UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNITED SERVICES AUTOMOBILE ASSOCIATION,

Petitioner,

v.

AUTO TELEMATICS LTD.,

Patent Owner

Case IPR2023-00518
Patent 9,633,487

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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I. INTRODUCTION

In its Patent Owner Response ("POR"), Auto Telematics ("AT") argues against the Petition grounds by narrowing key prior art disclosures. These arguments are not new—AT pursued them in its Patent Owner Preliminary Response ("POPR"). And, while the POR is accompanied by testimony from Christopher Wilson, this testimony provides nearly no corroboration for these repackaged POPR arguments. Indeed, PO fails to address aspects of the underlying record highlighted by USAA in the Petition, much less address the unfavorable analysis and conclusions offered by the Panel (albeit, preliminarily) in the Institution Decision.

The POR's primarily focus is Curry, which AT mischaracterizes and misinterprets in several ways. AT first superficially minimizes Curry's use of sensor data to phone calls, and in doing so, overlooks Curry's disclosure of "an integrated and economical solution" to "detect and prevent unsafe driving behavior, such as talking on or texting while mobile phones while driving" by "utilizing GPS and accelerometer sensors embedded in mobile phones." USAA-1005, 7:5-22; USAA-1003, ¶¶67-69. AT then attempts to limit use of this sensor data to server-side analytics. Finally, AT argues that information determined from the recording and processing of data is not even related to driving. Not only do these characterizations contradict clear and ambiguous teachings within Curry,

they bely its express objective—to improve driver safety. Of course, this is consistent with the approach earlier taken in the POPR, yielding similar characterizations of Curry that were rightly dismissed by the Panel as "too narrow." Inst. Dec., 23.

AT has also failed to meaningfully develop the evidentiary record post-institution. It failed to avail itself of the opportunity cross-examine USAA's expert, Dr. William Michalson. And, deposition of Mr. Wilson, yielded deposition testimony that reinforced the Panel's preliminary assessment—the Petition sufficiently identified a prior art basis for obviousness. The post-institution record, therefore, favors USAA's positions.

The Panel should therefore find the Challenged Claims unpatentable.

II. CLAIM INTERPRETATION

No express constructions are required in this proceeding. Pet., 3-4.[1] AT similarly chose not to expressly construe any claim term, confirming the Panel does "not need to construe any terms expressly to reach [its] decision." Inst. Dec., 8. Nonetheless, USAA addresses the POR's characterizations of claim terms below.

[1] The POR mischaracterizes the Petition when referencing observations as "Petitioner's proposed construction." POR, 5.

A. Determine…A Start Of A Driving Period[2]

AT characterizes this phrase to impose two time-durational requirements on an associated time period of the ***driving period***, that: (1) the time period is "the entire period in which the vehicle is being driven…" (POR, 34), and (2) the time period "necessarily includes only the period in which the vehicle is being driven" (POR, 35 (fn 7)). *See* USAA-1001, 20:23-38; FIG. 4a. Neither the claim language nor the record evidence supports this position.

When addressing [1.6], the Petition observed that "the claim leaves open the possibility of the driving period corresponding to the beginning, middle or end of, a vehicle's operation." Pet., 3-4; USAA-1003, ¶130. The Panel addressed this observation in a related IPR proceeding, and found that specification disclosure "supports" it because "the start of the driving period may correspond to the middle of a vehicle's operation…" *See* IPR2023-00857, Pap. 10 ("857 Decision"), 10-11 (PTAB Dec. 19, 2023).

The Panel also identified disclosure (in a shared specification) of "trigger[ing] the start of a driving period" based on "sensor data reflect[ing] a detected speed above a predetermined threshold." *Id.* (citing U.S. Pat. No. 10,198,879, 3:31-61); USAA-1001, 3:31-61.

[2] Reference to claim language in this Reply is bolded and italicized throughout.

Because the '487 patent contemplates embodiments in which a ***start*** of a ***driving period*** occurs at time point *after* a user has already started to drive, the ***driving period*** is not limited to the entire time period of a vehicle being driven. *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1276 (Fed. Cir. 2008) ("We normally do not interpret claim terms in a way that excludes embodiments disclosed in the specification"). Even AT's expert agrees. USAA-1084, 99:7-10 ("So the specifics of exactly **when the driving period starts** and exactly when it ends are **not critical** to the analysis or the driving period as perceived by a person of skill in the art."); *see also id.*, 91:7-16, 103:16-104:7, 104:12-106:16, 111:24-114:21.

