

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 IPR2023-00911

Patent No. 9,311,271 B2

PATENT OWNER AUTO TELEMATICS LTD's

SUR-REPLY

TABLE OF CONTENTS

	Page
I. CLAIM INTERPRETATION	1
A. “Driving Period”	1
a. A driving period must include the entire period in which the vehicle is driven.	1
b. A driving period is NOT a snapshot of time or an arbitrary number of minutes.	2
B. “A Start of a Driving Period” / “Initialization Input”	3
C. “Driving Information Associated with How a Vehicle is Driven”	5
D. “A Selection of the Driving Information”	6
II. CURRY DOES NOT DISCLOSE FEATURES OF CLAIM 1	8
A. Curry’s Phone Does Not <i>Determine...A Start of a Driving Period</i>	8
B. Curry’s Phone Does Not <i>Process the Sensor Data...During the Driving Period to Derive Driving Information Associated with How the Vehicle Is Driven</i>	11
1. How a Vehicle is Driven.....	11
2. During the Driving Period.....	12
3. Derive Driving Information.....	13
C. Curry’s Phone Does Not <i>Store a Selection of the Driving Information</i>	14
D. Curry’s Phone Does Not Determine or Transmit <i>Driving Information...Compris[ing]...A Driving Score</i> ...	16
III. PETITIONER WALKS BACK ITS MOTIVATION TO COMBINE CURRY AND RABU	23

IV. PETITIONER’S ARGUMENTS REGARDING KATAYAMA DO NOT APPLY	28
V. CURRY’S PHONE DOES NOT GENERATE DRIVING SCORES, SO CALLOPY-CURRY FALLS	29

I. CLAIM INTERPRETATION

A. “Driving Period”

Petitioner inappropriately limits “driving period” to “a start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use.” Pet. Reply, 3; Ex-1001, 31:40-42. These features do not define a “driving period.” Ex-2001, ¶53.

a. A driving period must include the entire period in which the vehicle is driven.

Claim 1 recites:

[A] “determine...start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use;

[B] process the sensor data...during the driving period to derive driving information associated with how the vehicle is driven....”

Ex-1001, 31:39-45. Element [A] concerns the “*start of* a driving period;” it does not define “driving period.” Ex-2001, ¶¶49-55, 61. “Driving period” is instead defined by a full reading of the claims and specification. The driving period is the period during which the vehicle is driven upon determination of its beginning until it is terminated and “driving information associated with how the vehicle is driven” is derived. POR, 6, 13, 52; Ex-2001, ¶¶66, 168.

The processing requirements of [B] can only be met *during the time period*, *i.e., the duration*, when “the vehicle is driven.” Ex-1001, Abstract, 1:29—2:21 (describing a mobile device emulating a continuously monitoring vehicle “black

box), 18:49—20:27, FIGs. 4a, 4b (illustrating continuous processing of sensor data and generating driving information throughout the driving period). The driving period must be consistent with the purpose of the invention: “to log driving information associated with the vehicle, when that vehicle is being driven” and “to derive driving information...to determine if a driving incident...has occurred.” Ex-1001, 3:12-14, 13:15-30; Ex-2001, ¶¶52, 54. The mobile device continuously records sensor data and derives driving information in continuously generated files even once a driving incident has been detected. Ex-1001, 17:3-7, 17:22-27. When the mobile device detects the driving period has terminated, it stops recording sensor data. *Id.*, 19:54—20:15.

b. A driving period is NOT snapshot of time or an arbitrary number of minutes.

Petitioner repeatedly misinterprets “driving period” in terms of “snapshots,” *e.g.*, instances at which data is recorded when a user interfaces with a phone, or in terms of an arbitrary pre-set number of minutes of recording data. *See* Pet., 25-28; Pet. Reply, 6-7. These interpretations are *not consistent with claim 1 or the specification*. *See* Ex-2001, ¶¶54-55.

If the driving period was a mere snapshot in time when a phone call was initiated and other conditions are met, the requirement to “process the sensor data...during the driving period to derive driving information associated with how

the vehicle is driven” could not be met. Processing must occur “during the driving period,” not just at a snapshot in time or over an arbitrary time period untethered to actual driving. *See* Ex-1001, 31:43-45; POR, 6, 35; Ex-2001, ¶¶55, 128-129.

The claims are not about monitoring for a driver’s random use of a cell phone. Such interpretation would at least miss logging, processing, and scoring driving information during a significant portion of the driving period. Monitoring driving over the entire driving period is explicit in the ’271 specification. *See* Ex-1001, 18:49—20:15; POR, 6, 9, 13; Ex-2001, ¶¶55-56, 66, 69-70. For example, the specification discloses “enforc[ing] the correct and consistent use of the Witness application...to guarantee that the application is enabled whenever a...vehicle is being driven” over “the total travelled distance of the vehicle” for “monitoring all vehicle journeys.” Ex-1001, 29:54—30:9.

B. “A Start of a Driving Period” / “Initialization Input”

Petitioner conflates “start of a driving period” with “driving period.” A “start” is a particular moment in time, while a “driving period” is a duration. Petitioner erroneously states that “because the two claim parameters defining the ‘driving period’ are ‘removably attached...and the vehicle is in use,’ the claim leaves open the possibility of the driving period corresponding to the beginning, middle or end of, a vehicle’s operation.” Pet. Reply, 3. However, in the claims, “removably

attached...and the vehicle is in use” regard the *start of* a driving period, not the driving period itself. Ex-1001, 31:40-42; POR, 6; Ex-2001, ¶¶53-54.

“Determin[ing] the start of a driving period” is an important aspect of the claims to initialize logging functionality on the mobile device to detect occurrence of a predetermined event or driving incident during the driving period. Ex-1001, 3:12-18; POR, 8-9. If the claimed “driving period” began at the middle or end of a period in which the vehicle is driven, the purpose of the invention would be thwarted. Ex-2001, ¶¶50-52, 55, 61; Ex-1001, 13:15-30.

Contrary to Petitioner’s allegation, PO’s characterization of the “start of a driving period” is not defeated by the registration process or other technical mechanism (*e.g.*, a speed threshold) by which the mobile device determines the start of that driving period. *See* Pet. Reply, 3-4, 7-8. *See, also*, POR, 6; Ex-2001, ¶¶54, 61; Ex-1001, 3:25-41, 18:32-48. To trigger processing of sensor data, the mobile device requires a practical way of electronically determining when the driving period starts. Such a trigger does not negate that a driving period is the period that the vehicle is driven. *See* Pet. Reply, 3-4, 8; Ex-2001, ¶¶50-52, 54. *See, also*, Ex-1001, 3:25-44, 18:30-43. Determining a driving period by reaching a vehicle speed threshold does not alter the purpose of the invention to process sensor data to derive driving information over the *entirety* of the driving period. Ex-2001, ¶¶50-52, 54; Ex-1089, 263:15-18, 268:9-22, 269:13-25.

