

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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UNITED SERVICES AUTOMOBILE ASSOCIATION,  
*Petitioner,*

v.

AUTO TELEMATICS LTD.,  
*Patent Owner.*

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Case IPR2023-00770  
Patent No. 10,192,369 B2

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**PATENT OWNER AUTO TELEMATICS LTD's PRELIMINARY**  
**RESPONSE PURSUANT TO 37 C.F.R. §42.107**

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Patent Owner Auto Telematics Ltd. (“Patent Owner” or “Auto Telematics”) submits this Preliminary Response to the Petition filed by United Services Automobile Association (“Petitioner” or “USAA”) for *Inter Partes* Review (“IPR”) of claims 1-27 (the “Challenged Claims”) of U.S. Patent No. 10,192,369 B2 (“the ’369 patent”). This response is being timely filed.

## **I. INTRODUCTION**

A dispute in a UK county court over the cause of a minor traffic accident led to the conception of the inventions claimed in the family of patents in which the ’369 patent is included. Initially, the inventors developed a mobile device application that simply recorded video of a user’s vehicle journey in a rolling loop while also determining and recording other useful information such as time of day, speed, and GPS position (this latter information converted into a trace of the vehicle’s journey on a map). This application became known as the Witness App. Subsequently, a new application – Witness Pro – was developed allowing recordings of additional aspects of the vehicle’s journey recorded in a rolling loop and uploaded to a central server. Soon thereafter, a smartphone-based insurance telematics product was developed and offered to insurance companies in the UK as a cost-effective alternative to traditional vehicle insurance policies.

The ’369 patent describes methods and systems for logging driving information associated with a vehicle when driven. In one aspect, a mobile

telecommunications device is provided that may be adapted for installation to a vehicle and configured to log driving information associated with that vehicle. The mobile device is arranged to register the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven. The mobile device is also arranged to process sensor data during the driving period to derive driving information associated with how the vehicle is driven. A selection of that driving information is then stored to the mobile device.

## **II. SUMMARY OF ARGUMENTS**

As set forth in detail below, the Board should not institute an IPR because Petitioner cannot show, and has not shown, that the claims of the '369 patent are obvious. With reference to Petitioner's Ground 1A: (i) the cited references fail to teach or suggest all elements of the claims; (ii) Petitioner has misconstrued the differences between the claims of the '369 patent and the cited references, (iii) Petitioner has provided insufficient rationale for why a POSITA would be motivated to combine them, and (iv) Petitioner's rationale to combine them is based on impermissible hindsight. Nothing in Petitioner's Grounds 1B-1G, which add references to the Ground 1A combination, cures the deficiencies of Ground 1A.

### III. THE '369 PATENT

The '369 patent includes three independent claims, claims 1, 26, and 27.

Claim 1 is representative and provides:

1. A mobile telecommunications device configured to log driving information associated with a vehicle, the mobile telecommunications device comprising:

a sensor set comprising an image sensor, an audio sensor, an accelerometer or a positioning module, or a combination thereof;

a user interface;

a processor; and

a memory;

the mobile telecommunications device being configured to:

determine, based on at least one of the inputs received by the user interface and sensor data from the device's sensor set, a start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use;

process the sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven; and

store a selection of the driving information to the memory;

wherein the driving information is derived without data from vehicle sensors, and the memory comprises:

a long term memory for persistently storing driving information and a short term memory for transiently storing driving information, wherein the short term memory receives driving information at a higher update rate than the long term memory, the mobile telecommunications device being further configured to:

write driving information to the short term memory at a predetermined update rate during the driving period in a predetermined sequence; and,

overwrite the driving information previously written to the short term memory in accordance with the predetermined sequence.

USAA-1001 at 31:42—32:10.

Dependent claims 2-25 claim a number of other elements of the invention of claim 1, including configuring the mobile device to detect the occurrence of a pre-determined event (e.g., an accident) and permitting a user to confirm or deny the occurrence of the pre-determined event, overriding driving information written to short term memory in accordance with a pre-determined sequence to conserve

memory space, and processing driving information to generate a driving score associated with a particular driver. USAA-1001 at 32:11—33:60.<sup>1</sup>

Claim 26 is similar to claim 1, where claim 26 substitutes “removably affixed” for “removably attached” in line 15 of the claim. Claim 27 adds a feature to the process step of claims 1 and 2, reciting:

process the sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven, the processing involving the use of a neural network on the mobile telecommunications device to determine whether the driving information represents an acceptable or unacceptable driving pattern....

USAA-1001 at 34:47-53.

Claims 1, 26, and 27 require that the mobile telecommunications device be configured to determine, “based on the inputs received by the user interface and

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<sup>1</sup> As the prior art references on which Petitioner relies do not render obvious or otherwise invalidate the independent claim (Claim 1), and any additional references relied on in its obviousness assertions as to the remaining dependent claims (Claims 2-25) similarly fail, Patent Owner will focus its arguments on Claim 1. Patent Owner reserves the right to raise any additional arguments as to the validity of the Challenged Claim if an IPR is initiated by the Board.

sensor data from the devices sensor set, *a start of a driving period.*” USAA-1001 at 31:53-55 (emphasis added). The invention’s ability to determine the start of a driving period is an important aspect of the invention.

According to a first aspect of the present invention there is provided a mobile telecommunications device adapted for installation to a vehicle and configured to load driving information associated with the vehicle when driven . . . *[wherein] the mobile device [is] arranged to execute the downloaded application to control the mobile device to: register the start of a driving period during which the mobile device is installed to the vehicle and vehicle is being driven by a driver;* process sensor data . . . during the driving period to derive driving information associated with how the vehicle is driven; and store a selection of the driving information to the memory.

USAA-1001 at 1:64-2:14 (emphasis added). The ’369 patent describes how the mobile device may be configured to determine the start of a driving period:

The initialization input may . . . be generated automatically in response to the mobile device being installed to the vehicle and/or the vehicle being driven. The initialization input may be generated automatically in response to the sensor data having pre-determined values. For example, if the sensor data reflects a detected speed above a pre-determined threshold – for example, 20 kilometers per hour – *then this can be used to trigger the start of the driving period.* Similarly if the sensor data reflects that the mobile device is held securely to the vehicle in a pre-determined position (for example via [an] adaptor) *this can also be used to trigger the start of the driving period.* To this end, the

adaptor and/or the mobile device may comprise a registration module configured to register the installation of the mobile device to the vehicle and/or the adaptor. The registration module may comprise a proximity sensor to detect the proximity of the mobile device to the vehicle. The registration module may comprise a NFC (near field communication) device. *The registration module may be arranged to determine a match between the location of the mobile device and the location of the vehicle.* The match may be performed by receiving and comprising a first position input associated with the position of the vehicle and a second positioning input associated with the position of the mobile device. The registration module and/or adaptor may be a smart holster.

USAA-1001 at 3:37-62 (emphasis added).

Claim 1 also provides that such information “*is derived without data from vehicle sensors.*” USAA-1001 at 31:63-64. The invention focuses on determining driving information specific to an *individual* rather than driving information specific to a *vehicle* (which driving information would be based on data collected from the vehicle’s sensors). Because multiple people may drive a single vehicle, reliance on data generated by vehicle sensors would frustrate a primary purpose of the invention of generating individual-specific driving data.

The claimed invention further requires that the mobile telecommunications device be configured to “process the sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven” and to store that driving information to the mobile device’s memory.

[T]he executed application may be arranged to control the mobile device to process sensor data from the sensor set during a plurality of driving periods to derive driving information associated with when and/or how the vehicle is driven for each of the driving periods.

USAA-1001 at 6:11-15.

[W]herein, the [mobile device] processor is arranged to process sensor data from the sensor set during the driving period to derive driving information associated with when and/or how the vehicle is driven and stores selection of the driving information to the [mobile device's] memory.

USAA-1001 at 10:63-67.

[S]ensor data captured from any one of the aforementioned data capture modules 21, 23, 25, 27 is processed by the processor module 33, to generate driving information. By driving information is intended any data which may be derived from raw sensor data captured by any of the aforementioned modules 21, 23, 25, 27.

USAA-1001 at 16:48-53.

The claimed invention further requires that the memory be partitioned into “a long term memory for persistently storing driving information and a short term memory for transiently storing driving information, wherein the short term memory receives driving information at a higher update rate” that is “predetermined,” and which updates are overwritten in the short term memory as compared to the long

term memory, which, as claimed as “persistent” storage, is not overwritten due to storage space filling up.

The sampled data, along with any derived driving information is preferably stored in the storage buffer 34a, unless a driving incident has been identified, in which case the associated sensor and driving information is stored in the permanent storage component 34b to avoid undesirable overwriting.

USAA-1001 at 17:8-14.

Data files are stored in the buffer 34a, unless they are associated with a driving incident, in which case they are then stored in protected storage 34b, which cannot be overwritten. Once the storage space comprised in the buffer 34a has been exhausted, the oldest data file is overwritten by a newer data file.

USAA-1001 at 18:5-10.

The inventor, realizing the processing and memory capabilities of mobile devices at the time, as well as the likely increase of those capabilities over time, recognized the benefits of deriving, processing, and storing driving information on the mobile device, and separating the persistent storage from the transient storage for persistently storing data associated with a driving incident so that it could not be overwritten. These benefits include: (i) faster and more reliable derivation of driving information; (ii) no need to transmit large volumes of sensor data from the mobile device to a server; (iii) less storage space being required for data sampled and

processed when a driving incident does not occur; and (iv) use of persistent storage only when needed (when a driving incident occurs). This is dramatically different from the state-of-the-art at the time, including the prior art references relied on by Petitioner.

#### **IV. PRIMARY PRIOR ART REFERENCES RELIED ON BY PETITIONER**

##### **A. Forstall *et al.* – Exhibit USAA-1028**

Forstall describes an early iPhone system for aiding a user in map-assisted navigation using their mobile device and estimating their physical position on the map based on sensed data, particularly where and when positioning data is unavailable, through the use of “dead reckoning” – i.e., using sensor data to measure movement of the device from a previously fixed location to determine its current location. USAA-1028, [0062]. Forstall provides no disclosure, teaching, or suggestion of the determination of the start of a driving period or deriving driving information associated with how a vehicle is driven from the start of and throughout a driving period, or the storing of a selection of any such driving information, or detecting the occurrence of any predetermined event, or taking any action in response to the detection of any such predetermined event.

**B. Rabu – Exhibit USAA-1013**

Rabu provides a method for determining an orientation angle and movement of a portable media device (“PMD”) and determines differing “modes of operation” of that device based on a frequency spectrum associated with the device’s motion. USAA-1013 at 2:61—3:4. However, it fails to disclose, teach, or suggest the determination of the start of a driving period, the processing at the PMD of sensor data to derive driving information associated with how the vehicle is driven throughout such a driving period, or the storage of a selection of such driving information into memory on the PMD. Rather, Rabu describes determining a “holder status” that indicates “whether the PMD is docked, resting on a surface, or being held by a person,” *Id.* at 1:60-62, and determining a “holder motion status” that includes “determining whether the PMD is in a moving vehicle, in a stationary vehicle, being held by a moving person, or being held by a stationary person.” *Id.* at 1:62-65.