B. Driving Information

According to AT, "[d]riving information" includes "location, **speed**, and **acceleration** of the vehicle associated with how the vehicle is driven," which may include "detected driving events, including driving anomalies." POR, 29. This is consistent with the Petition's identification of "driving behavior" information in Curry, such as "talking…or texting…while driving" and "speeding, **abnormal acceleration**, **abnormal deceleration**, and taking sharp turns." Pet., 29; USAA-1003, ¶¶140-142; USAA-1005, 3:24-4:6.

III. CURRY-RABU RENDERS CLAIM 1 OBVIOUS

The POR primarily addresses Curry amongst Curry-Rabu of Ground 1A in relation to three limitations recited in claim 1:

> [1.6] [a] mobile telecommunications device configured to: determine, based on 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;
>
> [1.8] store a selection of the ***driving information*** to the memory;
>
> USAA-1001, 31:42-67; *see* Pet., 64-70

For [1.6], AT attempts to distinguish the ***start*** of a ***driving period*** by narrowly characterizing a start of a recording on Curry's phone 106 as being limited to phone calls. In addressing ***processing*** in [1.7], it ignores Curry's express disclosure of a motion data cache (on a mobile device) for locally storing processed data, and attempts instead to limit all processing to a data server. Finally, for [1.8], AT insists that any information stored in the motion data cache cannot be ***driving information***. Each of these arguments fail because they either mischaracterizes Curry and/or the Petition, or overlook contrary positions in each.

A. Curry Teaches Sensor Data Recording Techniques That *Determine…A Start Of A Driving Period*

The Curry-Rabu phone satisfies [1.6] in "multiple ways" because "Curry

describes **multiple embodiments** in which a phone determines a start of a driving period during which the phone is located within a moving vehicle." Pet., 23-24; USAA-1003, ¶¶133, 134. Cited examples of these embodiments include Figure 3 (Pet., 25-26 citing USAA-1005, 12:20-13:26); USAA-1003, ¶136) and Figure 4 (Pet., 27 citing USAA-1005, 15:7-22); USAA-1003, ¶137).

Faced with multiple mappings to Curry, AT limits its focuses on only one—the Figure 4 embodiment, which it purports "does not disclose **any data collection unrelated to the phone call**." POR, 19. This improperly narrows both the scope of Curry's disclosure and the mappings to Curry expressly relied-upon in the Petition. For example, in Figure 3, Curry teaches that a "motion recording process can be activated 302 on the phone," where the activation is "accomplished by the user of the phone." USAA-1005, 13:20-26. The same paragraph also confirms that activation of recording "when an outgoing call 301 is made or an incoming call 303" is merely exemplary. *Id*. AT's characterization of Curry's recording process is unduly narrow.

AT's position is also largely the same as what it previously said in the POPR—that starting the recording of sensor data upon receipt of a phone call in Curry is not "a start of a driving period." POPR, 20. In the Institution Decision, the Panel indicated that it was "not persuaded" by this argument and explained instead that "Curry specifically teach[es] that a phone call may be placed or

received during the driving of a vehicle, which then activates the monitoring mode." Inst. Dec., 32-33. This logic was reinforced through ensuing deposition of Mr. Wilson who confirmed through his testimony that motion recording in relation to phone calls advances Curry's overall objective to improve driver safety because it helps "eliminate or penalize people for the use of cell phone while driving." USAA-1084, 211:3-5.

AT also contends Curry's "**triggering event (the phone call or text)** does not occur at the start of the period in which the vehicle is being driven." *See, e.g.*, POR, 34. Here, AT unjustifiably limits the ***start*** of [1.6] to the start of driving. As noted §II.A, *supra*, the intrinsic record teaches an example that instead triggers a start of a driving period *after* the start of driving (e.g., upon reaching a threshold speed). *See* USAA-1001, 3:37-62. Tellingly, neither the POR nor the Wilson declaration address this example in their discussion of the ***driving period***. POR, 6-8 (citing AT-2001, ¶¶46-48), 32-36 (citing AT-2001, ¶¶105-10). Nor would a POSITA interpret [1.6] so narrowly because "when the driving period starts" is "not critical." USAA-1084, 99:7-10.