Claim 1 requires “register[ing] the start of the driving period in response to an initialization input generated automatically in response to the sensor data having predetermined values...reflecting a detected speed above a predetermined threshold.” Ex-1001, 31:51-56 (claim element [1.10]). This “Initialization Limitation” should be interpreted as intended – to explicitly claim how the mobile device registers the start of the driving period –as supported by the specification. *Id.*, 3:12-38.

The start of a driving period must be registered, but precisely “‘when the driving period starts’ is ‘not critical,’” because reaching a threshold speed provides a practical approximation of the start of the driving period and, most importantly, is explicitly claimed. Pet. Reply, 8 (quoting Ex-1088, 99:7-10); Ex-1089, 263:15-18, 268:9-22, 269:13-25; Ex-1001, 31:54-56. To deny this fact is to deny the claim language itself. Even Curry understood that measuring a speed could indicate a driving status, albeit at a snapshot in time. *See, e.g.*, Ex-1005, 16:26-28 (determining “driving mode” when speed is “greater than 15 miles/hour” at the time of a call).

C. “Driving Information Associated with How a Vehicle is Driven”

The mobile device must “process the sensor data from the sensor set during the driving period to *derive driving information associated with how the vehicle is driven.*” Ex-1001, 31:43-45. The claimed “derived driving information” includes more than raw sensor data, specifically, information regarding “how the vehicle is

driven,” including “occurrence of a predetermined event.” *See, e.g.*, Ex-1001, 1:17-25, 3:12-16, 5:10-21 (“detailed driving information in the lead up to, and immediately following a predetermined event of significance”), 6:58-59 (“driving information representing acceptable or unacceptable driving patterns”), 10:13-17 (processed driving information to generate and comprise a driving score), 13:15-24, 13:65—14:2 (“speed of impact, the g-forces the vehicle was subjected to during the collision, or any other information wherefrom the severity of the collision may be determined”), 19:9-28 (detecting a variation in acceleration, velocity, g-force, pitch, roll, yaw, or combination of derived driving information to detect a driving incident). POR, 2-3, 12-13, 29-30; Ex-2001, ¶¶39, 62-66, 69-70, 109-113.

D. “A Selection of the Driving Information”

“Store a **selection** of the driving information to the memory” has a particular purpose and meaning. *See* Ex-1001, 4:42-51, 11:38-40, 23:24-27 (“selected portions of the recorded data associated with the incident”), 31:46. In this regard, FIG. 3 (annotated below) illustrates a storage configuration within the claimed mobile device. *Id.*, 16:20—17:67.

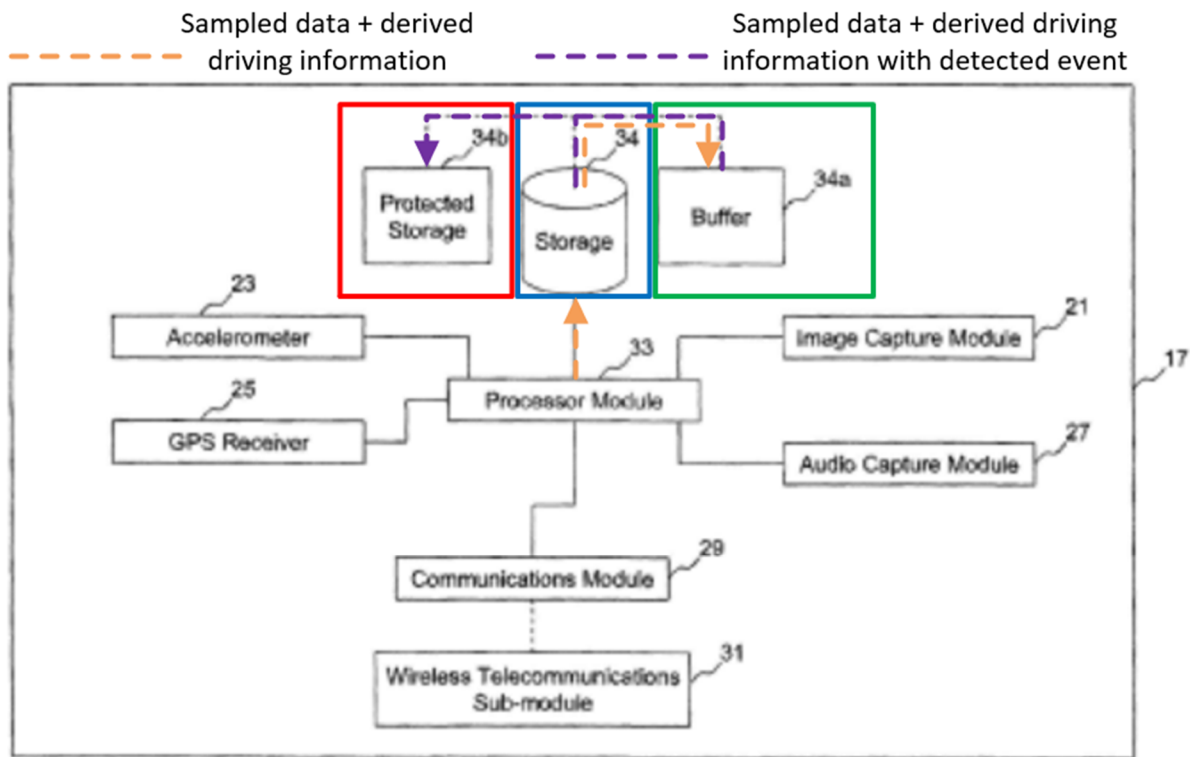


Fig .3

Ex-1001, FIG. 3 (annotated).