Rabu determines a frequency spectrum associated with the holder motion and from such frequency spectrum determines the motion status of the PMD, *id.* at 4:29-33, and thereafter implements a “mode of operation” for the PMD based on that motion status. In contrast to the ’369 patent’s location determination, Rabu discloses frequency analysis to determine small movements of a device for distinguishing docking status. *Id.* at 2:65—3:1; *compare to* USAA-1001 at 16:15-20.

**C. Langle – Exhibit USAA-1029**

Langle posits that accelerometers/compasses on a mobile phone may be used in general to classify driving habits as safe or unsafe. USAA-1029 at 1. However, Langle provides no disclosure, teaching, or suggestion of any system, device, or application of such classifications, much less of any system, device, or application for logging driving information from the start of a driving period or of taking any action in response to detection of any predetermined event. Langle merely identifies various graphed curves showing measured g-forces over time, positing that various characteristics of those graphs may reveal instances of “unsafe” acceleration or deceleration to make a binary assessment of driving as either safe or unsafe. *See id.* at 2-3. Langle recognizes that “‘safe’ is a relative term so this paper only assumes that ‘safe’ driving and ‘unsafe’ driving have measurable differences in acceleration.” *Id.* at 2.

Further, Langle discloses its own limitations as not providing for “calibration of braking distance, lane changes, and reliable transformation of phone orientation with respect to trajectory of the vehicle” (*id.* at 1), where “using this data..., [the distinction between safe and unsafe] is not so clear for accelerations” and a “second integration [of acceleration] yields [only] a rough estimate of distance” (*id.* at 2).

**D. Katayama *et al.* – Exhibit USAA-1024**

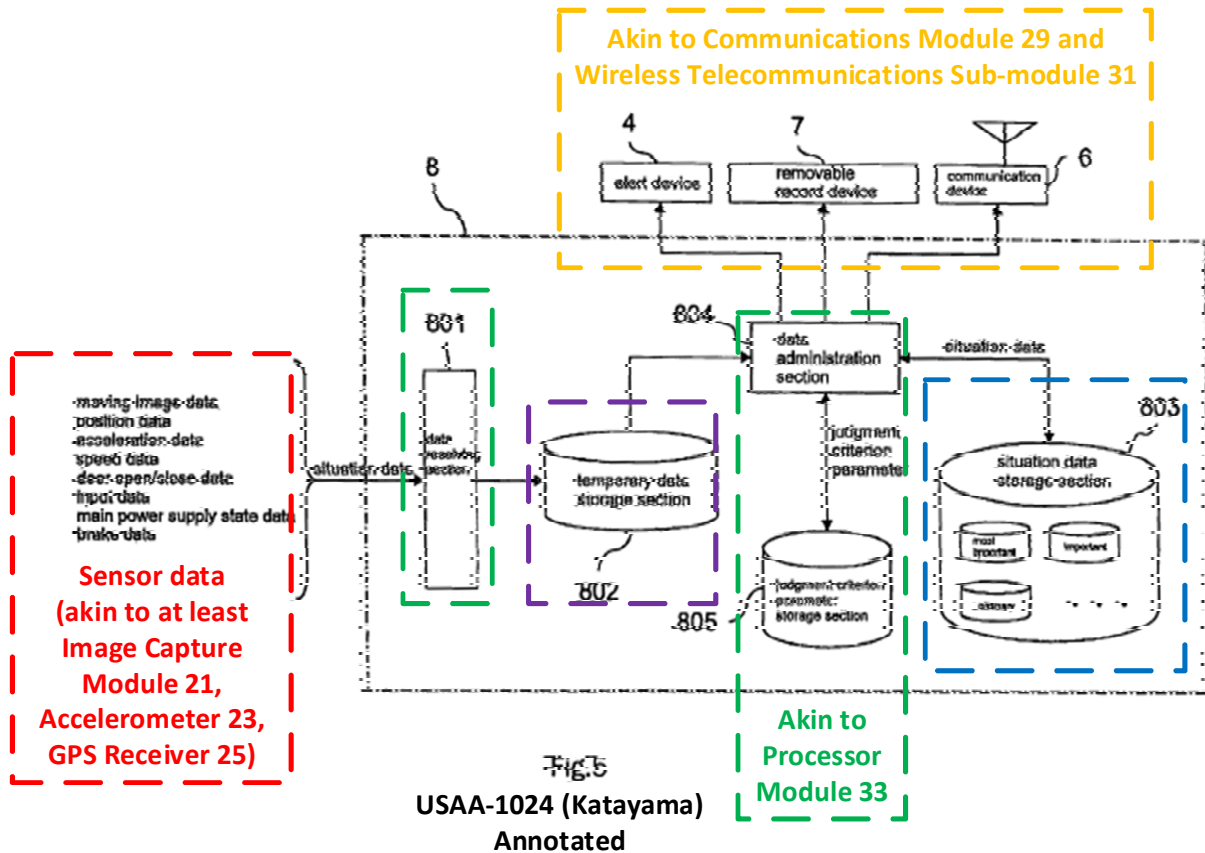
Katayama is directed to “a vehicle-mounted driving recorder that can facilitate an after-the-fact analysis on not only situation data at a time of an accident but also situation data at a time of [a risk incident].” USAA-1024, [0009]. Katayama categorizes situation data based on order of importance as determined by a learning function (*id.*, FIG. 5, data administration section 804) accessing predetermined criteria (*id.*, FIG. 5, judgment criterion parameter storage section 805) and configures its data storage based on the learned categories of situation data. *Id.*, [0012], [0051]-[0054], [0057], [0058].

Katayama discloses storing situation data without reference to a start of a driving period. Katayama discloses activating a driving recorder “by the electric power supplied from a vehicle battery.” *Id.*, [0039]. Although Katayama erases a part of its stored situation data that is less important and does not erase its most important data, this data is not separately stored in storage configured to be long term storage versus short term storage. *See id.*, [0055], [0058], FIG. 5. Instead, both more important and less important data are stored in the same storage in Katayama (*see id.*, FIG. 5, situation data storage section 803), with the more important data being maintained and the less important data potentially being erased from situation data storage section 803 if the capacity runs out. *Id.*, [0055], [0057].

Petitioner's description of Katayama that identifies "situation data storage section 803" as "long term" storage is incorrect. Pet. at 26. Rather, data marked less important (e.g., "ordinary") is stored in the same "situation data storage section 803" as data marked "most important" (USAA-1024, FIG. 5, 803). Petitioner's statement that "[i]n contrast, situation data that is classified with an identifier marking it as less than important remains in 'temporary data storage section 802' until eventually overwritten with new data" is incorrect. Pet. at 27. Rather, less important data does not remain in "temporary data storage section 802" but gets shifted to "situation data storage section 803," which Petitioner calls "long term," and such less important data may get erased from this long term situation data storage section 803 if storage space runs out. *See* USAA-1024, [0016], [0055]; Pet. at 26.

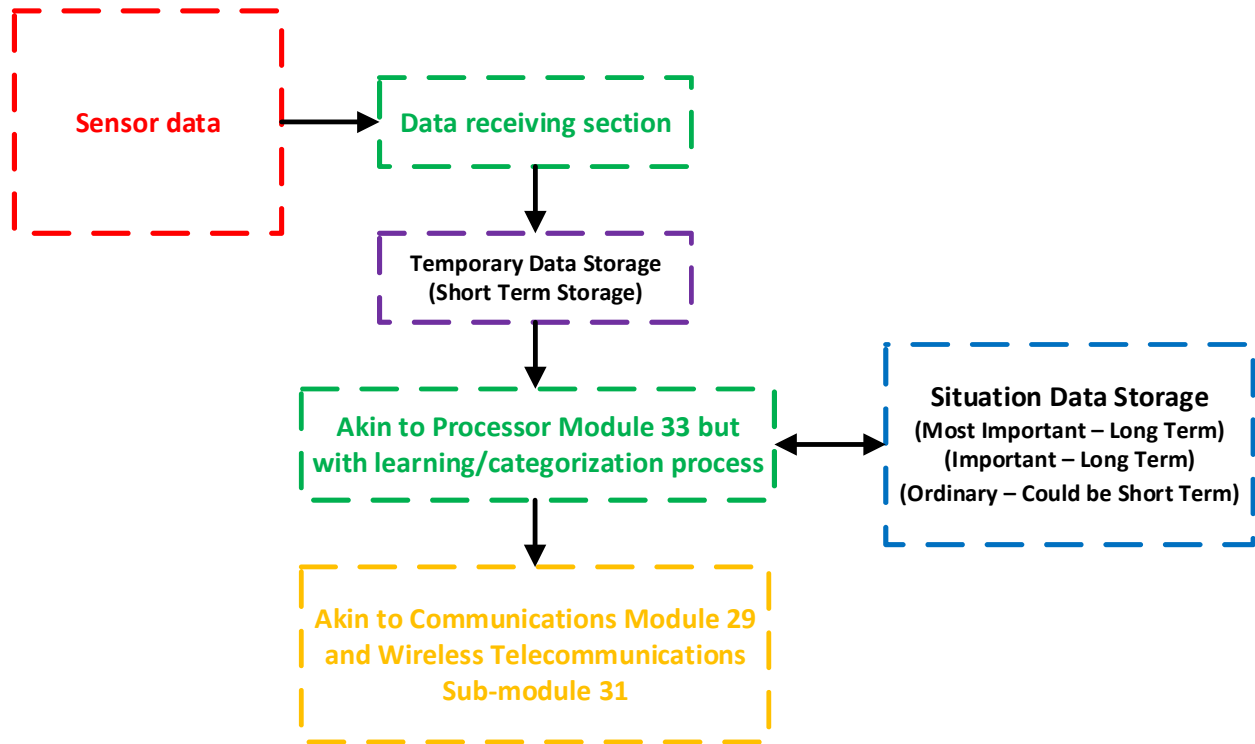
For illustrative purposes, FIG. 5 of Katayama is annotated and rearranged below to aid in its comparison to FIG. 3 of the '369 patent, which is also annotated and rearranged for comparative purposes. The colored boxes of annotated FIG. 3 of the '369 patent map to the colored boxes of annotated FIG. 5 of Katayama. These are the same mappings as applied by Petitioner, as explained further below.

Katayama's FIG. 5 is mapped to the '369 patent by Petitioner as:



USAA-1024, FIG. 5; [0044]-[0057]; USAA-1001, FIG. 3, 15:41-18:10; Pet. at 22-28.

Katayama's FIG. 5 can then be arranged as:



USAA-1024 (Katayama) FIG. 5 Rearranged

USAA-1024, FIG. 5; [0044]-[0057]; USAA-1001, FIG. 3, 15:41-18:10; Pet. at 22-28.

