claims. None of these four references teaches this limitation. Specifically, none of these references disclose “learning” and none disclose data that comes from other SDVs.

1. Grounds 2 and 8-10 Fail Because *Gunderson*, *Kang*, and *Schunder* All Fail to Disclose *Active Learning Data*

Petitioner cannot prevail on Grounds 2 and 8-10 (claims 2-5 and 31-36) because Petitioner relies on several references (*Kang*, *Schunder*, and *Gunderson*),

none of which disclose *active learning data*. For each of the three references, Petitioner argues that data is “active learning data” if it originates from a source other than the instant SDV of the invention. Petition at 40-42, 45-46, 47-48. As discussed above, these arguments rely on an incorrect and overly broad interpretation of the term that reads out the “learning” term and the requirement that such data must come from “other SDVs.” §§ IV.A-B, *supra*. For at least this reason, the grounds that rely on *Kang*, *Schunder*, and *Gunderson*, therefore, fail.

Claim 2 (like all the claims challenged in Grounds 2 and 8–10) relies on each of these three references for a different feature of the claim and is therefore representative. Moreover, because of this reliance, the deficiency of any one of these references is dispositive.

Kang. The Petition states that *Kang* includes “a road and weather information collecting unit 135 that obtains weather information (*weather condition data*) from an external source based on the vehicle’s GPS information or using onboard sensors.” Petition at 45 (citing EX1009 at 9:32-49). Without any further explanation (in either the Petition or the accompanying declaration), Petitioner then asserts “*Kang* teaches *weights based on active learning data*.” *Id.* at 46; see EX1003 ¶¶ 160-61 (discussing *Kang*). Petitioner’s contention is solely premised on *Kang* teaching “the type of weather condition.” Petition at 46. The Petition contains no reasoning as to why this is *active learning data*, simply concluding that it is. *Id.* The rest of the discussion

regarding *Kang* in the accompanying declaration relates to a distinct limitation. See EX1003 ¶¶ 159-61 (arguing that *Kang*'s weights are based on data that is *weather condition data*).

First, *Kang* does not teach that its “weather condition data” is used for any sort of “learning,” and Petitioner does not identify any alleged “learning” happening in *Kang*. Petitioner therefore fails to show that *Kang*'s data is “active learning data.” § IV.A, *supra*.

Second, *Kang* explicitly states that its “weather condition data” comes from the “Internet.” *Kang* does not disclose, nor does Petitioner argue, that *Kang*'s “weather condition data” comes from other SDVs. Petitioner therefore fails to show that *Kang*'s data comes from “other SDVs” as all challenged claims explicitly require. § IV.B, *supra*.

Schunder. Petitioner's reliance on *Schunder* lacks merit for similar reasons: Petitioner relies on the same incorrect interpretations of the term “active learning data” which read out “learning” and “other SDVs.” Petitioner argues that “*Schunder* teaches a server receives weather data and GPS coordinates from vehicles” and “receives weather condition data from other vehicles on the same roadway.” Petition at 47. Petitioner contends that this “weather condition data” is active learning data without any explanation. *Id.*

First, like *Kang*, *Schunder* does not teach that its “weather data” is used for any sort of “learning,” nor does Petitioner identify any alleged “learning” in *Schunder*. Petitioner therefore fails to show that *Schunder*’s data is “active learning data.” § IV.A, *supra*.

Second, Petitioner alleges *Schunder*’s weather data is received by a server from “vehicles” or “automobiles.” *Schunder* never teaches obtaining data from self-driving vehicles, as the claims require. Nor does Petitioner make any attempt to argue that *Schunder*’s weather data is obtained from self-driving vehicles. Petitioner therefore fails to show that *Schunder*’s data comes from “other SDVs” as all challenged claims explicitly require. § IV.B, *supra*.

Gunderson. Petitioner utilizes the heading “*Gunderson*’s Active Learning Data” for claim limitation 2(c), but Petitioner never argues that *Gunderson* discloses *active learning data*. This section concludes that an ordinary artisan would have understood *Gunderson* “teaches weights based on...information about a first cohort of human drivers of other SDVs.” Petition at 42 (ellipses in original). Even if Petitioner had argued that *Gunderson* taught *active learning data*, it would still be incorrect.

Petitioner states that *Gunderson* describes aggregating and analyzing “event data” at a server. Petition at 41. But the Petition does not show the “event data” is used for “learning” or that it comes from “other SDVs.” As shown above, an

interpretation of the claims that does not address these terms is contrary to the plain language of the claims and the intrinsic evidence. §§ IV.A-B, *supra*.

As with *Kang* and *Schunder*, *Gunderson's* “event data” is not used for “learning.” Petitioner does not even attempt to show that *Gunderson's* “event data” is used for “learning.” Rather, Petitioner only alleges the event data is stored in a “database,” without further explanation. Petition at 41. Petitioner therefore fails to show that *Gunderson's* data is “active learning data.” § IV.A, *supra*.