“Sensor data captured from...data capture modules 21, 23, 25, 27 is processed by the processor module 33 to generate driving information...derived from [the] raw sensor data....” *Id.*, 16:20-24. “The processor module 33 is...configured to analyse sampled sensor data and generate[] driving information to determine if a driving incident has occurred....Sampled sensor data is stored in storage 34 [blue]...along with any generated driving information” (orange). *Id.*, 16:34-40. “The sampled data, along with any derived driving information [orange] is preferably stored in the storage buffer 34a [green], unless a driving incident has

been identified, in which case the associated sensor data and driving information [*i.e.*, **a selection**, purple] is stored in the permanent storage component 34b [red] to avoid undesirable overwriting.” *Id.*, 16:47-52. Thus, the selection is the portion of sampled sensor data and derived driving information (purple) associated with an identified driving incident. “[A] cycle of overwriting older data with newly sampled data [in storage buffer 34a] is continuously carried out...unless a driving incident has been detected, in which case...all data related to the driving incident (*i.e.*, the **selection**) is stored in a long term protected storage 34b to safeguard it from being overwritten by newer data.” *Id.*, 16:53-64.

II. CURRY DOES NOT DISCLOSE FEATURES OF CLAIM 1

A. Curry’s Phone Does Not *Determine...A Start of a Driving Period*

Petitioner’s citations to Curry, showing the start of a phone call and/or recording period occurring at the time Curry’s phone determines the phone’s activity mode, do not determine the claimed *start of a driving period* that initializes the mobile device’s claimed logging functionality. Pet. Reply, 6-8 (citing Ex-1005, 13:20—14:26 (FIG. 3), 16:7-22 (FIG. 4)); POR, 8-9, 12, 33-35; Ex-2001, ¶¶83, 85, 123-128.

Curry’s phone is limited to motion recording by collecting/caching raw sensor (GPS 314, accelerometer 316) data in motion data cache 304 at the detection of an outgoing or incoming call 301/303 by motion recording activation 302 function. *See*

Ex-1005, FIG. 3, 13:20-31. Curry's phone determines an activity of driving by activity mode recognition 306 *after* motion recording is started and raw sensor data is cached. *Id.*, FIG. 3, 13:31—14:4. Curry's dynamical call handling module 308 then determines whether to block a call based on the determined activity mode and user permission data sent from outside the phone to a static database on the phone. *Id.*, 14:5-19. Then, "[d]ata from the motion data cache 304 and the activity mode recognition module 306 can be...sent back to the server 322" for further processing. *Id.*, 14:19-23.

Curry, 14:23-26, merely discusses what occurs if the determined activity mode is not driving. Thus, 13:20—14:26 (FIG. 3) does not disclose determining a start of a driving period or any processing regarding deriving driving information or vehicle behavior during a driving period. Rather, FIG. 3 discloses taking a snapshot of activity after a call triggers a recording period and handling the call based on the snapshot and predetermined user permissions. This is not the claimed "start of a driving period." *See* Ex-2001, ¶¶149-152, 157-158.

Curry's phone caches raw sensor data over a limited time period (*e.g.*, 6 minutes) and *post-processes* the data merely to determine activity mode, similar to FIG. 3, for a call that was put through. Ex-1005, 16:7-22, FIG. 4. Any "unsafe driving behaviors" (not specifically defined) "can be penalized after the fact by deducting the driving safety score in the data server" (*not on Curry's phone*). *Id.*,

16:7-18. Although Curry's phone can handle activity mode changes during the FIG. 4 process, there is no disclosure that Curry's phone determines the start of the claimed driving period or any processing to derive driving information regarding vehicle behavior. *See id.*, 16:18-22. *See also* Ex-2001, ¶¶82, 124-125, 128, 149, 152.

Curry's recording period does not start a "driving period" as claimed. POR, 35; Ex-2001, ¶¶126-127; *see* Pet. Reply, 7. In each of Curry's embodiments, Curry's caching process is untethered to driving, instead relying on a phone call or user input to start recording to "motion data cache," and only thereafter determining an activity mode from the cached data, which may or may not indicate driving. Ex-1005, 8:29—9:3, 13:25-33 (FIG. 3), 16:7-22 (FIG. 4), 17:20-23 (FIG. 5). Ex-2001, ¶¶79-82, 152-153. Curry's phone may activate a call handler *at some time while* driving (*see* Ex-1005, FIG. 1, 122; FIG. 3, 308; 14:5-10), merely evaluating the raw data from motion data cache, activity mode, and a user permission (Ex-1005, 14:17-26), but Curry's phone cannot determine when driving starts or *how* the vehicle is driven after determining the activity of driving. *See* Ex-2001, ¶¶79, 127, 157-158. Curry's phone merely determines that the "user is driving." Ex-1005, FIG. 3, 310, 14:8-10.

B. Curry's Phone Does Not *Process the Sensor Data...During the Driving Period to Derive Driving Information Associated with How the Vehicle Is Driven*

1. How a Vehicle is Driven

Petitioner fails to rebut that Curry's phone does not determine *how a vehicle is driven*. See, e.g., Ex-1001, 31:45. Instead, Petitioner dismisses this claim element as “inconsequential,” substituting it with “whether” a vehicle is driven. Pet. Reply, 8-9.

The specification explicitly identifies “how a vehicle is driven” with derived driving information, including indications of a driving incident (e.g., a collision), not merely raw sensor data. See Pet. Reply, 9. The '271 mobile device captures sensor data from its sensors and derives driving information regarding *vehicle behavior* (e.g., variation in velocity, speed of impact, pitch, yaw, roll, G-force, bearing/heading, time elapsed, and driving anomalies) to associate the sensor data with *how the vehicle is driven*. Ex-1001, 2:10-21, 5:3-23, 7:12-15, 10:28-35, 13:65—14:2, 15:40-45, 16:20-27, 17:22-24, 18:50—19:28, 20:60—21:5, 25:31-35; POR, 2-3, Ex-2001, ¶¶39-40, 56, 58, 63-65.

In contrast, Curry's limited disclosure of “preventing cell phone use while driving” (i.e., user behavior), by its activity mode recognition for call handling, does not determine *how the vehicle is driven*. Petitioner illogically states, “[t]he 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 is therefore associated with how the vehicle is driven.*” Pet. Reply, 9. With this unsupported statement, Petitioner inappropriately asks the Board to invalidate claims by dismissing explicit facts of what data is collected and how it is processed and used, and to rely only on intended use (“to improve driver safety”).

2. During the Driving Period

Upon determining that the driving period started, processing sensor data commences and continues “during the driving period” to derive driving information associated with “how a vehicle is driven,” regardless of any arbitrarily timed phone call occurring sometime during or outside of driving. Ex-1001, 18:49-54, 19:54-58. Phone calls do not stop or restart a driving period in the ’271 system, as it would defeat the purposes of the invention to “determine the cause of an event such as an accident, to modify driver behaviour and/or to determine insurance premiums.” POR, 6; Ex-1001, 1:22-25; Ex-2001, ¶¶55, 68. While calls may need to be handled during a driving period, the ’271 discloses ways to do that without impacting the patent’s primary purposes. *See, e.g.*, Ex-1001, 3:55—4:41 (“voice-call management may comprise temporarily disabling and/or diverting voice-calls...during a driving period”); Ex-2001, ¶68.