FIG. 3 of the '369 patent can be annotated, according to Patent Owner's specification, as:

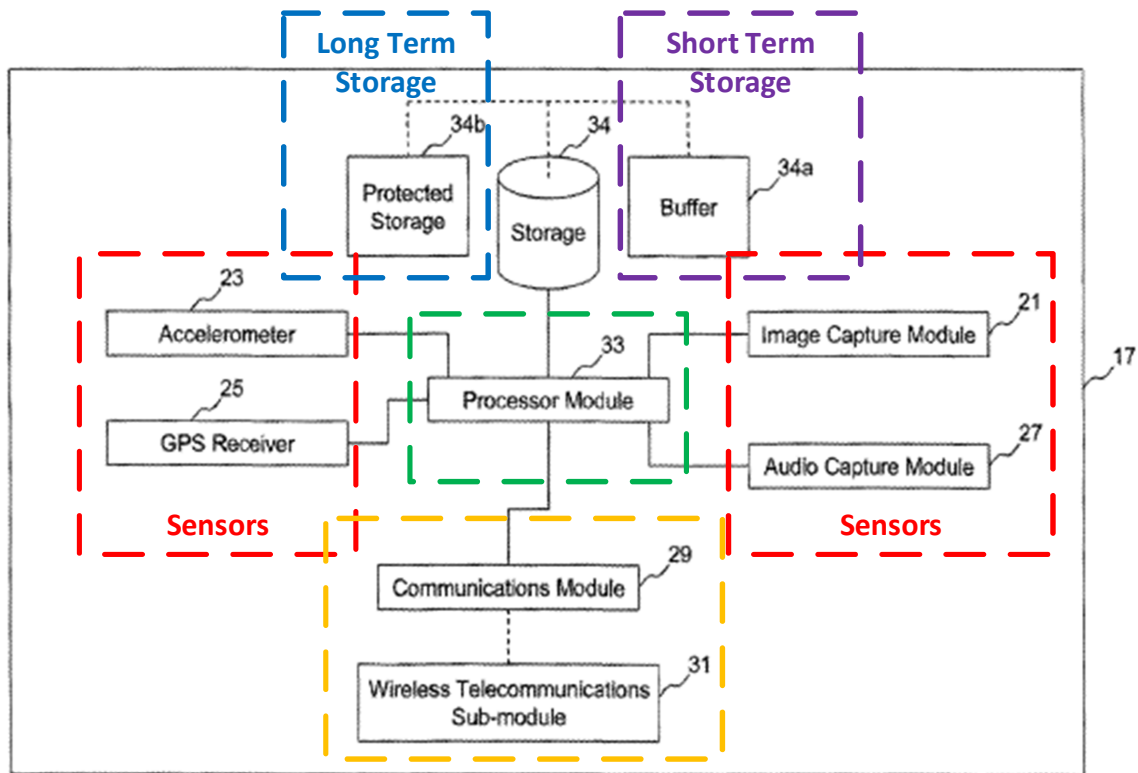
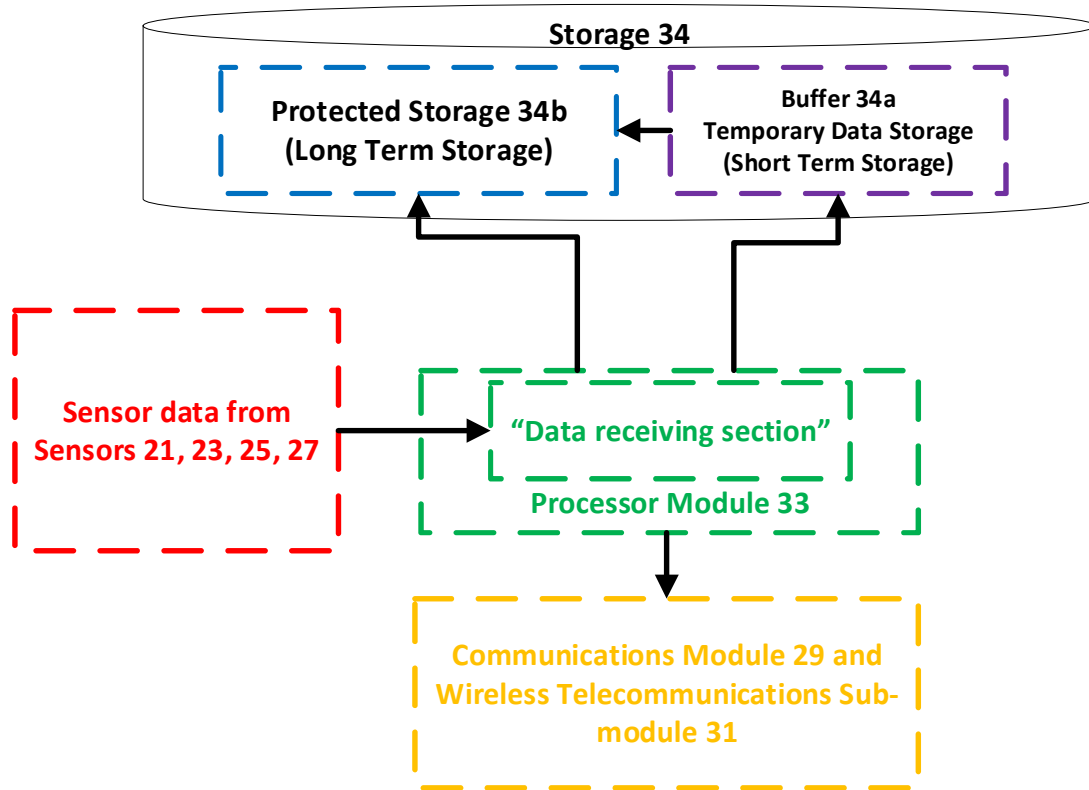


Fig .3  
'369 Patent FIG. 3 Annotated

USAA-1001, FIG. 3, 15:41-18:10.

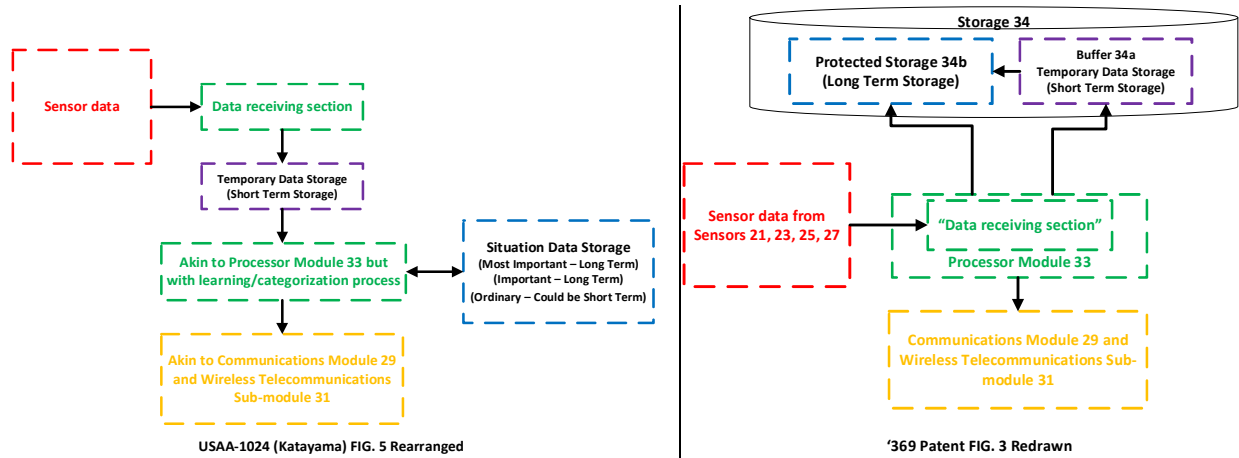
FIG. 3 of the '369 patent can then be rearranged as:



'369 Patent FIG. 3 Redrawn

USAA-1001, FIG. 3, 15:41-18:10.

A side-by-side comparison of the annotations illustrates the differences between Katayama's storage configuration and the memory of the '369 patent.



In Katayama, all sensor data is first moved from “data receiving section 801” to “temporary data storage section 802,” which the Petitioner maps to the short term memory of the '369 patent. Pet. at 33-34, 51; USAA-1024, [0044]-[0045]. However, Katayama's “data administration section 804” applies “judgment criterion parameters” from “judgment criterion parameter storage section 805” in a learning process to categorize *all* sensor data in the “temporary data storage section 802,” based on importance, using the applied judgment criterion parameters. USAA-1024, [0046]-[0049]. Even less important information (e.g., “ordinary” data) will be moved to the “situation data storage section 803,” which Petitioner maps to long term memory of the '369 patent. USAA-1024, FIG. 5, [0044], [0048], [0051]; Pet. at 33-34, 51.

According to Katayama, the difference between “temporary data storage section 802” and “situation data storage section 803” is merely that the data in “situation data storage section 803” is a categorized version of the data in “temporary data storage section 802” after a user pushes a button on the recording device to move the categorized data over to “situation data storage section 803.” *See* USAA-1024, [0051]-[0054]. Katayama discloses that, thereafter, “situation data storage section 803” may overflow with too much data, and data categorized as “Ordinary” may be overwritten (i.e., making it short term data, because it is not persistent). *See* USAA-1024, [0055].

Katayama throws away data in “situation data storage section 803,” which Petitioner incorrectly alleges to be the same as the “long term memory” of the ’369 patent. Katayama’s “situation data storage section 803” mixes long term and short term data and erases part of “situation data storage section 803” as needed. Thus, Katayama, due to its learning process and application of importance criteria to categorize all of the sensor data in “temporary data storage section 802,” is not configured like the ’369 patent with regard to separate short term and long term storage.

#### **E. State of the Cited Primary Prior Art**

As illustrated in Table 1 below, during this 2005 to 2009 timeframe, using mobile devices such as smartphones (first introduced in 2007) for vehicle navigation

and data recording for situational awareness were in their relative infancy. As would be understood by a person having ordinary skill in the relevant art (“POSITA”), each of the Forstall, Rabu, Langle, and Katayama advances were relatively small involving user-interactive mobile devices for vehicle navigation and data recording for situational awareness. *See* AT-2001; AT-2002. Many non-obvious advances, such as the claimed invention of the ’369 patent, would be made in the following years to build upon this early technology.