AT also mischaracterizes Ground 1A in alleging that the Petition maps the "incoming phone call of Curry" to each of the "input received by the user interface" of [1.6] and the "predetermined event" of [1.10]. POR, 40-41. Instead, the Petition distinctly mapped to [1.6] and [1.10] based on Curry's multiple

embodiments—consistent with the obviousness challenge to claim 1. Pet., 24 (discussing "multiple embodiments" in addressing [1.10]), Pet., 35 (discussing "various embodiments" in addressing [1.10]); *see* USAA-1003, ¶¶134, 155. Regardless, the Petition also mapped "identify[ing] unsafe driving behaviors" to the ***predetermined action*** of [1.10]. Pet., 35-36; USAA-1003, ¶155. AT's allegation that the mappings to [1.6] and [1.10] create an "insurmountable problem" is plain wrong. POR, 40.

B. Processing Of Sensor Data By The Curry-Rabu Phone Satisfies *Process[ing] The Sensor Data…To Derive Driving Information*

The Curry-Rabu phone satisfies [1.7] by processing sensor data (e.g., motion and orientation data) to derive "driving behavior" information, e.g., "talking…or texting…while driving" and "**speeding**, **abnormal acceleration**, **abnormal deceleration**, and taking sharp turns." Pet., 29 (citing USAA-1005, 7:13-29, 8:21-27, 8:30-9:33, 10:15-26, 11:3-17); USAA-1003, ¶140. Based on Curry, this processing can occur in real-time using timestamp information. *Id.* (citing USAA-1005, 12:27-31). Other types of ***driving information*** described in Curry include a "driver safety statistic," which may be "reported to" a data server. USAA-1005, 3:24-4:6; USAA-1003, ¶129.

As an initial matter, AT mischaracterizes the Petition's mappings to ***driving information*** as "the mobile device's determination of '*whether*' a vehicle is being

driven" and not "*how* the vehicle is being driven." POR, 36 (emphasis added). Setting aside accuracy, AT's purported distinction between "whether" and "how" is inconsequential and does not inform the issue. The information collected by the Curry-Rabu phone, regardless of what is precisely measured, is collected while driving and used by the Curry system to improve driver safety, and therefore, associated with how the vehicle is driven. USAA-1005, 3:24-6. This purported distinction also contradicts AT's own identification of information representing examples of ***driving information***. Like AT's identification of "location, **speed**, and **acceleration** of the vehicle…" (*see* POR, 29), the Petition identified Curry's "driving behavior" information, including "**speeding**, **abnormal acceleration**, **abnormal deceleration**, and taking sharp turns" (Pet., 29). The Petition therefore mapped the same types of information in Curry to the ***driving information*** as those identified by AT.