Petitioner also does not attempt to show that *Gunderson's* “event data” comes from “other SDVs.” At most, Petitioner alleges the “event data” comes from a “vehicle,” but does not allege or show it comes from a “other self driving vehicles.” Petition at 41. Petitioner therefore fails to show that *Gunderson's* data comes from “other SDVs” as all challenged claims explicitly require. § IV.B, *supra*.

The remainder of the claims in Ground 2 (claims 3-5) depend from claim 2. Petition at 2. Thus, for the same reasons claim 2 fails, the entirety of Ground 2 fails.

Grounds 8-10 fail because these grounds cross-cite the same analysis in Claim 2 for the discussion of active learning data. *See* Petition at 73-74 (relying solely on references to claim 2 for claim 31); *see* 3-4 (claims 32-36, the claims subject to Grounds 8-10, depending from claim 31). For the same reasons Claim 2 fails, Grounds 8-10 also fail.

2. Ground 4 Fails Because *Attard* Fails to Disclose *Active Learning Data*

Petitioner relies on *Attard* to teach *active learning data* for claim 8, the sole claim challenged in Ground 4. Petition at 60. The entirety of this discussion is: “*Attard* teaches receiving V2V (vehicle-to-vehicle) data, i.e., *active learning data*.” *Id.* at 60 (citing EX1004 at 13:1-3).

Petitioner does not even attempt to show that *Attard*’s “V2V” data is used for “learning.” Any attempts would be futile because *Attard* does not teach that “v2v communications” are used in learning. Instead, *Attard* explains “v2v communications 112 as described herein are generally packet communications and could be sent and received at least partly according to Dedicated Short Range Communications (DSRC) or the like.” EX1004 at 4:50-53. *Attard* uses these v2v communications to communicate observational data to other vehicles. *See id.* at 4:60-64 (stating a v2v communication may include “vehicle 101 position (e.g., latitude and longitude), speed, heading, acceleration status, brake system status, transmission status, steering wheel position, etc.”). The mere fact that data is communicated does not mean it will be used in learning, as opposed to one-off calculations (which is not an example of learning). § IV.A, *supra*.

Thus, by failing to prove that *Attard* teaches active learning data, Petitioner fails as to Ground 4.

Petitioner's reference to *Coelingh* in reference to limitation 8(e) does not change this analysis. Petitioner cites *Coelingh* for limitation 8(e)'s requirement of a *camera sensor operational anomaly*. See Petition at 60, 109 (claim language). The only section of *Coelingh* Petitioner cites related to the use of such data discusses the kind of one-time determination that, as previously discussed, does not constitute *active learning data*. EX1041 at 4:9-23 (discussing a one-time estimation of sensor functionality).

3. Ground 5 Fails Because *Gunderson*, *Kang*, and *Attard* All Fail to Disclose *Active Learning Data*

Petitioner's Ground 5 argument, addressing solely claim 9, fails for two reasons: (1) claim 9's dependence on claim 8, and (2) Petitioner's reliance on its flawed analysis of claim 2. Either error is fatal to Ground 5, and Petitioners commit both.

First, claim 9 depends from claim 8. As explained in Section V.C.2, *supra*, Petitioners have failed to explain how *Attard* teaches active learning data. For this reason alone, Ground 5 fails.

Second, claim 9 includes "active learning data" in limitations 9(c) and 9(h). Petition at 109-10. The entirety of Petitioner's analysis for limitation 9(c) is "*See*, 2(c)." *Id.* at 62. The cross-cited section incorrectly relies on *Gunderson* as teaching active learning data. *Id.* at 40-42; see § V.C.1, *supra* (distinguishing *Gunderson*).

Similarly for 9(h), Petitioner merely says, “*See*, 2(h).” Petition at 63. The section associated with limitation 2(h) incorrectly relies on *Kang* as teaching *active learning data*. *Id.* at 45-46; *see* § V.C.1, *supra* (distinguishing *Kang*). Because neither *Gunderson* nor *Kang* teaches *active learning data*, this is a second, independent fatal flaw in Ground 5. As no reference (*Attard*, *Gunderson*, or *Kang*) teaches *active learning data*, this Ground fails for both reasons.

VI. CONCLUSION

For at least the reasons set forth herein, Patent Owner respectfully requests the Board deny the Petition and decline to institute IPR in this proceeding.

Dated: September 24, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing **Patent Owner's Preliminary Response Pursuant to 37 C.F.R. § 42.107** was served to the following counsel of record for Petitioner addressed as follows:

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that this brief complies with the type-volume limitation of 37 C.F.R. § 42.24 because this brief contains 5,714 words.

Dated: September 24, 2025

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