Table 1. Timeline of Early “Smartphone” Mobile Device Development

| 2005                                                                                                    | 2007                                                                                                                             | 2008                                                                                                                                                             | 2009                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2010                                                                                                                                                                 | 2011                                                                                      |                                                            |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------|
| →                                                                                                       |                                                                                                                                  |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                      |                                                                                           | →                                                          |
| <b>7/1/2005:</b> <i>Katayama</i> discloses basic vehicle-mounted driving recorder having no GUI screen. | <b>6/29/2007:</b> First iPhone launched (AT-2002 at 9);<br><b>11/5/2007:</b> public beta of Android 1.0 launched (AT-2001 at 6). | <b>4/23/2008:</b> <i>Katayama</i> publishes for availability to public.<br><b>7/11/2008:</b> iPhone 3G released; iPhone app store introduced (AT-2002 at 13-14). | <b>1/1/2009:</b> <i>Forstall</i> filed for dead reckoning mapping using iPhone device components for motion;<br><b>April 2009:</b> Android 1.5 released (AT-2001 at 8);<br><b>6/16/2009:</b> iPhone 3GS released with <b>first digital compass</b> (AT-2002 at 19); iPhone in all major markets (AT-2002 at 18);<br><b>8/31/2009:</b> <i>Langle</i> discloses vehicle motion using accelerometer/compass in Android 1.5 phone;<br><b>Oct. 2009:</b> Android 2.0 released with Google Maps navigation (AT-2001 at 10);<br><b>12/15/2009:</b> <i>Rabu</i> discloses method for determining orientation angle and frequency spectrum of motion of portable media player. | <b>6/24/2010:</b> iPhone 4 released with first front-facing camera (AT-2002 at 22);<br><b>Sept. 2010:</b> Android 2.3 follows with multiple cameras (AT-2001 at 13). | <b>10/14/2011:</b> iPhone 4S released with Siri, iMessage, and iCloud (AT-2002 at 26-27). | Mobile devices such as iPhone and Android further advance. |

*See* AT-2001; AT-2002.

For the obviousness requirement, the Petitioner would have had to provide evidence and a sufficient rationale for why the disclosed art of Forstall, Rabu, Langle, and Katayama would have led the POSITA, before the filing of the '369 patent, to combine these references in arriving at the claimed invention. “[W]hile ‘common sense’ can be invoked, even potentially to supply a limitation missing from the prior art, it must still be supported by evidence and a reasoned explanation.” *Arendi v. Apple*, 832 F.3d 1355, 1363, 119 USPQ2d 1822, 1827 (Fed. Cir. 2016). Petitioner has failed in this regard.

To the extent that any of the cited references are relevant, each provide, at best, aspects of foundational technology that do not inform the obviousness analysis, and instead rely on the Petitioner’s hindsight bias, as will be further shown in this response. The Federal Circuit has observed that “‘the prejudice of hindsight bias’ often overlooks that the ‘genius of invention is often a combination of known elements which in hindsight seems preordained.’” *Polaris Industries, Inc.*, 882 F.3d at 1068.

## **V. PERSON OF ORDINARY SKILL IN THE ART**

Solely for the purpose of this Preliminary Response, Auto Telematics does not challenge USAA’s proposed definition of a person of ordinary skill in the art (“POSITA”). Auto Telematics reserves the right to provide an alternative definition of a POSITA if an IPR is instituted.

## VI. CLAIM CONSTRUCTION

In an IPR, claim terms are generally given their ordinary and customary meaning as would be understood by a POSITA and in the context of the entire patent disclosure. *See* 37 C.F.R. §42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).<sup>2</sup> Petitioner initially states that no express constructions are required in this proceeding,” Pet. at 11. Nonetheless, Petitioner then argues that the term “driving period” of Claim 1 “establishes just two ‘driving period’ attributes: (1) ‘the mobile device is removably attached to the vehicle’ and (2) ‘the vehicle is in use.’” Pet. at 12. Further, Petitioner states that “[t]hese attributes may be satisfied by a start of a monitoring period, whether at the onset of vehicle driving or whether instead before or thereafter.” *Id.* Petitioner posited similar arguments in the parallel District Court proceeding, which arguments were rejected by the Court, and should likewise be rejected here.

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<sup>2</sup> Patent Owner notes that in the parallel District Court proceeding involving the ’369 patent (among others), Petitioner sought construction of several terms including “sensor set,” “driving period,” “driving information,” and “driving score.” As to each of these terms, the Court agreed with Patent Owner that no construction was required and that the plain and ordinary meaning of each term applied.

Petitioner's proposed construction is additionally flawed because it introduces unsupported limitations for the driving period not included in the claims. Specifically, Petitioner's characterization of the start of a driving period as a "monitoring period" that starts at any time with respect to the onset of driving, Pet. at 12, is simply an inaccurate generalization of "driving period" that has no basis in the specification or claims. Nowhere in the '369 specification or claims is Petitioner's constructed term "monitoring period" used or defined. *See generally* USAA-1001. For example, the claims do not state that the mobile device must be removably attached "to satisfy a start of a monitoring period," as suggested by Petitioner. *See* Pet. at 12. Instead, the claims require that the mobile device be removably attached *during* the driving period: "determine, based on inputs received by the user interface and sensor data from the device's sensor set, a start of a driving period *during which* the mobile device is removably attached to the vehicle and the vehicle is in use," as recited by Claim 1 of the '369 patent (emphasis added). The claim language itself accurately captures the scope of the invention, and there is no need for a different construction incorporating Petitioner's manufactured limitations for the driving period.

Petitioner seeks to rewrite the claim language and then later argue that its rewritten claims require the Board to agree to each additional limitation Petitioner argues for in its Petition. Petitioner cannot create new terms for constructing the

claims to suit its arguments. The Board should decline to adopt Petitioner's constructions and instead agree with Patent Owner that the terms "driving period" and "start of a driving period" should be construed consistent with its plain and ordinary meaning.

## **VII. PETITIONER CANNOT SHOW THAT CLAIMS 1-27 ARE OBVIOUS**

Under Ground 1A, Petitioner contends that claims 1-4, 10-12, 16, 17, 19-24, and 26 of the '369 patent are unpatentable as obvious over Forstall in view of Rabu, further in view of Langle, and further in view of Katayama. Grounds 1B-1G attack the remaining claims of the '369 patent with additional references added to the Forstall-Rabu-Langle-Katayama combination. The Forstall-Rabu-Langle-Katayama combination does not render the claims of the '369 patent obvious, and no 5<sup>th</sup> reference cures the shortcomings of Forstall-Rabu-Langle-Katayama.

A patent claim is unpatentable under 35 U.S.C. §103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious to a POSITA at the time the application was filed. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is based on underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of non-obviousness. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18

(1966). A determination of obviousness cannot be based on “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F. 3d 1364, 1380 (Fed. Cir. 2016). “[I]nstead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” based on a combination of references. *See In re Nuvasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016); *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in *KSR*, 550 U.S. at 418).

The requirement of a reason to combine cited references is a safeguard against hindsight bias, which is characterized by the “temptation to read into the prior art the teachings of the invention in issue.” *KSR*, 550 U.S. at 421 (quoting *Graham*, 383 U.S. at 36) (“A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning”); *see also InTouch Technologies, Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014) (finding that testimony did not articulate reasons to combine and improperly used the challenged patent as a roadmap); *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012) (“[T]he expert’s testimony on obviousness was essentially a conclusory statement that a person of ordinary skill in the art would have known... how to combine any of a number of references to achieve the claimed inventions. This is not sufficient and is fraught with hindsight bias.”).

**A. Petitioner Cannot Show That the Challenged Claims Are Obvious Over Forstall in View of Rabu, Langle, and Katayama**

“In an [IPR], the 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) (requiring IPR petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). Additionally, 37 C.F.R. §42.104(b)(4) requires that the Petition “specify where each element of the claim is found in the prior art . . . relied upon.” This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Petitioner has not met this burden.

Petitioner contends that claims 1-4, 10-12, 16, 17, 19-24, and 26 of the ’369 patent are obvious over the combination of Forstall, Rabu, Langle, and Katayama. Pet. at 38-69. This is not the case, however, as Forstall, Rabu, Langle, and Katayama, individually, and in combination, fail to teach or suggest all of the elements of the claims, including at least the elements numbered by the Petitioner as [1.6], [1.7], and [1.10]<sup>3</sup>:

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<sup>3</sup> For ease of reference, Patent Owner adopts Petitioner’s naming convention of the different features of the claim elements (e.g., [1.1], [1.2], etc.). *See* Pet. at 1-8.

[1.6] determine, based on at least one of the inputs received by the user interface and sensor data from the device's sensor set, a start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use;

[1.7] process the sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven; ...

[wherein] ... the memory comprises:

[1.10] a long term memory for persistently storing driving information and a short term memory for transiently storing driving information,

as recited by USAA-1001 at Claim 1.

Further, Petitioner has not shown with particularity why the '369 patent is unpatentable. Specifically, Petitioner has misconstrued the differences between the claims of the '369 patent and the alleged prior art while providing insufficient rationale for why a POSITA would have been motivated to combine the cited references to arrive at the claimed subject matter. Additionally, Petitioner's rationale to combine is based on impermissible hindsight.

Notwithstanding all of the above, even if one were to make Petitioner's proposed combination of Forstall, Rabu, Langle, and Katayama, such would not result in the claimed invention of the '369 patent.

**1. Petitioner Fails to Indicate with Particularity How the Cited Art Maps to the '369 Claims and Misconstrues the Differences Between the '369 Claims and the Cited Art**

In an attempt to determine “(1) the scope and content of the prior art; [and] (2) any differences between the claimed subject matter and the prior art,” Petitioner misapplies aspects of the cited art of the Forstall-Rabu-Langle-Katayama combination. None of the references that Petitioner relies on teaches or suggests all of the features of the claimed invention, or at least the features of claim elements [1.6], [1.7], and [1.10]-[1.13] of the '369 patent.

Sections III.A.1.(a)-(d) of the Petition merely describe the cited references individually without relating them to the claims. In Section III.A.1.(e), Petitioner combines the Forstall, Rabu, Langle, and/or Katayama references before indicating how individual features of these references read on the claims. Petitioner does not clearly and completely map portions of Forstall, Rabu, Langle, and/or Katayama to every element of the claims in any section of the Petition, or otherwise explain why any missing or different features would have been obvious. For example, while Sections III.A.1(a)-(d) describe Forstall, Rabu, Langle, and Katayama individually, none of these sections includes a mapping of Forstall, Rabu, Langle, or Katayama to the claim elements.

Section III.A.1(e) immediately jumps to proposing how the Forstall, Rabu, Langle, and Katayama references could be integrated with each other, without

particularly relating the integration of Forstall, Rabu, Langle, and Katayama to the claims. While Petitioner does cite to sections of the art, the sections are broadly and generally cited to, and Petitioner does not point out how particular elements in the art map to the particular elements of Claim 1. *See, e.g.*, Pet. at 51-53 (in which, for claim element [1.10], Petitioner identifies “memory,” “short term memory,” “long term memory,” and “persistently” regarding “storage” found in the art, but does not identify how the references read on “a long term memory for persistently storing driving information and a short term memory for transiently storing driving information,” any differences in the art, or why any differences would have been obvious to a POSITA). Petitioner must consider all words in the claim as a whole in judging the obviousness of the claimed subject matter, but has not done so here. *See In re Wilson*, 424 F.2d 1382, 1385.