3. Derive Driving Information

Petitioner erroneously alleges that Curry's phone determines "'driving behavior' information...such as...speeding...." Pet. Reply, 4, 8. However, nothing in Curry evidences Curry's *phone* determining anything abnormal in its raw sensor data, including speeding. Ex-1005, 7:13-29 (discussing Curry's server), 8:21-27 (use permission), 8:30—9:33 (storing raw data for activity mode recognition), 10:15-26 (activity mode recognition), 11:3-17 (collecting raw data to determine context of a phone call for post-processing); POR, 16-17, 19-21, 36-37; Ex-2001, ¶¶75-76, 78-80, 84-85. Curry's phone determines "high-speed range" relative to "remaining stationary," "low speed," or "medium range," but Curry does not qualify these determinations as abnormal. Ex-1005, 16:27—17:14, FIG. 5; POR, 19-21.

While Curry's phone identifies phone use in "driving mode," any behavior of the vehicle, including any abnormalities, is determined by Curry's server. POR, 16-21, 30-31; Ex-2001, 75-76, 80, 83-85, 113-114, 116. This distinction is important because the '271 claims *require that the mobile device performs this processing*. Ex-1001, 31:38-56. Petitioner inaccurately maps "talking...or texting...while driving" to the claims: what a *user* is doing on the phone instead of what the *vehicle* is doing. Pet. Reply, 4; POR, 20-21, 30; Ex-2001, ¶¶83, 85, 113-114.

While possibly being a *cause* of certain *vehicle* behavior, "talking or texting" is human behavior, not vehicle behavior detected and processed during the claimed

“driving period.” “Talking or texting” regards use of a phone, not use of a vehicle, and is not “how a vehicle is driven.” The claims require derivation of driving information related to how a vehicle is driven, which is not satisfied by determining that a phone is being used while a vehicle is driven. POR, 16-17, 21; Ex-2001, ¶¶75-76, 83, 85.

C. Curry’s Phone Does Not Store a Selection of the Driving Information

Curry does not store *driving information*, whether all or a selection, at least because Curry’s stored raw data is not derived driving information according to the claims. POR, 38; Ex-2001, ¶136. Even assuming, *arguendo*, that Curry derives driving information, Curry discloses no functionality or storage configuration for storing and sending only a selection of what it stores in motion data cache to the server and no way to discern what that selection might be. POR, 39; Ex-2001, ¶141.

Curry discloses no **selection**, according to the plain meaning of the term, and therefore does not encompass Petitioner’s overly broad interpretation of selection being “‘all of’ that information.” *See* Pet. Reply, 4-5; POR, 38-40; Ex-2001, ¶¶136-142. Petitioner’s interpretation ignores the specification. Instead, Petitioner manufactures features that Curry does not disclose: “Curry explains that *specific aspects* of recorded sensor data are more useful for storage and transmission to safety data server 104, such as motion data indicating possible use violations or unsafe

driving behavior.” Pet. Reply, 5 (citing Ex-1005, 3:24—4:6, 4:8-11, 7:5-22, 8:29—10:12, 13:20—16:6, FIG. 1). There are several problems with this statement and Petitioner’s citations to Curry.

First, Petitioner’s citations do not establish that Curry determines “specific aspects” of the data in motion data cache to send to Curry’s server. *See* Ex-1005 3:26-27 (“data in...motion data cache can be transmitted to and stored on the...server”), 4:8-11 (Curry’s server provides data to third parties), 7:5-22 (“driving safety data can be recorded in mobile phones and then transmitted to a...server” for “statistical analysis on collected raw driving data”), 8:29—10:12 (Curry’s phone collects motion data and uploads it with activity mode recognition results to the server for safety score evaluation and sharing); 13:20—16:6 (describing FIG. 3; data in motion data cache is sent to the activity mode recognition module).

Second, Curry’s phone performs activity mode recognition and call handling, while the server performs any further processing (*e.g.*, involving “use violations or unsafe driving behavior”) of the recorded data associated with a phone call or text. POR, 16-21; Ex-2001, ¶¶75-85. Curry’s phone does not discern “specific aspects” of recorded sensor data and split some data off according to those aspects. Curry records motion data when a phone call/text is initiated (*e.g.*, Ex-1005, FIGs. 1, 3, 4) and uses *all* data limited only by the time of the phone call/text (and timestamp on the associated motion data) to determine activity mode and block phone use (*e.g.*,

Ex-1005, FIGs. 5, 6), which does not support the “selection” feature of the claims.
Ex-2001, ¶¶141-142, 145.

D. Curry’s Phone Does Not *Determine or Transmit “Driving Information...Compr[is]ing...A Driving Score*

Petitioner erroneously alleges that Curry’s “mobile phone collects other types of *driving information*, such as ‘[a] safety statistic...’ [that] can be ‘reported to’ a data server.” Pet. Reply, 11. However, this “safety statistic” is determined by Curry’s server, is reported to Curry’s server by Curry’s Auto Insurance Companies 130 as “Driving Safety Scores,” or is shared as Driving Safety Score Data 214 between Curry’s Driver Safety User Control and Monitoring Website and third parties via a Data Sharing Interface 216. *See* Ex-1005, 3:26-32, 4:1-6, 10:3-5, 13:15-17, FIG. 1 (104, 130), FIG. 2 (214, 216).

Curry’s phone reports to Curry’s server “driving safety performance data,” *which Curry defines as raw sensor data from motion data cache*. *See id.*, FIG. 1, FIG. 3, 7:5-17, 9:1-3, 9:31-33, 13:1-2, 14:19-21 (Curry’s server performs statistical analysis on raw sensor data 114, 116 received from motion data cache 118). *See also* Ex-2001, ¶¶157, 199-201. Indeed, Petitioner appears to agree that “driving safety performance data” includes raw sensor data. *See* Pet. Reply, 9-10 (“‘location, speed, and acceleration data’ are examples of ‘driving safety performance data’”). “Driving safety performance data,” “driving safety information,” or “driver safety data” in

Curry represents raw sensor data, which can be accompanied by an activity mode determination, and which are all sent to Curry's server for processing. Ex-1005, 8:29—9:3, 9:22-28, 11:15-18, 14:19-23, 18:1-3; Ex-2001, ¶¶76-77, 82.