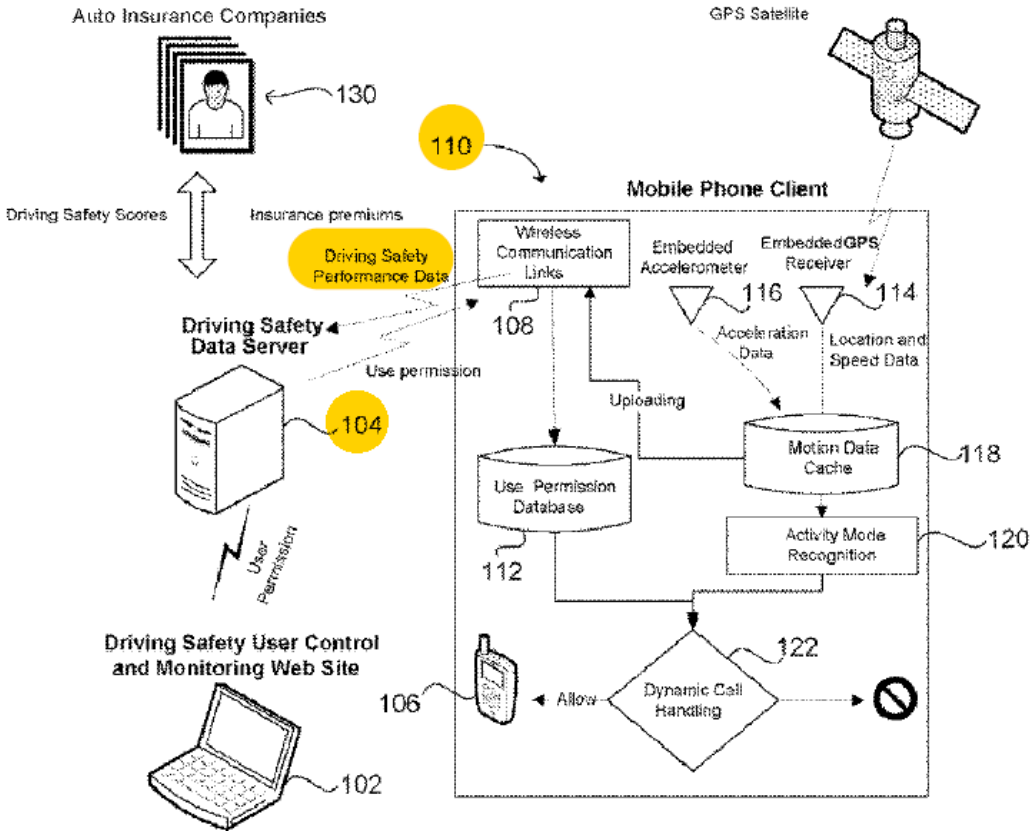
Worse, AT states that "talking or texting with mobile phones **while driving**" in Curry has "nothing to do with actual driving." POR, 39. This makes no sense, and is at odds with Curry's recognition that "using mobile phones while driving" causes a driver to be "four times as likely to get into crashes." USAA-1005, 2:2:3-8; USAA-1003, ¶¶67-69. If detection of "unsafe driving behavior" has no relation to "actual driving," as AT contends, then this would obviate any of the user safety features provided by the Curry system.

AT then proceeds to mischaracterize Curry as disclosing performance by a server (and not a mobile device) of any and all processing of ***driving information*** . *See, e.g.* POR, 31 ("it is Curry's server that actually logs driving information, not Curry's mobile phone"), 14 ("…Curry's mobile phone uses the raw data only to estimate context (e.g., standing, walking, driving) of mobile phone use using pre-set permissions from the server"); 36 ("to the extent that any processing is disclosed in Curry, a remote server processes raw data sent to it by Curry's mobile phone").

But the plain text of Curry refutes each of these characterizations. For instance, Curry describes "sensors embedded in mobile phones" are used to track "location, speed, and acceleration data of a driver[,]" and further, that "[t]he communication links in the mobile phone can be used to **[transmit] driving safety performance data to a central data server**." USAA-1005, 11:15-25; USAA-1003, ¶120. Because these disclosures immediately follow one another within the same paragraph, Curry discloses, or at the least, suggests that "location, speed, and acceleration data" are examples of "driving safety performance data" (i.e., data indicating safety performance associated with driving), consistent with testimony from Dr. Michalson. USAA-1003, ¶141.

Further, the "driving safety data" is "recorded" (e.g., processed) on a mobile phone and "transmitted" to a server via "communication links," further confirming

processing of such data by the mobile phone. *Id.*, 7:5-22; USAA-1003, ¶¶147-148. Specifically, as highlighted below, the "driver safety performance data" recorded/processed by mobile phone client 110 (running on a mobile phone) is transmitted to driving safety data server 104:



USAA-1005, FIG. 1 (annotated)

Curry also teaches its mobile phone collecting other types of ***driving information***, such as "[a] safety statistic and other information," which are then "made available to the selected individuals…" USAA-1005, 4:7-11; USAA-1003, ¶¶120-21. The safety statistic can be "reported to" a data server, which confirms

location processing of the safety statistic on the mobile phone. *Id.*, 3:24-4:6; Pet., 31-32. For example, "the driver safety statistic **may be decreased** for certain user behaviors, such as use of the device **while driving**…," further confirming calculation of a value of the driver safety statistic occurs on the mobile phone. *Id.*, 3:24-4:6; *see id.*, 21:4-6. Relevantly, Mr. Wilson admitted in deposition that the calculation and adjustment of this value is based on unsafe driving (i.e., ***associated with how [a] vehicle is driven***), and thus, the value is an example of ***driving information***. USAA-1084, 209:18-22. Simply put, AT is wrong when it states, "Curry does not disclose that Curry's phone has features that allow it to 'derive information associated with a user's driving behavior.'" POR, 39.

