

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 IPR2023-00912
Patent No. 9,311,271 B2

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

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IPR2023-00912

U.S. Patent No. 9,311,271 B2

EXHIBITS

AT-2001 Declaration and *Curriculum Vitae* of Christopher Wilson

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 1-7 (the “Challenged Claims”) of U.S. Patent No. 9,311,271 B2 (“the ‘271 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 ‘271 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 recording other useful information such as time of day, speed and GPS position (this latter information converted into a trace of the vehicles journey on a map). This application became known as the Witness App. Subsequently, a new app – Witness Pro – was developed allowing recordings of additional aspects of a vehicle’s journey recorded in a rolling loop which were then 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 ‘271 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. Importantly, 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. That driving information is then stored to the mobile device.

II. SUMMARY OF ARGUMENTS

As set forth in detail below, each and every argument raised by USAA in its Petition primarily relies on U.S. Patent Application No.: US 2011/0307188 to Peng *et al* (“Peng”) being combined with certain prior art references which USAA argues renders each of the claims of the ‘271 patent obvious under 35 U.S.C. § 103. While the Peng reference is most certainly distinguishable from the teachings and claims of the ‘271 patent, there is no need for the Board to examine these distinctions (nor does the Patent Owner ask the Board to do so) as the Peng reference does not qualify as prior art.¹ In this regard, the Peng reference has a filing date of June 29, 2011 and a publication date of December 15, 2011, while

¹ Patent Owner reserves the right to assert the distinctions between the ‘271 patent and Peng, as well as the other references asserted by USAA, in the event that the Board institutes *inter partes* review.

the latest date to which the '271 patent may claim priority is June 10, 2011 – nearly three (3) weeks prior to Peng's filing date. As such, the Board may summarily dismiss USAA's Petition as the primary reference on which that Petition relies is not prior art.

III. THE '271 PATENT

The '271 patent includes four independent claims (claims 1, 4, 6, and 7).

Claim 1 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 accelerator or a positioning module, or a combination thereof;

a user interface;

a processor; and

a memory;

the 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;

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

store a selection of the driving information to the memory;wherein the driving information is derived without data from vehicle sensors, and

the mobile telecommunications device is controlled by a downloaded application to control the mobile device to register the start of the driving period in response to the sensor data having predetermined values, wherein the initialization input is generated in response to sensor data reflecting a detected speed above a predetermined threshold.

USAA-1001 at 31:29-56. The dependent claims (claims nos. 2 – 3) claim a number of other elements of the invention including the configuration of the mobile telecommunications device to register its attachment to the vehicle and determine a match between the locations of the vehicle and the mobile device and a downloaded application controlling the mobile device to down-sample sensor data from a first sampling rate to second sampling. USAA-1001 at 31:57-67.²

² Claim 4 includes certain limitations regarding the processing of sensor data from the sensor set during a plurality of driving periods to derive driving

Relevant to the arguments set forth herein, independent Claim 6 provides for a data-logging system including the concept of generating a driving score to determine an individual's driving risk profile. In particular, Claim 6 provides:

6. A data-logging system for logging driving information received from a remote mobile telecommunications device, the data-logging system comprising a processor and memory, the data logging system comprising:

a database for storing a plurality of accounts, each account having a unique identifier and the database being arranged to store driving information associated with at least one of a vehicle and a driver;

a communications interface arranged to communicate with the remote mobile telecommunications device, and received therefrom;

a unique identifier for association of the remote mobile telecommunications device with a corresponding one of the plurality of accounts;

driving information to be logged to that corresponding account, the driving information derived based on inputs received by a user interface of the remote mobile telecommunications device and

information (USAA-1001 at 32:1-29) that are not relevant to the arguments and assertions set forth herein.

sensor data from a sensor set of the remote mobile telecommunications device, the driving information derived without data from vehicle sensors; and

wherein the driving information comprises at least one of a driving score and sensor data captured and processed by the remote mobile telecommunications device during a driving period during which the remote mobile telecommunications device is removably attached to the vehicle being driven by the driver, the data logging system being further arranged to process the driving information logged to a corresponding account to generate a driving score used to determine a risk profile for at least one of the vehicle and driver.