In Section III.A.2, Petitioner revisits the proposed integration of Forstall, Rabu, Langle, and Katayama but again fails to indicate how any specific teachings of these references, or how parts of the integrated “Forstall-Rabu-Langle2009-Katayama device,” should be particularly mapped to the claim elements. Petitioner also attempts to map to art not in the proposed combination. For example, as to claim [1.2], without explanation, Petitioner cites to USAA-1030, which, according to the exhibit list, is U.S. Patent Publication to Warren et al. (No. 2006/0053038), a reference not in the proposed combination. *See* Pet. at 40. Similarly, for claim [1.3],

Petitioner cites to “*Id.*, [0072], [0027]” but the citation does not clearly indicate which document is being cited to for the claim element. *See* Pet. at 41.

For claim elements [1.5] and [1.10], Petitioner represents that the memory of the combination device reads on the claimed memory configuration. *See* Pet. at 42, 51-53. Specifically, Petitioner cites to Katayama for the proposition that “[t]he memory would have been configured to retain (i.e., store over long time periods) situation data indicting (*sic*) unsafe driving behavior in the data storage section while also ensure (*sic*) sufficient capacity to store data in temporary section since ‘old data is sequentially erased and new situation data is written in.’” Pet. at 42-43. However, nothing in Katayama ensures that more important data will always be retained. In other words, nothing in Katayama ensures that what Petitioner maps to “a long term memory for persistently storing driving information” of claim [1.10] will actually persistently store driving information as required by the claim. Petitioner cites to Katayama at [0001]-[0002], [0011]-[0016], [0027], [0044]-[0052], [0054], [0083], but ignores Katayama at [0055] (disclosing that some of “situation data storage section 803” may be automatically erased) in every instance of the citations to Katayama for claim element [1.10].

In fact, Petitioner does not cite to Katayama at [0055] in the entire Petition, so Petitioner fails to even address this concern. Petitioner instead makes an effort to hand-wave on this issue: “More specifically, the important situation data would be

retained to enable ‘after-the-fact’ analysis of, for example, accidents and risk incidents, and would for at least that reason be understood as being ‘*persistently*’ stored.” Pet. at 53 (emphasis in original). Such an understanding, however, would not read on “the memory comprises: a long term memory for persistently storing driving information and a short term memory for transiently storing driving information,” as recited by claim [1.10]. It thus follows that Petitioner’s mapping cannot read on claim elements [1.11]-[1.13], at least because these claim elements have their basis in the claimed transient “short term memory” as opposed to the claimed persistent “long term memory.”

Thus, Katayama, due to its learning process and application of importance criteria to categorize all of the sensor data in “temporary data storage section 802,” is not configured like the ’369 patent with regard to separate short term and long term storage. *See* discussion *supra* Part IV.E. Because part of what Petitioner is calling long term storage in Katayama is configured to be erased if it fills up, Katayama does not read on Claim 1 of the ’369 patent. *See* USAA-1024, [0051]-[0057].

As to claim element [1.6], Petitioner jumped from suggesting that “start of a driving period” should be equated to “start of a monitoring period” in Section 1.C of the Petition (Pet. at 12) to then suggesting that “the start of a driving period” should be mapped to “the start of a navigation period” in Forstall to satisfy claim [1.6] (Pet.

at 45-47), without explaining why they are the same. But, as previously shown, Forstall does not disclose “the start of a driving period.” *See* discussion *supra* Section IV.A. Forstall concerns location accuracy for walking or driving. *See* USAA-1028, Abstract.

Rabu is directed to “determin[ing] a motion and orientation status of [a] PMD” by analysis of frequency spectrum. USAA-1013 at 1:41-42; *see* USAA-1013 at 4:30-33. Although Petitioner suggests that Rabu’s “mount[ing] in a vehicle” or “dock status” can read on “removably attached to a vehicle” of claim element [1.6] and can “indicate whether the holder [of the PMD] is in a moving vehicle,” (Pet. at 48), Rabu does not determine the start of a driving period based on inputs received by the user interface and sensor data, as required by claim element [1.6]. Thus, Rabu cannot cure Forstall’s deficiencies regarding “the start of a driving period” of claim [1.6]. Such oversights by the Petitioner make clear that Petitioner has not particularly pointed out how the cited parts of Forstall and Rabu map to claim element [1.6].

As to claim element [1.7], the Petition cites to Langle for “driving information associated with how the vehicle is driven” but fails to explain why or how a binary safe versus unsafe decision based on evaluation of sensor data maps to the claim element. Pet. at 48-49. Petitioner does not fully map the claim elements regarding “deriving driving information.” Again, Petitioner must consider all words in the

claim as a whole in judging the obviousness of the claimed subject matter. *See In re Wilson*, 424 F.2d 1382, 1385.

Petitioner cites to a large swath of three pages and two figures of Langle (pages 1-3 and FIGs. 2 and 4) without explaining what information on those pages and in those figures supports Petitioner's assertion. *See* Pet. at 48-49. Even if Langle's safe/unsafe driving evaluation can somehow map to "deriving driving information," Petitioner does not explain why mathematically transforming raw sensor data, such as from an accelerometer, to make a binary decision, reads on the claim language.

As to claim element [1.8], Petitioner incorrectly states that "[t]he 'selection' of driving information is improper inferential claiming, and therefore non-limiting, since such selection is not one of the operations recited to be performed by the 'mobile telecommunications device.'" Pet. at 49, n.7 (*citing Ex Parte Sullivan*, Appeal No. 2002-1924 (PTAB June 20, 2016)). On one hand, Petitioner has misconstrued the holding of *Ex Parte Sullivan* and/or mis-cited *Ex Parte Sullivan*, and on the other hand, Petitioner contradicts Patent Owner's specification.

First, nowhere in the decision for *Ex Parte Sullivan*, Appeal No. 2002-1924 (PTAB June 20, 2016)) is a discussion of or holding regarding "improper inferential claiming." Petitioner may be referring instead to *Ex Parte Sullivan*, Appeal No. 2014-005800 (PTAB 2016). In that *Ex Parte Sullivan*, the Board established a rule

against describing a claim element in terms of another device or structure which is not referred to elsewhere in the claim. *See id.* at 4. In that case, the claim in question was to a defibrillator that comprised “a defibrillation port for guiding via electrodes the stored electrical charge to a person.” *Id.* at 3. The claim was rejected in part based on the use of inferential claiming, which the Board defined as “introducing a new element in the middle of a recitation or description of another element in a claim.” *Id.* at 4. Using that definition, the Board concluded that “a defibrillation port for guiding via electrodes” was an example of inferential claiming, and therefore resulted in “uncertainty as to whether the claimed ‘electrodes’ are part of the apparatus as defined by the claim.” *Id.* Because of this uncertainty, the Board affirmed the rejection of the claim to the defibrillator that included the claimed defibrillation port as indefinite. *Id.*

The *Ex Parte Sullivan* “improper inferential claiming” rule does not apply to claim element [1.8]. Petitioner objects to claim [1.8]’s recitation of “store a selection of the driving information to the memory,” because “such selection is not one of the operations recited to be performed by the “mobile communications device.” First, generally, nowhere in patent law is it mandatory to positively recite each method step. Particular to claim [1.8], “selecting” is not one of the recited method steps and it does not have to be in order for “selection” to hold meaning in the claim. In *Ex Parte Sullivan*, the issue regarded a potentially ambiguous part of an apparatus –

electrodes, not a claim step. The issue was not that electrodes were not shown to be positively doing something in the claim. The issue was that the claim wording “a defibrillation port for guiding via electrodes” ambiguously introduced “electrodes” such that it was not clear whether the electrodes were part of the claimed apparatus. *See Ex Parte Sullivan* at 4. In the present claims, “selection” is a noun (but not an apparatus) that plainly means a choice of the driving information. Further, the specification of the ’369 patent clearly identifies what the selection is and how the selection is made. *See, e.g.,* USAA-1001 at 4:50—5:26. Petitioner simply has misidentified the *Ex Parte Sullivan* reference, misconstrued its holding, and then misapplied it to Patent Owner’s claims, contradicting Patent Owner’s specification along the way.

## **2. Petitioner Provides Insufficient Rationale to Combine Forstall, Rabu, Langle, and Katayama**

Although Petitioner argues that some of the individual elements were known in the cited references and that combining those references would have yielded the claimed invention, Petitioner does not explain *why* a POSITA would have combined those elements in the claimed manner. *See KSR*, 550 U.S. at 418 (“[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art”). Throughout the Petition, Petitioner states a POSITA *would* have done it, but without evidence, Petitioner is offering only that a POSITA *could* have done it.

Petitioner does not provide a reason to combine Forstall, Rabu, Langle, and Katayama that is not based on the '369 patent itself. Nowhere in Section III.A.1 does Petitioner provide a reasoned motivation, beyond what is suggested by the '369 patent, to combine Forstall, Rabu, Langle, and Katayama into the “Forstall-Rabu-Langle2009-Katayama device,” *e.g.*, something in Forstall that would cause a POSITA to modify Forstall, and further, to search out Rabu, and further to search out Langle, and further to search out Katayama. Without a motivation to combine, as would be understood by a POSITA before the filing of the claimed invention, there would be no “Forstall-Rabu-Langle2009-Katayama device” as Petitioner proposes. *See* Pet. at 28-38. *See also Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1343 (Fed. Cir. 2017) (citing *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1047–48, 1051 (Fed. Cir. 2016) (en banc)) (requiring that Petitioner provide, with particularity, rationale to combine the teachings of the cited art, *i.e.*, “whether the relevant skilled artisan had a motivation to combine pieces of prior art in the way eventually claimed in the patent at issue”).

In arriving at a rationale to combine, “the question under 35 U.S.C. § 103 is not merely what the references expressly teach but what they *would have suggested* to one of ordinary skill in the art at the time the invention was made.” *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (quoting *In re Lamberti*,

545 F.2d 747, 750 (CCPA 1976)) (emphasis added); *see also* Manual of Patent Examining Procedure § 2123 (9th ed. rev. 10.2019 June 2020) (“MPEP”).

In its obviousness analysis in Section III.A.1(e) of the Petition, Petitioner suggests only what benefits and capabilities would result from integrating Forstall, Rabu, Langle, and Katayama together into a combination inspired by the claims, and does so piecemeal, in sub-combinations, for convenience of the Petitioner’s conclusory arguments.