As annotated below, Curry's drawings confirm raw sensor data (FIGs. 1, 2, 3, in red) transmitted to Curry's server (FIGs. 1, 2, 3, in blue) for further processing *by the server* including statistical analysis and sharing of driving safety scores (FIG. 1, 2, in green) between the server (FIG. 1, 2, in blue) and third parties (FIG. 1, 2, in orange). Ex-1005, 9:30—10:5, 11:15-18, 11:26-30, 13:3-19, 14:17-23. Curry's phone may send an activity mode determination (FIG. 3, in purple) with raw sensor data (FIG. 1, 2, 3, in red) to Curry's server (FIGs. 1, 2, 3, in blue) for further processing and statistical analysis. Ex-1005, 9:22-28, 13:1-2, 14:19-23.

Specifically, Curry's phone sends raw sensor data from its phone client 110, 210 to server 104/driver safety user control and monitoring website 102, which compares the raw sensor data with the user permission data from 102 to calculate the safety statistic by Driving Safety Score Evaluation 212. Ex-1005, 3:24-32, 13:3-19, FIG. 1, FIG. 2; Ex-2001, ¶¶116, 154, 157, 192, 199. Even for the single instance in Curry that discusses collection of raw sensor data at times other than a phone call, Curry discloses that the data is sent from its mobile device to the server, which server then calculates or updates the driver safety statistic. Ex-1005, 3:32—4:5.

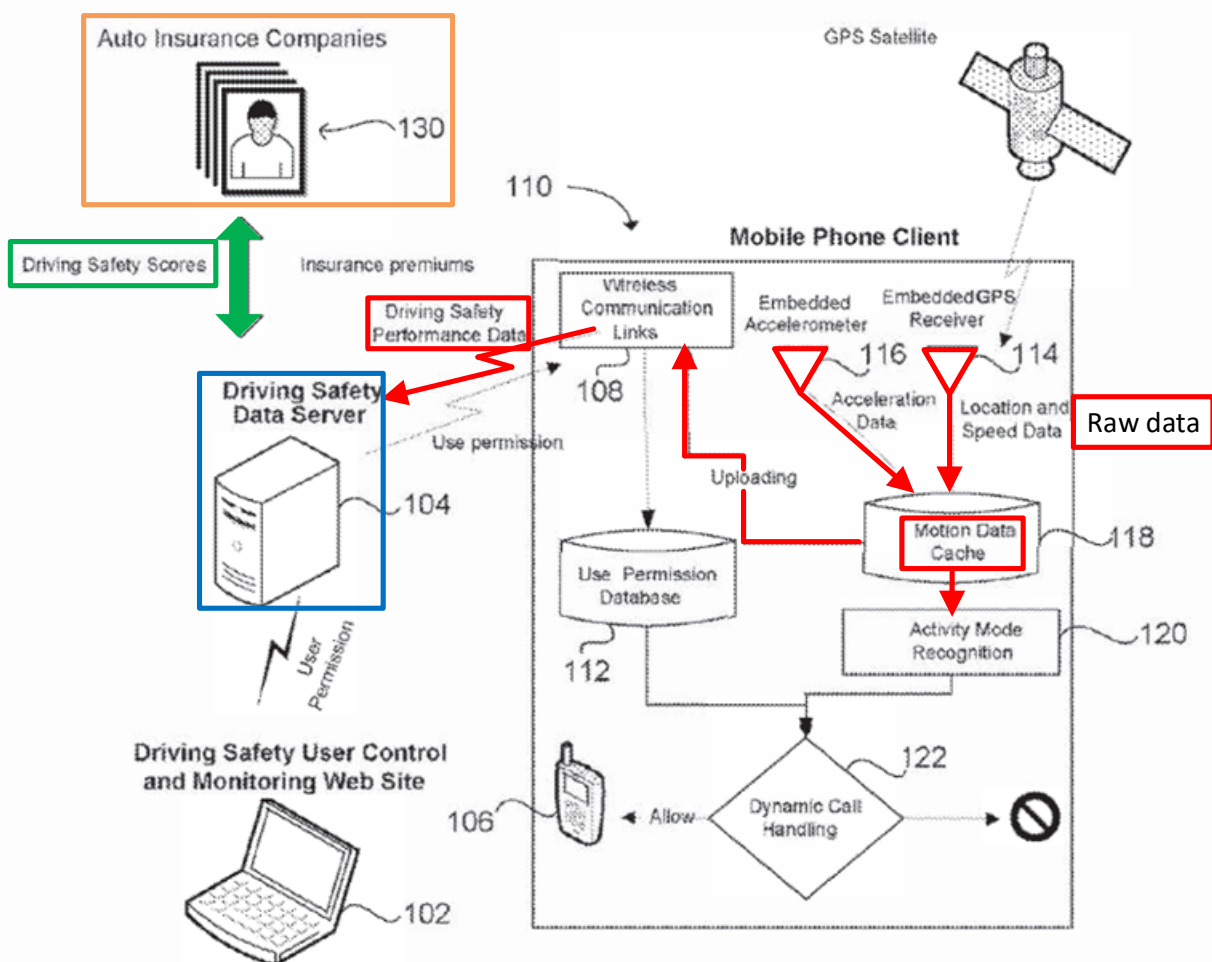


FIG. 1

Ex-1005, FIG. 1 (annotated).