USAA-1001 at 32:40-33:4.³

Importantly, independent claims 1 and 4 include the limitation that the mobile telecommunications device be configured to determine, “based on the

³ Independent Claim 7 is identical to Claim 6 except that it includes the following limitation at the end:

wherein the driving score is used to define an insurance premium associated with the account and the data logging system is further arranged to communicate to the remote mobile telecommunication device an insurance offer generated in response to the driving information received from the remote mobile telecommunications device.

inputs received by the user interface and sensor data from the devices sensor set, *a start of a driving period ...*” USAA-1001 at 32:52-54 (emphasis added). It is critical to these claims that the start of a driving period is determined.

Aspects of some exemplary implementations provides 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 1:59-2:9 (emphasis added). The ‘271 patent goes on to describe how the mobile device is to be configured to determine the start of a driving period:

The initialisation 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 3:27-54 (emphasis added).⁴

⁴ Although not claimed in '271 patent, the specification discloses the determination of the end of that driving period.

The end of a driving period may be automatically detected by the processor module 33, if certain conditions are met. For example, if the measured velocity of the vehicle remained zero for a pre-determined period of time, the processor module 33 may infer that the vehicle is stationary and no longer being driven, and accordingly ceases recording sensor data, and the method is terminated.

USAA-1001 at 19:60-66.

Also, critical to the invention claimed in the ‘271 patent is the fact that the driving score is derived without any reliance on data derived from any of the vehicle’s sensors. Each of the independent claims expressly provides that such information “*is derived without data from vehicle sensors*” USAA-1001 at 62-63. This is critical as one of the primary purposes of the invention is to determine driving information specific to an individual, not information specific to the vehicle which is all that would be collected if the invention relied 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 the primary purpose of the invention of generating individual specific driving data.⁵ Use of data from

⁵ The ‘271 patent specification, however, does disclose the potential “supplemental” use of data from vehicle sensors.

It will be appreciated that the sensor set onboard the mobile device *may be supplemented by a sensor set external to the mobile device. For example, the external device may be an engine management system of the vehicle and/or the external device may be arranged to connect to the on-car data network of the vehicle.* Thus, the external device may have access to information associated with the behavior of the vehicle (for example, the speed of the vehicle, how much the brake pedal is being pressed, etc.). Such driving information may be processed and/or stored by the mobile device under control of the

the mobile phone's sensors alone also provides the functionality of a black-box installed on the vehicle to collect data from the vehicle's sensors without the additional expense of developing, manufacturing, installing and updating that black-box. USAA-1001 at 2:13-24; 2:31-43.

As set forth above, Claims 6 and 7 also requires the generation of a “driving score” used to determine a driver's risk profile.

Advantageously, by pairing an identifier uniquely associated with the mobile device enables the remote system to unambiguously determine the source of the driving information. Accordingly, said driving information can be matched to a particular driver and/or vehicle. ***This is particularly useful when assessing a risk profile of said driver.***

executed application in a manner similar to driving information derived from sensor data internal to the mobile device.

USAA-1001 at 9:45-57 (emphasis added). While the inventors contemplated the use of data from a vehicle sensor to supplement data derived from the mobile devices' sensors, each of the independent claims' explicit language that the driving information is derived “without data from vehicle sensors” makes clear that data derived in this matter is not to be utilized in the invention claimed in the '271 patent.

Preferably, *the mobile device is controlled by the executed application to process the driving information to generate a driving score. The driving information may comprise the driving score.*

USAA-1001 at 10:10.17 (emphasis added).

The specification goes on to provide:

Preferably, the system is arranged to process the driving information logged to the corresponding account to generate a driving score. *The driving score may be used to determine a risk profile for at least one of the vehicle and driver.* The driving score may be used to define an insurance premium associated with the account.