**a. Petitioner Fails To Establish That A POSITA Would Be Motivated To Modify Forstall With The Teachings Of Rabu**

In Section III.A.1(e)(i), Petitioner loosely suggests that combining Forstall and Rabu would solve Forstall’s “[lack of] implementation details relating to detecting a vehicle mode” because Rabu “is focused on mode detection” and Rabu “leverages a ‘generally conventional’ accelerometer (also in Forstall’s device).” Pet. at 29. Petitioner provides no rational reason why a POSITA looking at Forstall would find Rabu to be appropriate for combining with Forstall, including, e.g., why Rabu’s use of frequency analysis of device movements would be necessary. Petitioner instead generally states that “practical solutions relating to Forstall’s vehicle mode detection . . . are found within Rabu” without considering what those “practical solutions” represent or why they would be needed or appropriate to arrive at the claimed invention. *See id.* Even to “supplement the detection of a ‘vehicle mode,’” a POSITA might find a solution in Rabu, but not an appropriate solution for the

claimed invention. *See id.* at 29-30. Additionally, use of an accelerometer as a generic feature of both Forstall and Rabu does not sufficiently explain why a POSITA would have looked to combine these references.

Petitioner erroneously suggests that Forstall's silence on a particular topic or feature somehow provides sufficient reason for a POSITA to search out Rabu. For example, Petitioner argues, "[a] POSITA would have also been motivated to seek practical solutions relating to Forstall's vehicle mode detection since its disclosure lacks implementation details relating to detecting a vehicle mode absent some explicit user indication." *Id.* at 29. Petitioner merely speculates on Forstall's silence, but, based on the Federal Circuit's explanation of "rational underpinning," this speculation does not "support the legal conclusion of obviousness." *See In re Kahn*, 441 F.3d at 988; *In re GPAC Inc.*, 57 F.3d at 1579. "The legal conclusion of obviousness must be supported by facts" and cannot "resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies." *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967). "[W]hile 'common sense' can be invoked, even potentially to supply a limitation missing from the prior art, it must still be supported by evidence and a reasoned explanation....[T]his is particularly true where the missing limitation goes to the heart of an invention." *Arendi v. Apple*, 832 F.3d 1355, 1363, 119 USPQ2d 1822, 1827 (Fed. Cir. 2016). Petitioner's speculation violates these propositions.

Petitioner’s gap-filling analysis seeks to compensate for what is absent from the references themselves. But “[t]o draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction—an illogical and inappropriate process by which to determine patentability.” *Sensonics Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996) (citing *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)). “The invention must be viewed not after the blueprint has been drawn by the inventor, but as it would have been perceived in the state of the art that existed at the time the invention was made.” *Id.* (citing *Interconnect Planning Corp. v. Feil*, 774 F. 2d 1132, 1138 (Fed. Cir. 1985)). Thus, the Board should not give weight to Petitioner’s speculation about what is missing in Forstall. As the Federal Circuit has explained, “legal determination of obviousness . . . should be based on evidence rather than on mere speculation or conjecture.” *Alza Corp. v. Maylan Labs., Inc.*, 464 F.3d 1286, 1290 (Fed. Cir. 2006). *See also*, discussion *infra* Section VII.A.3.

Solutions to fill in gaps for missing implementation details suggested by feature similarities is not a sufficient motivation to combine, without more. Said another way, merely asserting that the cited art is relevant to or directed to the same art or same techniques does not suffice as an articulated reason with a rational underpinning to combine the respective teachings of the cited art—more is required

to support the legal conclusion of obviousness. *See KSR*, 550 U.S. at 418; *see also Microsoft Corp. v. Enfish, LLC*, 662 F. App'x 981, 990 (Fed. Cir. 2016) (determining that the Board correctly concluded that Microsoft “gave no reason for the motivation of a person of ordinary skill [in the art] to combine [prior art references] except that the references were directed to the same art or same techniques”).

A POSITA would understand, based on the plain meaning of the claim terms, in light of the specification, that during a driving period, the vehicle of the '369 patent is being driven. The POSITA would further understand that driving information is collected by the mobile communications device during the driving period, which has a start. Nothing in Forstall or Rabu suggests that merely “automatically detect[ing] a ‘vehicle mode’ using a docked/undocked status” would lead to the claimed invention, regardless of the combination “introduc[ing] multiple additional advantages.” *See Pet.* at 30.

The “vehicle mode” of operation of the Forstall navigation system is a default mode of operation for employing a “dead reckoning” method of estimating the location of the mobile device. USAA-1028, [0064]. A separate “walking mode” may be enabled when the navigation system detects that the user is taking steps, such as through impact sensors in the user’s footwear. *Id.*, [0061]. Otherwise, the Forstall system remains in the default “vehicle mode.” Other than mentioning that acceleration “along the axes perpendicular to the detected gravity axis are given

enhanced weight in the vehicle mode,” *id.*, [0070], Forstall does not otherwise distinguish how the navigation system might differ in operation between the “driving mode” and the “walking mode.”

Forstall simply does not disclose, nor does it require, a “vehicle mode detection,” but instead employs a “vehicle mode” of operation (that simply has the effect of adjusting a weight that is assigned to certain acceleration data, USAA-1028, [0070]) that is the default mode of operation. Because it is a default mode of operation, there is simply no need of detection of that mode that would lead a POSITA to look to the Rabu reference, which describes a mode of operation of a mobile device based on its determination of how and when the mobile device is being used in relation to movement of a vehicle.

Petitioner seeks to create a problem or challenge in Forstall that allegedly may be addressed by Rabu where none exists. As Forstall operates by default in a “vehicle mode,” there is absolutely no need to “detect a vehicle mode” as asserted by Petitioner, and thus there is no reason or motivation to look to the docking station of Rabu to solve any challenge relating to “detecting a vehicle mode” in Forstall.

The “practical solution” alleged by Petitioner lacks support in the references themselves. Nothing in those references would suggest to a POSITA that the “mode” of weighing acceleration data in Forstall might in any way benefit from Rabu’s disclosure concerning modifying a mode of operation of a mobile device based on

how it is being used when in a moving vehicle. As noted above, “the question under 35 USC §103 is not merely what the references expressly teach but what they *would have suggested* to one of ordinary skill in the art at the time the invention was made.” *Merck & Co.*, 874 F.2d at 807 (quoting *In re Lamberti*, 545 F.2d at 750) (emphasis added). Here, nothing in Rabu would have suggested any modification to the Forstall method of weighing acceleration data. While Petitioner once again attempts to justify the combination by asserting what the resultant combination could do if it were made, Petitioner’s attempt to craft a need for a “practical solution” does not include sufficient rationale for why a POSITA would be motivated to make that combination.

Further, Petitioner argues that a POSITA would be motivated to combine Rabu and Forstall because “determining that a mobile device is docked in a moving vehicle provides a basis for changing the operational mode to ‘vehicle mode,’ which then enables position measurement using a ‘default dead reckoning mode.’” Pet. at 58. Again, Forstall already operates in a default dead reckoning vehicle mode, and simply switches to a dead reckoning walking mode when impact sensors in the user’s footwear indicate the user is taking steps. USAA-1028, [0065]. As the Forstall device is operating by default in a dead reckoning mode, a POSITA would have no reason to look to Rabu to change into that default mode, or to provide unnecessary

additional functionality for frequency analysis to determine docking status for Rabu's "mode detection."

A determination of obviousness cannot be based on these types of mere conclusory statements, but rather "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d at 988. Here, there is none. Petitioner's purported motivation to combine Rabu and Forstall simply does not apply to the disclosures in those references, and again should not be relied upon to support institution.

Petitioner states, among other things, that "[a POSITA] would have found it obvious to integrate Rabu's dock status sensing and associated mode-shifting capabilities into Forstall's device 100, thereby enhancing the device's ability to promote safe driving." Pet. at 28. Petitioner further reasons that "the resulting device would have added functionality, as it would be capable of defining and determining different types of driving periods based on user inputs and sensor data (including one in which the phone is docked within a moving vehicle, and another in which the phone is undocked within a moving vehicle)." *Id.*

Petitioner's rationale of "enhancing the device's ability to promote safe driving" and creating a "resulting device [that] would have added functionality" are generic and nothing but conclusory statements that the combination "would have been obvious." *See In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017); *see also*

*ActiveVideo Networks Inc.*, 694 F.3d at 1328 (finding expert testimony of motivation to combine “to build something better,” “more efficient, cheaper, or” something that “had more features” was generic and insufficient). Section 103, however, does not permit such conclusory statements to form the basis of an obviousness argument.

Petitioner provides general examples of added functionality that could be achieved: “For example, the Forstall-Rabu device would have leveraged orientation and motion data from its accelerometer to determine both vehicle motion and phone docking status upon a user initiating an adaptive navigation period.” Pet. at 28. Petitioner generically concludes that “the Forstall-Rabu device would have provided a basis for changing the operational mode to ‘vehicle mode,’ which would have enabled position measurement using a ‘default dead reckoning mode[;]’ and “a POSITA would have found it obvious to leverage motion and orientation data from accelerometer 172 to detect whether device should operating (*sic*) in ‘vehicle mode.’” *Id.* at 29.

By at least these examples, Petitioner states what a POSITA *could* do by combining Forstall and Rabu, but fails to provide sufficient rationale, beyond generic statements drawing on nothing but hindsight, for why a POSITA *would be motivated* to combine Forstall and Rabu. “[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” *See*

*Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015); *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1068–69 (Fed. Cir. 2018) (finding that “the Board focused on what a skilled artisan would have been *able* to do, rather than what a skilled artisan would have been *motivated* to do at the time of the invention”). Here, Petitioner fails to provide *any* motivation for the referenced combination.

As to claim element [1.6], Petitioner suggests, based on the Forstall-Rabu combination, that “it would have been obvious to a POSITA to provide a device that is ‘mounted in a vehicle’ using an ‘automobile dock’ or ‘vehicle holder,’ and thus, is ‘*removably attached to the vehicle*’ prior to and/or during a navigation period where a vehicle is traveling along a navigation path (*‘the vehicle is in use’*).” Pet. at 48 (emphasis in original). Petitioner posits that “this would have improved the transitioning of operational modes” (*id.*), while ignoring that (i) Rabu requires frequency analysis of small changes in motion to determine reorientation in a vehicle such as for docking status (USAA-1013 at 4:30-33), which the claims of the ‘369 patent do not require, and (ii) nothing in the cited portions of Forstall identify need to improve transitioning of operational modes, e.g., by such motion analysis. Although the combination may indeed “have improved the transitioning of operational modes,” a POSITA would not have been motivated by Forstall to seek out frequency analysis for determining small changes in motion status because Forstall concerns utilizing sensor data from an iPhone’s accelerometers, compass,

gyroscopes, and impact sensors for determining dead reckoning position measurement when another positioning mode, such as GPS, becomes unavailable. USAA-1028, [0062].

**(i) Forstall Teaches Away from the Teachings of Rabu**

Forstall concerns location accuracy for walking or driving, not orientation accuracy or motion status for docking determination. *See* USAA-1028, Abstract. Forstall discloses that even though “a vehicle dead reckoning mode uses an accelerometer reading to determine how the device is positioned relative to the earth’s gravity” and “axis changes and measurements are updated if the device is reoriented in the vehicle,” “[i]n the vehicle mode, sudden accelerations in a positive or negative direction along the axis of the earth’s gravity are given *a reduced importance* in the dead reckoning position measurement calculation being utilized.” USAA-1028, [0070] (emphasis added). Simply, Forstall does not consider reorientation in a vehicle as important.