Beyond these mischaracterizations, AT fails to identify any evidence suggesting that Curry's phone would have been somehow unable to ***process sensor data…to derive driving information***, as recited in [1.7]. This reticence is not surprising, as Mr. Wilson admitted that Curry's phone "could perform the processing…" USAA-1084, 62:11-13; *id.*, 64:8-9 ("It had the capability to do some processing – you know, I agree to that"); *see also id.*, 65:21-66:4. Indeed, an iPhone 3G—an implementation expressly disclosed in Curry—would have been capable of processing sensor data in the same manner as recited in [1.7]. *See id.*, 48:3-15, 63:23-24. Curry supports this because it expressly teaches processed sensor data (e.g., "location speed, and acceleration data from sensors embedded in

the wireless device") being "recorded to a local motion cache 118 for further processing." USAA-1005, 8:29-9:11; *see* Pet., 29-31. Thus, in Curry, local processing of sensor data stored in local motion cache 118 is performed prior to transmission of locally-processed sensor data to a server.

Left with no other option, AT obtusely states no "raw data" in Curry is "from a driving period…" POR, 30. To the extent that AT's position is that no raw data collected by Curry's phone can be from a period during which a vehicle is being driven, this position was earlier presented and considered by the Panel, which recognized disclosure by pointed out Curry of scenarios in which "a phone call may be placed or received during the driving of a vehicle, which then activates the monitoring mode." Inst. Dec., 22. AT offered nothing to confront this apt observation. Indeed, as shown in Curry's Figure 3, when the monitoring mode is activated, "the motion recording processed can be activated 302 on the phone," which may be accomplished "through an automated process by the mobile phone client…" USAA-1005, 12:20-26. In at least this scenario, Curry confirms that sensor data collected upon activation of the monitoring mode is raw data that is from a driving period (i.e., a period during which a vehicle is being driven and a phone call is received). Curry confirms this because "mobile phone client 110 can record location, speed, and acceleration data" "**[w]hen** a call is made or received." USAA-1005, 8:29-9:11.

C. Recording of Safety Data In Curry's Local Motion Data Cache Involves *Stor[ing] A Selection Of The Driving Information*

The Curry-Rabu phone satisfies [1.8] because information derived from processed sensor data is stored in memory (e.g., motion data cache 118) prior to transmission (e.g., to server 104). Pet., 31 (citing USAA-1005, 7:5-22, 8:29-10:12, 13:20-16:6, Figs. 1, 3); USAA-1003, ¶146. Further, in Curry, driving information is derived from "timestamped motion data associated with pre-specified sampling intervals" such that "[e]ach activity estimation result includes a selection of driving information for the corresponding time interval." *Id.*, 32. As to the ***selection***, "a POSITA would have found obvious to store in the Curry-Rabu phone a subset of (i.e., selection of) the recorded sensor data" given Curry's disclosure that "specific aspects of recorded sensor data are more useful for storage and transmission to safety data server 104." *Id.*, 31-32 (citing USAA-1005, USAA-1005, 3:24-4:6, 7:5-22, 8:29-10:12, 13:20-16:6, Fig. 1); USAA-1003, ¶¶147-148.

According to AT, "[t]o the extent that Curry stores sensor information, it is **solely raw data**, not 'information derived from processed sensor data', and certainly not 'driving information'…" POR, 38. But, as explained in the previous section, Curry describes various examples of information representing ***driving information*** (e.g., processed speed data, processed accelerometer data, driving safety performance data, driver safety statistic) being processed locally on a mobile

device. Further, this information may be stored locally prior to transmission to an associated server, confirming local storage of information beyond raw sensor data. *See, e.g.*, USAA-1005, 11:15-25 ("driving safety data can be **recorded in mobile phones** and then transmitted to a centrally managed data server"); USAA-1005, 8:29-9:11 (processed sensor data, e.g., "location speed, and acceleration data from sensors embedded in the wireless device" is "**recorded to a local motion cache 118** for further processing"); Pet., 21, 29-31; USAA-1003, ¶¶147-148. Mr. Wilson also confirmed that storage of sensor data in Curry's phone would have involved storing processed sensor data, such as operational data. USAA-1084, 224:3-17.

IV. MOTIVATION TO COMBINE CURRY AND RABU

AT also attempts to undermine Curry-Rabu. AT first postulates that a POSITA would not have had a reasonable expectation of success in implementing the combination. It then accuses the combination of being rooted in impermissible hindsight. Both arguments fail for the reasons discussed below.