USAA-1001 at 12:4-9 (emphasis added).

IV. PRIMARY PRIOR ART REFERENCE RELIED ON BY PETITIONER – US PATENT APPLICATION PUB. NO. US 2011/0307188 TO PENG *et al.*

Peng discloses a system and method for evaluating driving related data that may be collected from sensors on a mobile device and “from sensors and/or devices external to [the] mobile device (e.g., speed sensors, blind spot information sensors, seat belt sensors, GPS device, etc.).” USAA-1005 at [0021]. As further set forth in Peng, the invention comprises a mobile device that includes a data collection module that manages “the collection of driving data ... from any number and types of data sources, including (a) data sources provided by handheld mobile device ... (b) data sources in [the] vehicle ... (e.g., on-board vehicle computer, seat belt sensors, GPS system, etc.), and/or (c) data sources external to [the] vehicle

(e.g., data sources accessible to handheld mobile device 100 by a satellite network or other telecommunication links)” USAA-1005 at [0033]. These data sources in the vehicle may include the “engine RPM, speedometer, fuel usage rate, exhaust components or other combination indications, suspension system monitors, seat belt use indicators, tracking systems for other vehicles in vicinity, [and] blind spot indicators.” *Id.*

The trigger to start and stop the collection of driving data is based on the orientation of the mobile device relative to the vehicle. USAA-1005 at [0036]. “For example, data collection module may allow driving data collection to be manually or automatically started (or restarted after an interruption) only if the physical orientation of [the] mobile device is suitable for collecting driving data, according to predefined rules. Further, during driving data collection, module may automatically stop or interrupt the driving data collection if [the] mobile device is moved such that it is no longer suitably oriented for collecting driving data.” *Id.*

This invention is distinct from the invention claimed in the ‘271 patent wherein driving information about how a vehicle is being driven is derived by the mobile device from data collected solely by the mobile device’s sensors. Again, however, the Board need not decide this issue as Peng may not be considered as prior art to the ‘271 patent.

V. PERSON OF ORDINARY SKILL IN THE ART

For the purpose of this Preliminary Response, Auto Telematics does not challenge USAA's expert's proposed definition of a person of ordinary skill in the art ("POSITA") in this matter would have at least a Bachelor of Science Degree (or its equivalent) in an academic area such as electrical engineering, computer engineering, computer science, or a related technical field and about 2-3 years of experience in the field of telematic systems. Auto Telematics, however, reserves the right to provide an alternative definition of a POSITA if an IPR is instituted.⁶

VI. CLAIM CONSTRUCTION

In an *inter partes* review, the same claim construction standard is applied that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, claim terms are generally given their ordinary and

⁶ Patent Owner's expert, Christopher Wilson, nonetheless opines that a person of ordinary skill in the art would also include individuals with a Bachelor of Science degree in other fields, including physics, and that the particular educational experience becomes less relevant as the individual's experience in the telematics field increases. AT-2001 at ¶ 11. In this regard, Mr. Wilson opines that a person of ordinary skill in the art would include individuals with a Bachelor of Science Degree in any discipline and 3 – 5 years of experience in the field of telematics systems. *Id.*

customary meaning as would be understood by an ordinarily skilled artisan at the time of the invention and in the context of the entire patent disclosure. *See id.*; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (*en banc*).

Here, the Petitioner asserts that because the Challenged Claims are obvious under any reasonable interpretation, no express constructions are required. While Patent Owner disagrees with the characterization that the Challenged Claims are obvious under any construction of the claims, it agrees that no constructions are required here.

It should also be noted that in a proceeding pending before the United States District Court for the Western District of Texas (Waco Division) (Case No. 6:22-cv-00474-ADA) wherein Patent Owner is asserting allegations of infringement of the ‘271 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 the Patent Owner that no construction was required and that the plain and ordinary meaning of each term would be utilized by the Court.