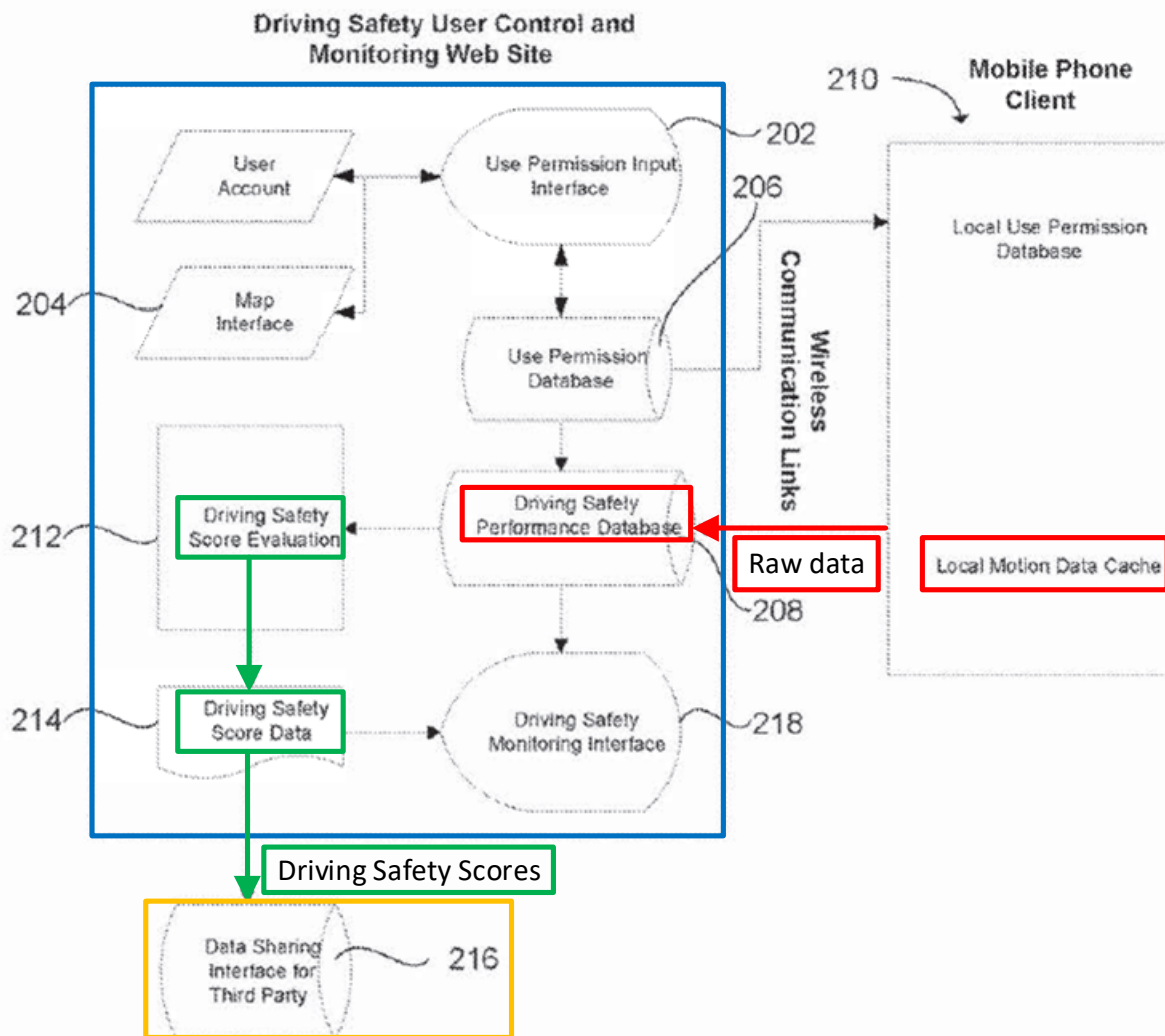


FIG. 2

Id., FIG. 2 (annotated).

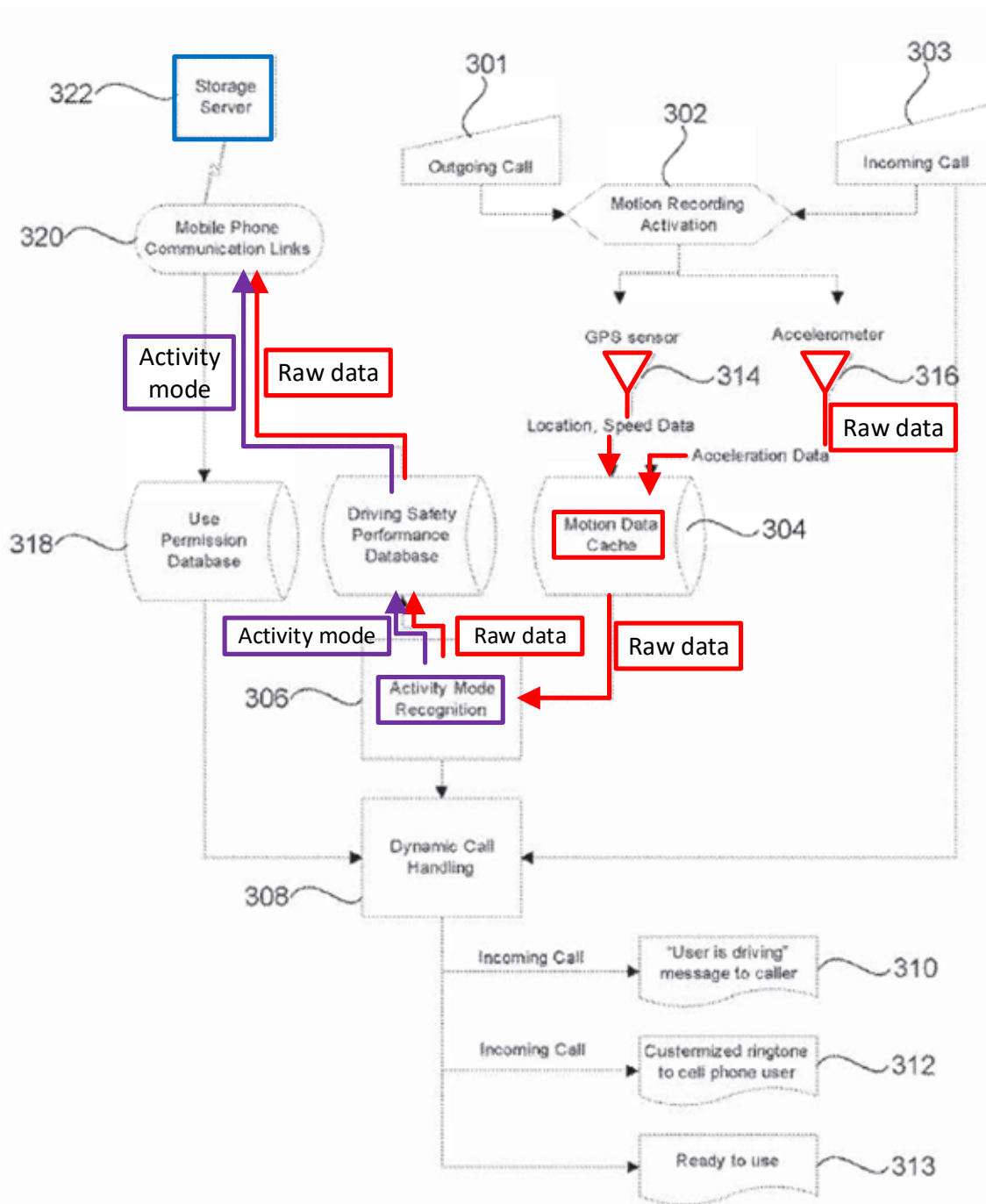


FIG. 3

Id., FIG. 3 (annotated).