A. Rabu's Disclosure Confirms Combinability with Curry For The Reasons Discussed In The Petition

1. AT's Alleged Inoperability Theories of Curry-Rabu Are Not Supported By Evidence

As noted in the Petition, Curry-Rabu would have been motivated by "multiple additional advantages," including "increased user tolerance for Curry's monitoring mode," "increased likelihood of user participation in Curry's

monitoring mode," "enhanced reliability of motion detection and related determinations of user driving behaviors," "generation of more nuanced user driving scores," and "enhanced utility for third parties in leveraging those more nuanced driving scores." Pet., 16-17; USAA-1003, ¶¶109-113. These advantages would have been achieved by enabling a phone provided by the combination to, for example," "make…adjustments to phone 106's operating modes, determinations of user driving behaviors, and generation of user driving scores" based on capabilities incorporated from Rabu. *Id.*, 17 (citing USAA-1005, 9:15-10:14, 12:20-15:22, 16:30-17:7, Figs. 3, 4, 6; USAA-1013, 24:8-3:10).

Ignoring this motivation, AT attempts to paint Curry-Rabu as "impracticable," contending that "a POSITA would have had no reasonable expectation" in implementing it. POR, 42-43. Specifically, it posits that Curry-Rabu would have been incapable of providing the level of accuracy mandated for Curry's "activity mode" detection—a mandate completely fabricated by AT and without any suggestion within Curry. *See* POR, 43-44.

AT's criticism presupposes that "activity mode" detection in Curry-Rabu is somehow meaningfully different from that which is already disclosed in Curry for its phone. This misreads the combination, since the Petition made clear that "the elements of the resulting combination would **each perform functions they had been known to perform prior to the combination**." Pet., 18. Further, "the

Curry-Rabu phone would leverage orientation and motion data from its **accelerometer** to determine both vehicle motion and phone docking status…" Pet., 12; USAA-1003, ¶¶101-02. The Petition therefore made clear that the Curry-Rabu phone would have leveraged an accelerometer (present in Curry's phone) to use the same functions for activity mode recognition. This capability would have been just as accurate—if not more—accurate in detecting "activity mode." To this point, Mr. Wilson acknowledged in deposition that "[t]he same generic hardware is disclosed [in Curry and Rabu]" and that "the requirements on the Curry hardware -- the technical specifications are reasonably well predictable." USAA-1085, 57:20-58:20.

The only logical basis for AT's allegations of inoperability is therefore a contention of non-enabling disclosure by Curry with respect to sufficiently accurate detection of "activity mode" using the embedded sensors of Curry's phone. The POR made no such contention, and AT has not offered any evidence regarding whether Curry's disclosure of "activity mode" detection would have led a POSITA to make and use its disclosed techniques without undue experimentation. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

Indeed, beyond mere speculation, neither AT nor its expert have provided specific reasoning regarding alleged inoperability. *See* POR, 42-47. Mr. Wilson's declaration testimony largely tracks POR and fails to cite any further support. *See*

AT-2001, ¶¶125-131. Thus, AT's theories regarding alleged inoperability of Curry-Rabu (e.g., accuracy for detecting "activity mode" based on sensor data) are not supported by record evidence. *TQ Delta, LLC v. Cisco Sys.* 942 F.3d 1352, 1358 (Fed. Cir. 2019) ("Conclusory expert testimony does not qualify as substantial evidence.").

2. AT's Alleged Incompatibility Theories of Curry-Rabu Require Bodily Incorporation of Rabu

AT also alleges incompatibility between Curry's activity mode recognition and Rabu's motion detection techniques. *See* POR, 44 (citing Rabu's disclosure of "compar[ing] determined frequency spectra to one or more frequency spectra" in column 7, lines 32-37). AT further states "Rabu **requires** that the 'determination [of the activity mode be] made based on determining a frequency spectrum associated with the holder motion and comparing that to frequency spectra of known motions.'" USAA-1013, 7:26-28. But this blatantly mischaracterizes Rabu's disclosure, which instead describes a determination regarding holder status "**can be** made based on determining a frequency spectrum associated with the holder motion and comparing that to frequency spectra of known motions." USAA-1013, 7:15-30. AT conveniently altered Rabu's express disclosure to support its narrative that use of frequency spectrum data is necessarily required in every embodiment of detecting holder motion contemplated by Rabu.