The frequency spectrum technology would have been considered excessive by a POSITA at the time of the ’369 invention, due in part to the additional amount of processing of frequency data that the technology would require and also because such data would be discounted by Forstall’s system for vehicle dead reckoning. Thus, Forstall teaches away from using the teachings of Rabu. “A reference may be said to teach away when a person of ordinary skill, upon reading the reference . . . would be

led in a direction divergent from the path that was taken by the applicant.” *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

As evidence, Forstall discloses how the accelerometer data is used (and limited for use) for dead reckoning:

[A] vehicle dead reckoning mode uses an accelerometer reading to determine how the device is positioned relative to the earth's gravity. That is, the accelerometer is used to detect which direction is down relative to the positioning of the device. This axis changes and measurements are updated if the device is reoriented in the vehicle. *In the vehicle mode, sudden accelerations in a positive or negative direction along the axis of the earth's gravity are given a **reduced importance** in the dead reckoning position measurement calculation being utilized. Accelerations along this axis are **discounted** as they are likely caused by undulations of a traveling surface and reactions thereto by a vehicle suspension system. Accelerations along the axes perpendicular to the detected gravity axis are given enhanced weight in the vehicle mode as it is primarily these accelerations that contribute to displacement of the vehicle from a known fix to a second position to be measured via dead reckoning and displayed on a map.*

USAA-1028, [0070] (emphasis added). Whereas Forstall **discounts** accelerometer data in the vertical direction (i.e., direction of gravity, e.g., as would be found for bumps in the road, placing a phone on a dashboard, docking a phone, etc.), Rabu **depends on** these measurements to develop a frequency spectrum for determining holder motion and/or docking status. *See* USAA-1028 at [0070]; *compare to* USAA-

1013 at 4:25-33 (“Accelerometer 409 can measure acceleration due to gravity. Based on that measurement, processor 404 can determine the angle it is tilted at with respect to vertical, horizontal, or any other reference plane. ... [A]ccelerometer 409 can sense the amount of dynamic acceleration. Based on this information, processor 404 can determine a frequency spectrum associated with the holder motion and consequently determine the motion status of PMD 400.”).

Therefore, a POSITA would instead have been discouraged to combine Forstall with Rabu because Rabu’s frequency spectrum positioning determination would be overkill, requiring unnecessary processing power that at least would be wasted on accelerometer data in the vertical (gravity) direction. *See* USAA-1013 at 4:15-5:14 (describing processing to “determine the angle [the PMD] is tilted” and “a frequency spectrum,” “receive inputs from accelerometer 409, GPS device 405, and gyroscope 407 to calculate an orientation angle of PMD 400,” as well as “use [continuous] input from GPS device 405”). A POSITA simply would not be motivated to modify Forstall with Rabu to arrive at the claims of the ’369 patent or to seek out Rabu for any of Forstall’s alleged shortcomings. In the case of loss of GPS, Rabu’s device would have an accelerometer and a gyroscope (USAA-1013 at 4:18), similar to Forstall (USAA-1028, [0061]), but Rabu’s process for determining holder motion status (e.g., USAA-1013 at 4:25-33, 7:9-8:4) would not further advance Forstall’s ability to perform dead reckoning (USAA-1028, [0070], [0074]-

[0076]). Therefore, a POSITA at the time of the invention would, at best, not have been led to combine Forstall and Rabu to arrive at the claims of the '369 patent, and most likely would have been discouraged.

**b. Petitioner Fails to Establish That a POSITA Would Have Been Motivated to Modify Forstall, Whether Alone or with Rabu, with the Teachings of Langle**

In Section III.A.1(e)(ii) of the Petition, Petitioner posits that a POSITA, before the filing of the '369 patent, would have combined the Forstall-Rabu combination with Langle because Langle “described a technique to predict accident-related risks” ... “utiliz[ing] embedded sensors of mobile phones.” *Id.* Specifically, Petitioner reasons that a POSITA would have turned to this combination because “[m]obile based navigation systems were known to increase the risk of accidents since they typically involve mounting a mobile device to a vehicle dashboard so that a user may view navigation information while driving.” *Id.* But nothing in the Forstall-Rabu combination suggests a safety risk of using a mobile device in a vehicle. Even if it did, such a “known” safety risk might lead a POSITA not to use a mobile device with a graphical user interface as in the '369 patent, rather than to look to something that suggests that using such a device in the claimed invention would be detrimental.

Although motivation can come from places outside of the references themselves, it would seem counterproductive for a POSITA to be driven by such a concern when the very nature of the invention (a vehicle-mounted device) is for

generally making it easier and more cost effective to report driving incidents.

USAA-1001 at 1:22-30, 52-58.

Additionally, Petitioner points out that “Langle2009 teaches ‘mobile phones may be used to aid in safe driving practices and detection of emergencies[,]’ and thus, the sensors used for improving safety are already present in Forstall’s device.” *Id.* at 31. If “the sensors used for improving safety are already in Forstall’s device,” Petitioner has not made clear why a POSITA would have needed to combine Langle, regardless of how “[a] POSITA would have reasonably succeeded in incorporating Langle2009’s safety techniques into Forstall’s mobile device.” *Id.* That “Langle2009 recognizes that ‘[p]rogramming with accelerometers ... is straightforward and supports three axes’” would not be enough motivation to combine even if a POSITA fell upon Langle by accident. *See id.*

Further, Langle discloses nothing more than the idea that graphed curves showing acceleration as measured by a mobile device’s accelerometer over time may be used to classify that acceleration as “safe” or “unsafe” driving activity. A POSITA would not be motivated to combine the Forstall navigation system (whether alone or in combination with Rabu) with the acceleration curve classification methods of Langle. As described above, Forstall is directed to enabling navigation systems on a mobile device to continue operation even after loss of a GPS signal by “performing location estimation using dead reckoning.” USAA-1028, Abstract. In contrast,

Langle is directed to classifying driving behavior by analyzing the shapes of curves of acceleration over time as measured by “a Google phone to classify safe versus unsafe driving”, and more particularly to detect “safe verses unsafe braking . . . [and] safe and unsafe lane changes.” USAA-1029 at 1 (Abstract). While Petitioner attempts to tie the references together under the guise of an alleged common theme of, or need for, “safety,” there is simply nothing in Forstall that would motivate a POSITA to look to systems and/or methods for classifying acceleration curves as evidencing safe or unsafe braking or lane changes to somehow “improve safety” when using the Forstall navigation system, or to improve or address any other purported shortcomings of the Forstall navigation system. Knowledge of whether a specific acceleration evidences “safe” or “unsafe” driving does nothing to improve upon a navigation application on a mobile device. A POSITA seeking to improve upon such a navigation application would have no need or inclination to look to systems or methods for classifying accelerations as “safe” or “unsafe.”

While the statement that “[t]his safety risk would have motivated a POSITA to venture beyond Forstall’s disclosure to well-known vehicle monitoring systems specifically concerned with safety” recognizes a general concern (“[m]obile based navigation systems were known to increase the risk of accidents since they typically involve mounting a mobile device to a vehicle dashboard”), no concerns of safety,

risk, or distracted driving due to using the mobile device can be found in Forstall. Pet. at 30; *see, generally*, USAA-1028.

Even if there were a purported safety risk associated with Forstall, it is not evident, and Petitioner has not established, how evaluating vehicle acceleration, braking, and lane changing as discussed by Langle could address a safety risk associated with using a navigation system as disclosed by Forstall. Moreover, if a POSITA by happenstance were to come upon the teachings of Langle, the functions of Langle of classifying accelerations as safe or unsafe braking or lane changes has no bearing on any alleged safety concern relating to a driver viewing a navigation system.

As to claim [1.7], Petitioner's conclusory statement that "a POSITA would have found obvious that the driving safety data is derived from sensor data since Langle2009 describes analyzing information specified by the sensor data ... 'to classify safe versus unsafe driving'" maligns the obviousness analysis. Pet. at 49 (citing USAA-1029, Abstract). The question is not whether Langle's driving safety data obviously comes from sensors. Further, Dr. Michelson's expert declaration merely parrots the same conclusory assertion without adding any further evidence or explanation. *See* USAA-1003, ¶149.

Petitioner's rationale to combine Forstall with Langle of addressing a "safety risk" is generic and akin to stating in a conclusory fashion that the combination

“would have been obvious.” *See In re Van Os*, 844 F.3d at 1361; *see also ActiveVideo Networks Inc.*, 694 F.3d at 1328 (Fed. Cir. 2012) (finding expert testimony of motivation to combine “to build something better,” “more efficient, cheaper, or” something that “had more features” was generic and insufficient).

While Dr. Michalson, the Petitioner’s expert, parrots the same conclusory statements (*see* USAA-1003, ¶115), the cited evidence does not support configuring a mobile-based system like the claimed invention merely because “[m]obile based navigation systems were known to increase the risk of accidents.” Pet. at 30; *see* USAA-1031 at [0002]; USAA-1032 at 323. Cited art USAA-1031 concerns vehicle (e.g., fork-lift) safety and turns off a display upon vehicle motion because the display, while possibly being distracting, is not needed to operate the vehicle (e.g., heavy machinery). The motivation here is strikingly different because the claimed invention (logging driving information via a mobile telecommunications device) invites and/or benefits from user interaction with the mobile device.

Cited art USAA-1032 is directed to “a system [to monitor varied road and traffic conditions in a city setting] that performs rich sensing by piggybacking on smartphones that users carry with them in normal course.” USAA-1032 at 1. Petitioner’s pincite (“132”) does not exist in the reference, but Patent Owner can only assume, based on the reference’s purpose, that the reference does not discourage use of the device due to the purported increased risk of accidents. *See*,

*e.g.*, USAA-1032 at 2 (“main contributions of this work”). Thus, the generalization that “[m]obile based navigation systems were known to increase the risk of accidents” is both contradictory and counterintuitive and would have been such to a POSITA. While this statement may identify a concern related to the combination, it provides no reasoned motivation for making the combination before the time of the ’369 patent filing.

Such broad-stroke conclusions go far beyond the reach of any motivation present in the Forstall and Langle references, and simply do not provide justification for combining Langle with Forstall, whether alone or in combination with Rabu. Petitioner’s purported motivation to combine Langle with Rabu and Forstall therefore likewise fails, and again should not be relied upon to support institution.