Petitioner's assertion that Curry's phone processes a safety statistic and reports that statistic to Curry's server is thus unsupported. *See* Pet. Reply, 11, 29. First, Petitioner's citations to Curry use passive voice (*see, e.g.,* Pet. Reply, 11, citing Ex-1005, 3:24—4:6, 21:4-6), making it unclear what entity determines the safety statistic. Petitioner attempts to leverage this uncertainty to skew Curry's specification into something that it is not. *See* Pet. Reply, 8-9, 11.

Second, referring to “adjust[ing] the related safety score” (Pet. Reply, 29, citing Ex-1005, 11:7-10), Curry makes clear that its statistical analysis and scoring is performed *at the server or by a third party*. *See, e.g.,* Ex-1005, 3:24-32, 4:1-6, 7:13-17, 9:22—10:12, 13:1-19, 16:16-18. Curry does not disclose that its mobile device calculates, reports, or shares safety statistics or scores.

A close reading of Curry's specification regarding FIG. 4 reveals that when Curry says “[i]n the post-processing stage, the activity mode recognition module can be used to...*adjust* the related safety score...” (*id.*, 11:7-10), it means that in “[t]he post-processing technique...any unsafe driving behaviors can be penalized after the fact *by deducting the driving safety score in the data server.*” *Id.*, 16:13-18 (discussing FIG. 4). While 11:7-10 does not say what adjusts the score (“used...to adjust” is passive voice and does not mean “adjust”), 16:13-18, in reference to 11:7-10, identifies the server as doing so. Further, Curry discloses this as *post-processing*, unlike the processing of the '271 claims. *Id.*, 16:13-16.

Thus, Curry confirms that its server, or a third party, not its phone, performs all statistical analysis related to driver scoring. While Curry's phone *can* have certain processing capabilities, the specific processing alleged is not inherent in the phone nor disclosed in Curry. It is Petitioner's burden to prove otherwise. Petitioner has not done so. The capabilities of Curry's phone regarding what processing it "would have been capable of" are not sufficient. *See* Pet. Reply, 11.

FIGs. 1, 3-6 explicitly show that Curry's phone determines activity mode 506/508/514/516/518 using raw sensor data 114/116/314/316 from motion data cache 118/304, and handles phone calls 122/308, comparing use permission data 112/318 to activity mode 120/306. POR, 16-22, 33-37, 44-46; Ex-1005, FIGs. 1, 3-6; Ex-2001, ¶¶123-127. FIG. 2 explicitly shows Curry's server processing raw data from the phone's motion data cache 208 compared with use permission data 206 for driving safety score evaluation 212 and driving safety monitoring 218. Ex-1005, FIG. 2; POR, 18-19, 37. This is not the "process[ing]" required by the claims to "derive driving information associated with how the vehicle is driven," including "a driving score." POR, 19-20, 36; Ex-1001, 31:43-45, 32:15-17, 32:24-26, 32:55-59, 32:61-64, 33:20-23, 34:4-14; Ex-2001, ¶¶131-133, 154-159.

III. PETITIONER WALKS BACK ITS MOTIVATION TO COMBINE CURRY AND RABU

Petitioner walks back its original obviousness position, which relied on Rabu's frequency analysis, to avoid Curry-Rabu's unreliability. Pet., 11-18; Pet. Reply, 18-22. Petitioner has continuously relied on Rabu's frequency analysis of "motion data from its accelerometer" to combine Rabu's "mode shifting capabilities" with Curry to "restrict phone interactions" and "promote safe driving." *See* Pet., 11-12. For example, Petitioner repeatedly cites Rabu's FIGs. 7 and 8, key parts of Rabu's "detecting docking status of a portable device [(PMD)] using motion sensor data." *See id.*, 12 (citing Ex-1013, 8:13—10:42, describing Rabu's "methods for operating a [PMD]...includ[ing] determining...a frequency spectrum associated with a motion of the [PMD]").

Petitioner also repeatedly cites Rabu at 3:1-10, disclosing that the "PMD can determine the holder motion status," "can select a mode of operation based on... holder motion status," and can "examin[e] the frequency spectrum for a motion of an object...to determine the type of motion..." *See* Pet., 12, 14-15, 17, 25, 29 (citing Ex-1013, 3:1-10).¹ Petitioner *explicitly* relies on "relevant solutions within Rabu,"

¹ In instituting this IPR, the Board relied on Rabu's description of holder motion status for "multi-modal operation features" as advantages of "Rabu's use of

which “determin[es] a phone’s...*motion status*, for purposes of discerning phone usage context, and changing the phone’s operating mode to account for that context,” for example, “switching operating modes based on determining that the phone is ‘docked in a *moving vehicle*.’” Pet., 14 (citing Ex-1013, 3:1-10, 8:13—10:42, FIGs. 5, 7, 8). Petitioner also *explicitly* depends on these frequency-based mode-shifting capabilities to generate or adjust “driving scores.” See Pet., 12, 17.

Petitioner’s Reply continues to rely on Rabu’s frequency analysis by touting Curry-Rabu’s “multiple additional advantages” including “‘adjustments to phone 106’s operating modes...and generation of user driving scores’ based on capabilities incorporated from Rabu.” Pet. Reply, 18. While Petitioner certainly could have relied only on Rabu’s holder status determination in its Petition and Reply, it cannot now throw out the basis for its motivation to combine — Rabu’s holder motion status determination.

If a POSITA had needed a reference providing holder status based on orientation angle, Rabu would not have been it. A POSITA would have found that Curry discloses at least an iPhone 3G smartphone capable of being held and knowing

frequency data.” See Inst. Dec., 34-36, 39-40. For example, the Board emphasized that “[b]ased on the determined frequency spectrum, the PMD can determine whether it is in a moving vehicle.” *Id.*, 34 (quoting Ex-1013, 1:66—2:8).

its orientation. Ex-1005, 2:22-27, 3:6-7, 8:30-33, 13:28-29. Petitioner itself noticed that Curry and Rabu use the same accelerometer, and that orientation and motion data can be used from the accelerometer to “determine both vehicle motion and docking status.” Pet. Reply, 19 (quoting Pet., 12; Ex-1003, ¶102). Petitioner does not cite Rabu to cure any other shortcomings of Curry, so it makes no sense for a POSITA to have looked to Rabu merely for an accelerometer’s orientation data, given Curry’s accelerometer and Rabu’s reliability issues. *See* Pet. Reply, 19 (citing Ex-1089, 57:20—58:20). Further, Curry already discloses being able to “precisely identify the type of activity” in answer to its own stated challenge “to distinguish walking versus running.” Ex-1005, 16:23—17:2.