This is an improperly narrow interpretation of Rabu's disclosure, which instead claims techniques involving detecting holder motion *without* use of frequency spectrum data. For example, independent claim 10 of Rabu recites "determining a holder motion status of [a] portable media device" but otherwise does not limit such detection to use of frequency spectrum data. USAA-1013, 14:23-48. Independent claims 15 and 20 each recite techniques relating to monitoring current motion and/or dock status of a mobile device but similarly do not limit such techniques to use of frequency spectrum data. Thus, among Rabu's four independent claims, all but one independent claim are not limited by use of frequency spectrum data.

Indeed, AT's mandate for Curry-Rabu to use frequency spectrum data in monitoring motion data amounts to requiring the combination to bodily incorporate teachings from Rabu. The bedrock of obviousness is "what the combined teachings of those references would have suggested to those of ordinary skill in the art," not "whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference." *In re Keller*, 642 F.3d 413, 425 (CCPA 1981). Indeed, "it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review." *In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983). Applying this jurisprudence, the Board has found arguments assuming bodily incorporation unpersuasive and inconsistent

with assertions in the Petition. *See, e.g.*, IPR2017-00705, Pap. 87, 52-53 (PTAB July 31, 2018) (finding Patent Owner's argument regarding incompatible solutions within a prior art combination unpersuasive for assuming a requirement of bodily incorporation). The Board has also found arguments addressing irrelevant teachings in a secondary reference similarly unpersuasive. *See, e.g.*, IPR2020-00041, Pap. 29, 28-30 (PTAB Jan. 19, 2021).

Thus, AT's position alleged incompatibility based on Rabu's use of frequency spectrum data is both factually and legally incorrect—factually incorrect because it assumes the motion sensing techniques disclosed in Rabu require use of frequency spectrum data, and legally incorrect because it improperly requires bodily incorporation from Rabu into Curry.

3. Curry-Rabu Does Not Require Use of Rabu's Frequency Spectra Data

AT overlooks record evidence confirming that detection of vehicle motion status by Curry-Rabu need not be limited to frequency spectra data. As explained by Dr. Michalson, it would have been obvious to configure the Curry-Rabu phone to "leverage orientation and motion data" from its accelerometer to "determine both vehicle motion and phone docking status upon a user accepting a phone call while driving, or manually switching from a stationary to driving activity mode." USAA-1003, ¶101. This would have allowed the Curry-Rabu phone to better

account for phone usage context, and thereby enable the "nuanced approach to phone restrictions" described in Curry. *Id.*, ¶104.

Curry and Rabu also confirm that it would have been obvious for the Curry-Rabu phone to use accelerometer data alone to achieve the advantages provided by the combination (i.e., not requiring use of Rabu's frequency spectrum data). *See* Pet., 11-19; USAA-1003, ¶¶100-116. Curry describes a change in "activity mode" from "stop to driving" and expressly teaches that its system would have been capable of "us[ing] acceleration data…to determine the change…and then further estimate[s] the **motion type** before or after the change." USAA-1005, 16:7-22; USAA-1003, ¶101. Rabu likewise describes leveraging a "generally conventional" accelerometer to determine "both an orientation angle and motion status of the smart phone" to "determine whether the phone is docked within a moving vehicle." USAA-1003, ¶105 (citing USAA-1013, 3:1-10, 4:21-33, Figs. 1, 4). Notably, in discussing Curry-Rabu, Dr. Michalson cites to various portions of Rabu that make no reference to frequency spectra. *See* USAA-1003, ¶¶100-116; *see, e.g.*, USAA-1013, 1:36-2:14, 3:11-42, 3:46-4:3, 5:53-7:6, 8:1-4, 12:26-38.

Thus, as Dr. Michalson explained, the Curry-Rabu combination relies on Rabu's teachings with respect to detecting holder status based on orientation angle, but does not require exclusive reliance on specific techniques that use frequency spectra. Further, Rabu's determination of orientation data does not require relying

on frequency spectra, and a POSITA would have found it obvious to leverage this orientation data with motion data—whether obtained using techniques from Rabu or Curry—to provide the benefits of better accounting for phone usage context in the resulting system, including enabling multi-modal operations. AT's arguments fail for at least these additional reasons.