**c. Petitioner Fails to Establish That a POSITA Would Have Been Motivated to Modify Forstall, Whether Alone or with Rabu and/or Langle, with the Teachings of Katayama**

In Section III.A.1(e)(ii), Petitioner states that “[a] POSITA would have found it obvious to advance the Forstall-Rabu-Langle2009 device through implementation both of Katayama’s teachings on partitioning local memory into several sections (including sections for temporary and long term storage), and its related teachings on data handling, including both the comparison at the time of recording of digitalized sensor data against judgment criteria representative of specific driving behaviors, and storage in appropriate sections of memory of digitalized data with

metadata identifiers indicating determinations made through those comparisons.” Pet. at 31. Petitioner fails to recognize that the “implementation both of Katayama’s teachings on partitioning local memory into several sections (including sections for temporary and long term storage), and its related teachings on data handling” with the combination would not yield the claimed storage, as previously shown. *See* discussion *supra* Section IV.E.

A POSITA, thinking about the subject matter of the claims of the ’369 patent, in which data in long term memory is persistent (i.e., kept, not overwritten) while data in short term memory is temporary, would not look to Katayama, which throws away data in “situation data storage section 803,” which Petitioner incorrectly alleges to be the same as the “long term memory” of the ’369 patent. *See* discussion *supra* Section IV.E. A POSITA would understand, however, that Katayama’s “situation data storage section 803” mixes long term and short term data and erases part of “situation data storage section 803” as needed.

Further regarding combination with Katayama, Claim 1 of the ’369 patent does not address learning, so why Petitioner suggests that a POSITA would look to Katayama, which discloses specific functionality for learning the importance of data and applying a metadata identifier to “grasp a driving preference of the driver” (USAA-1024, [0053]) as a key feature, is not clear for Claim 1, other than that, in hindsight, such categorized learning might provide a nice feature to have in the

combination of Forstall-Rabu-Langle2009-Katayama for “improved data management.” *See* Pet. at 34-35. However, hindsight recognition of a nice feature to have is not proper motivation for a combination under 35 U.S.C. § 103.

Even if, as in Katayama at [0082], “the situation data storage section [stores] the situation data just in a chronological order without classifying the situation data in an order of importance,” there is nothing in Katayama saying that all of that data will be treated as long-term data and none will be lost due to overflow. Thus, the only way a POSITA could reasonably have been motivated to pick up Katayama with Forstall-Rabu-Langle in hand would be with hindsight knowledge of the invention.

Petitioner provides only conclusory statements regarding what a POSITA would find obvious, but such statements provide no support or rationale for why a POSITA would have looked to the Forstall, Rabu, Langle, and Katayama references in the first place. While each of Petitioner’s conclusory statements may provide *a result of the combination* after the fact, none of the statements provide a reason why making the combination would have been obvious to a POSITA, before the time of filing, without having all the art immediately in front of the POSITA and knowledge of the invention in hindsight.

Petitioner lists purported enhancements allegedly enabled by the enhanced Forstall-Rabu-Langle-Katayama combination that conveniently resemble some of

the features of the '369 patent. Pet. at 32-34. However, the purported enhancements are devoid of reasoning, other than what is gained by the improvements to the cited art for the sole sake of their improvements or to mimic the '369 patent claims. For example, Petitioner states, “the POSITA would have understood and found obvious that the above enhancements would improve Langle2009’s driving safety monitoring techniques, by enabling identification of accidents and ‘risk incidents’, with corresponding improvements to the sophistication of driving safety metrics.” *Id.* at 35. Petitioner then summarizes multiple benefits that would result from the combination. *Id.* at 36-37.

However, just because Petitioner can rationalize advantages of combining references *after the fact*, the advantages themselves do not provide sufficient reasons why it would have been obvious to combine the references in the first place. *See, e.g., ActiveVideo Networks Inc.*, 694 F.3d at 1328 (finding expert testimony of motivation to combine “to build something better,” “more efficient, cheaper, or” something that “had more features” was generic and insufficient). Petitioner once again does not provide rationale for why a POSITA would have looked to the references without impermissibly relying on hindsight.

### **3. Petitioner's Rationale To Combine Forstall, Rabu, Langle, and Katayama Is Based Entirely On Impermissible Hindsight, Using The '369 Patent As A Roadmap**

A determination of obviousness cannot be based on mere conclusory statements; “instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d at 988. Such “rational underpinning,” in view of the understanding of a POSITA, might include “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d at 1573, 1579 (Fed. Cir. 1995) (quoting *Custom Access., Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). Petitioner offers no such reasoning.

Petitioner's reasons for combining Forstall, Rabu, Langle, and Katayama are not supported by sufficient evidence, and Petitioner instead relies on hindsight for its analysis, disregarding the subject matter as a whole. *See Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (“[W]e cannot allow hindsight bias to be the thread that stitches together prior art patches into something that is the claimed invention.”). The Federal Circuit has explained that the invention must be considered “as a whole.”

[I]n making the assessment of differences between the prior art and the claimed subject matter, section 103 specifically requires consideration of the claimed invention “as a whole.” Inventions typically are new

combinations of existing principles or features. The “as a whole” instruction in title 35 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component. This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components.

*Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332, 1337 (Fed. Cir. 2005).

To avoid hindsight bias, the obviousness inquiry is not limited to whether the elements of the ’369 patent’s mobile communications device were known in the art as disparate puzzle pieces; nor is the inquiry complete with whether a POSITA would have understood Forstall in combination with Rabu, Langle, and Katayama to teach the ’369 patent’s logging of vehicle behavior. Rather, Petitioner must provide, *with particularity*, rationale to combine the teachings of the cited art, *i.e.*, “whether the relevant skilled artisan had a motivation to combine pieces of prior art in the way eventually claimed in the patent at issue.” *Intercontinental Great Brands LLC*, 869 F.3d at 1343 (citing *Apple Inc.*, 839 F.3d at 1047–48, 1051). Petitioner does not provide such rationale.

Petitioner’s rationale to combine Forstall, Rabu, Langle, and Katayama relies on using the ’369 patent as a roadmap for reconstructing the claims based on hindsight bias. Petitioner asserts reasons as to why a POSITA would have been

motivated to modify Forstall that appear to be nothing more than a desire to provide a mobile telecommunications device that meets the elements claimed in the '369 patent. However, in laying out an obviousness analysis, it is “impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.” *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). *See also In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991) (“It is impermissible [to use] applicant’s structure as a template and select[] elements from references to fill the gaps”). “To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction—an illogical and inappropriate process by which to determine patentability.” *Sensonics, Inc.*, 81 F.3d at 1570 (citing *W.L. Gore & Assoc.*, 721 F.2d at 1553).

For example, considering the cited art as a whole, and without the benefit of hindsight, a POSITA would never have picked up Rabu in the first place, let alone picked out sections of Rabu for its teaching of determining a frequency spectrum of a portable media device, comparing that frequency spectrum to a database of frequency spectra to determine a motion status and mode of operation of the portable media device, and further using such data to distinguish whether the portable media device is in a dock, resting on a surface, being handled by a person, located in a moving vehicle, or located in a stationary vehicle. *See* USAA-1013, Abstract.

Whereas Rabu requires the use of frequency data to make these specific distinctions and determinations, such use of frequency data would have been considered unnecessary and technically overkill by a POSITA, both for the '369 patent and for Forstall.

In this regard, the '369 patent relies on the availability of continuous sensor data (including continuous positioning data and accelerometer data) to ensure that data regarding how a vehicle is being driven is captured. *See* USAA-1001 at 16:15-20; 16:48-18-32. The '369 patent thus has no need for the use of frequency data like Rabu does. Forstall, disclosing an early version of the iPhone (*see* AT-20002) having internal hardware components for dead reckoning, incorporates these components for mitigating a lack of location services when GPS is not available. Rabu is directed to determining small relative movements of a device using frequency analysis of the movements for automatically determining docking status of the device. Neither Forstall nor the '369 patent are concerned with this type of data resolution or automated docking status. Forstall specifically is directed to positioning for navigation, i.e., for determining a location compared to map data, or displacement from a known fix, not precise device orientation and docking status. *See* USAA-1028 at [0006]-[0010], [0070].

For this and several other reasons outlined in this response, there is insufficient explanation in the Petition or Petitioner's expert declaration as to why a

POSITA would have combined the teachings of Forstall, Rabu, Langle, and Katayama in the manner Petitioner proposes. Petitioner relies upon the teachings of the '369 patent itself to argue that the references disclose or render obvious these very teachings. To do this, Petitioner's analysis reads limitations of the '369 patent into the cited art, which amounts to, once again, a hindsight analysis. *Cf. Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) ("This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result — often the very definition of invention").

For all of the foregoing reasons, Petitioner has failed to show that the challenged claim 1 (and 2-4, 10-12, 16, 17, 19-24, which depend from claim 1, and 26, which is similar to claim 1) is obvious over Forstall, in view of Rabu, in further view of Langle, and in further view of Katayama. As shown, Petitioner's rationale to combine these references is conclusory, does not have the factual support necessary to guard against impermissible hindsight, and ignores aspects of the references that indicate undesirability of combining the references as proposed. Therefore, the Board should not institute IPR for Ground 1A.

Further, an IPR should not be instituted for Grounds 1B through 1F for the same reasons as set forth above for claim 1. Adding additional references to the Forstall-Rabu-Langle-Katayama combination for claims 5-9, 13-15, 18, and 25 does

not change the patentability of claim 1 and thus the patentability of any of these dependent claims. Petitioner's additional cited references of Tamir, Balachandran, Thompson2010, Warren, and Willis do not affect the patentability analysis, and those references cannot cure the deficiencies identified above for the Forstall-Rabu-Langle-Katayama combination. Thus, claims 5-9, 13-15, 18, and 25 also remain patentable under 35 U.S.C. §103.

Regarding Ground 1G for independent claim 27, Berkobin added to the claim 1 combination also does not affect the patentability analysis of this claim. Berkobin adds artificial intelligence to the claim, but the subject matter of Berkobin cannot cure the shortcomings of the Forstall-Rabu-Langle-Katayama combination to which it is added. Thus, claim 27 remains patentable under 35 U.S.C. §103. Therefore, the Board should not institute IPR for Ground 1G.

## VIII. CONCLUSION

USAA's Petition fails as Petitioner cannot show, and has not shown, that the claims of the '369 patent are obvious in light of the cited references. Accordingly, Patent Owner Auto Telematics Ltd. respectfully requests that the Board deny USAA's request for *inter partes* review as there is no likelihood of success that USAA will succeed on any of the challenged claims.

August 10, 2023

Respectfully submitted,

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**CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24**

Pursuant to 37 C.F.R. § 42.24, Patent Owner Auto Telematics Ltd., certifies that, based on the word count of the word processing application used to prepare this paper, the number of words in this Patent Owner Preliminary Response is 13,996. This word count does not include the items that may be excluded from the count under 37 C.F.R. § 42.24(a) including the table of contents, table of authorities, list of exhibits and this certificate.

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**CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. § 42.6(e), undersigned counsel certifies that on August 10, 2023, this paper – Patent Owner Auto Telematics Ltd’s Preliminary Response Pursuant to 37 C.F.R. §42.107 – was served via electronic mail upon the following counsel of record for Petitioner:

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**IPR2023-00770**

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