The fact remains that Rabu is unreliable based on its reliance on the “Ogawa” reference. Ex-1013, 7:31-59. Petitioner has not rebutted Mr. Wilson’s assertion that Rabu, with Ogawa’s analysis as its base, presents reliability issues that would have deterred a POSITA from looking to Rabu. POR, 35, 37, 48-50; Ex-2001, ¶¶130, 135, 160-166. *See also* Ex-2001, ¶¶22-25.

Presumably recognizing the propriety of Mr. Wilson’s opinions, Petitioner now asserts that Rabu is only needed for its holder status (Rabu’s FIGs. 6 (602), 7),

not holder motion status (Rabu's FIGs. 6 (603), 8, 9, 10).² *See* Pet. Reply, 20-22. Yet, if only Rabu's holder status was combined with Curry, a POSITA could not have achieved Petitioner's purported benefits by leveraging Rabu's "associated mode-shifting capabilities into Curry's phone, thereby enhancing the Curry phone's ability to promote safe driving," because Rabu's mode-shifting capabilities are based on Rabu's holder motion status. *See* Pet., 11-12 (citing Ex-1013, 8:13—10:42). Rabu's holder status alone would not have achieved Petitioner's suggested benefits.

Petitioner baselessly accuses PO of alleging that Curry and Rabu are incompatible and inoperable. Pet. Reply, 18-21. PO, however, never raised those arguments. Rather, PO simply argues that Curry-Rabu would have been unreliable and ineffective at curing Curry's shortcomings, and thus a POSITA would not have made the combination. Even if the combination were made, it simply would not have achieved the "nuances" of Rabu's FIG. 5, which Petitioner touted as a motivation to combine throughout these proceedings. *See* Pet., 11-15 (citing Ex-1013, 3:1-10, 8:13—10:42, FIGs. 5, 7, 8), 17 (points 4, 5, citing Ex-1013, 3:1-10).

² Petitioner attempts to "undo" its Petition by claiming that its past citations have "no reference to frequency spectra." Pet. Reply, 22. However, Petitioner's references within Ex-1003, ¶¶102-117, citing Ex-1013, 2:2-11, 5:53—6:17, 8:1-4 (FIG. 5), all rely on frequency spectra.

Regarding Petitioner's misplaced "bodily incorporation" argument (Pet. Reply, 21), *In re Keller*, upon which Petitioner relies, states:

"To justify combining reference teachings...[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."

In re Keller, 642 F.3d 413, 425 (CCPA 1981). PO does not disagree with this proposition nor argue that frequency spectra must be physically incorporated into the Curry-Rabu phone. *See* Pet. Reply, 21. PO's arguments simply address "what the combined teachings...would have suggested to [a POSITA]," as required by the court. *In re Keller*, 642 F.3d at 425. PO rightly identifies a lack of motivation to combine Rabu with Curry based on the unreliability of frequency spectra to determine holder motion status. The Curry-Rabu phone would not have provided the nuanced determination of activity mode being sought by the combination, and therefore, a POSITA would not have made the combination. This unreliability, to which Mr. Wilson attested (*see* Ex-2001, ¶¶130, 135, 160-166), and which Rabu discloses (*e.g.*, Ex-1013, 7:54-60, citing Ex-2002 ("Ogawa")), has gone

unchallenged by Petitioner. Therefore, Petitioner's bodily incorporation argument is simply unfounded.

IV. PETITIONER'S ARGUMENTS REGARDING KATAYAMA DO NOT APPLY

Petitioner misapprehends claim element [1.10], the "Initialization Limitation," which relates to registering the start of a driving period, not use of different storage (*e.g.*, short term versus long term) upon detection of a driving incident. *See* Pet. Reply, 25-26. The detection feature is not in claim element [1.10], and the specification clearly makes the distinction. Ex-1001, 7:51—8:6, 16:34-64, 18:30-39, 18:49-60. Indeed, the Board noted this misapplication: "We further note that claim 1 does not require separate memory structure." Inst. Dec., 56.

To illustrate, claim element [1.10] refers to block 42 of FIG. 4a ("Register the start of a driving period") (Ex-1001, 18:30-39), while Petitioner refers to block 50 ("Securely store sensor data and driving information in protected storage") (*id.*, 18:55-60). Pet. Reply, 25. Petitioner's interpretation is not what the claim is about. According to [1.10], *register[ing] the start of a driving period in response to an initialization input* facilitates the start of processing and storing sensor data. Ex-1001, 18:30-32, 31:51-56. This storing is in *short-term*, not long-term memory. Ex-1001, 16:47-52 (discussing short term storage buffer 34a versus permanent storage

34b). The Board recognized Petitioner’s confusion. *See* Pet. Reply, 26; Inst. Dec., 56 (citing Pet., 49-51).

This confusion appears to be exacerbated by Petitioner’s continued conflation of “start of a driving period” and detection of a predetermined event, and Petitioner’s insistence on inappropriately mapping a phone call to both. *See* POR, 42-47. The initialization input,” a distinct claim element, cannot be a phone call, as Petitioner already maps a phone call to the “start of a driving period.” POR, 46; Pet., 34 (citing Pet., 25; Ex-1005, 8:30-33, 13:25-26, FIGs. 3-4). Nothing in Curry generates an initialization input to control its mobile phone to register the start of a driving period according to the claims. POR, 46-47; Ex-2001, ¶¶150-153.

Thus, Petitioner’s arguments regarding motivation to combine Katayama with Curry-Rabu, based on a separate memory structure, are inapplicable to the Challenged Claims. *See* Pet. Reply, 26-29.

V. CURRY’S PHONE DOES NOT GENERATE DRIVING SCORES, SO CALLOPY-CURRY FALLS

Petitioner’s arguments in support of Callopy-Curry are predicated on its incorrect assertions that Curry’s phone generates driving scores. *See* Pet. Reply, 8-11, 29. PO maintains that “only Curry’s external server calculates driving scores.” POR, 62. *See supra* Section II.D. Further, Curry’s reference to “adjust the related

safety score” does not align with Petitioner’s assertions. *See supra*, 21 (analyzing Ex-1005, 11:7-10, 16:13-18). Thus, Callopy-Curry falls with regard to claims 6-7.

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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 Sur-Reply is 5,596. 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 July 15, 2024, this paper – Patent Owner Auto Telematics Ltd.’s 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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