B. Curry-Rabu Is Not A Product of Hindsight

AT finally accuses Curry-Rabu of being a product of improper hindsight. In doing so, AT ignores both the legal standard for "impermissible hindsight", the predictable nature of the problems addressed by Curry-Rabu, and motivations that a POSITA would have had for implementing the solutions available through the combined teachings of Curry and Rabu.

Significantly, "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." *In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971). As the Federal Circuit has consistently observed, "the best defense against…hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references" because "[i]dentification of…a

teaching or motivation to combine in the prior art guards against any hindsight-based reconstruction of the claims." *See In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999); *Nuvasive, Inc. v. Hirshfeld*, No. 2020-1708, 10 (Fed. Cir. Aug. 18, 2021).

None of the grounds presented in the Petition offer theories on combinability that rely on information gleaned from the '487 Patent. Instead, each ground is supported by the independent teachings of third party reference disclosures that further corroborate the new expert testimony from Dr. Michalson, which demonstrates the obviousness of the Challenged Claims with reference to the specific teachings of the applied prior art references, as they would have been understood by a POSITA. *See* USAA-1003, ¶¶104-120.

For example, as explained by Dr. Michalson, Curry's disclosure of "accounting for phone usage context when generating a user driving score" would have motivated a POSITA to seek practical solutions for implementing "a nuanced approach to phone restrictions and to driver scoring that takes into account phone usage context." USAA-1003, ¶104. The POSITA would have readily found solutions in Rabu, which describes the use of generally conventional sensors like those in Curry's phone to determine "an orientation angle and motion status of the smart phone" for purposes of discerning phone usage context…." *Id.*, ¶105 (citing USAA-1013, 3:1-10).

AT's allegation that the only rationale for combining Curry and Rabu "relies on using the '487 patent as a roadmap for reconstructing the claims" lacks merit—not only because AT fails to identify a single instance of improper reliance, but also because the Challenged Claims recite no features directed to using motion sensing to provide phone usage restrictions to improve driver safety, as taught by Curry and Rabu. AT admits as such through its persistence in attempting to distinguish sensor monitoring in relation to receipt of phone calls while driving (as described in Curry) from various features recited in claim 1. *See, e.g.*, POR, 39 (describing that Curry's description of "'unsafe driving behavior' as talking on or texting with mobile phones while driving" has "nothing to do with actual driving"); *see id.*, 15 ("Importantly, a phone call is not a driving incident…").

More, Curry-Rabu is not based on hindsight because, as explained by Dr. Michalson, the POSITA would have been motivated and would have found it obvious to combine Curry and Rabu's teachings of predictable solutions to well-known driver safety problems caused by phone usage while driving, to better address those problems within the resulting system. For example, Dr. Michalson explained that a POSITA would have combined Curry and Rabu since it would have "improved safety for the user, passengers, and others" through "increased likelihood of user participation in Curry's monitoring mode." USAA-1003, ¶111 (citing USAA-1005, 7:5-22, 8:5-18, 11:3-14; USAA-1013, 1:36-2:14).

This (and other advantages provided by Curry-Rabu) would have been predictable solutions because driver safety problems caused by phone usage while driving were well-known by the Critical Date. Curry demonstrates this through reference to research showing that "using mobile phones while driving is four times as likely to get into crashes, and the increased crash risk is similar for hands-free and hand-held phones." USAA-1005, 2:3-8; USAA-1003, ¶¶67-69. Because driver safety problems were well-known by the Critical Date, solutions to these problems—such as Curry-Rabu—would have been entirely predictable to a POSITA. And the combination would have been the result of a POSITA merely using common sense to combine known teachings (the teachings in Curry and Rabu) to arrive at the predictable solution. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) ("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue [] known options within his or her technical grasp[]" and "[i]f this leads to [] anticipated success, it is likely the product not of innovation but of ordinary skill and common sense").

V. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests a final written decision confirming unpatentability of the Challenged Claims.

Respectfully submitted,

Date: June 13, 2024

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CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Response to Petition totals 5,321, which is less than the 5,600 allowed under 37 CFR § 42.24(b)(1).

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e)(4), the undersigned certifies that on June 13, 2024, a complete and entire copy of this Petitioner's Reply to Patent Owner's Response and associated exhibits were provided via email, to Auto Telematics by serving the email correspondence addresses of record as follows:

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