VII. PENG MAY NOT BE CONSIDERED AS PRIOR ART

U.S. Patent Application Publication No. US2011/0307188 to Peng, *et al.* titled “Systems and Methods for Providing Driver Feedback Using a Handheld Mobile Device” claims an earliest priority date of June 29, 2011. As conceded by

the Petitioner, the priority history on which the ‘271 patent relies includes at least three (3) applications with filing dates that predate the Peng priority date. These applications include:

- Application No. 1021292.6 filed in Great Britain on December 15, 2010 (“P1”)⁷
- Application No. 1101259.8 filed in Great Britain on January 25, 2011 (“P2”)
- Application No. 1109759.9 filed in Great Britain on June 10, 2011 (“P3”)

P3 includes particular descriptions supporting each and every element of the claims of the ‘271 patent. Accordingly, the claims of the ‘271 patent have a priority date of no later than June 10, 2011, which predates Peng’s effective prior art date. As such, Peng may not be relied on to invalidate the ‘271 patent.

a. P3 Sufficiently Describes Features 1.6 and 4.6

Petitioner argues that three (3) features of the ‘271 patent are not sufficiently described in P3 to allow the ‘271 patent to rely on a filing date prior to that of

⁷ For the Board’s convenience, the Patent Owner is using the same naming convention for the priority filings as the Petitioner in its Petition. The Patent Owner denies any meaning or inference that may be associated with these naming conventions.

Peng. The first of these elements, described by the Petitioner as Feature 1.6,⁸ includes “determin[ing] based on the inputs received by the user interface and the sensor data from the devices 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.” Pet. at 6; USAA-1001 at 31:39-43; 32:11-14. Petitioner focuses on the specific language that this determining step must be “based on the inputs received by the user interface and the sensor data,” and that this step must determine the “start of a driving period.” Pet. 6. Contrary to Petitioner’s arguments, however, both of these features are sufficiently described in at least P3 thereby justifying a priority date of at least June 10, 2011.

In this regard, Figure 1 of P3 shows a “recording screen” which at the bottom left hand corner includes a “start/stop” button.⁹

⁸ The same claim element is included in Claim 4 which Petitioner has labeled as Feature 4.6.

⁹ Petitioner’s assertions regarding the scope and teachings of P3 are supported with the declaration of its auto telematics expert, Christopher Wilson. AT-2001. Mr. Wilson’s statements and assertions are incorporated herein.

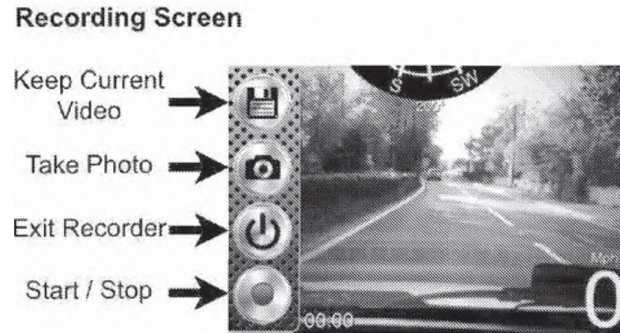


Figure 1

USAA-1505 at Figure 1. This feature is also referenced on p. 10 of P3 at both lines 27 (“Start/Stop Recording (starts recording video footage – and other data”)”) and line 33 (“during recording, (*i.e.* when the ‘Start/Stop Recording’ button is pressed) the Exit Recorder button in the Recording Screen is substituted with a Map Display button”). USAA-1505 at 10:27; 33. To use this feature, a user of the Witness application would press this button to start the recording of driving data. AT-2001 at 22.

Since P3 also describes the mobile device as having a touch sensitive screen to receive user data inputs (at p. 5, line 35 P3 identifies the modern smart-phone as having a “touch-sensitive screen ([to receive] user data inputs”), a person of ordinary skill in the art would know that the device could receive user inputs to start a recording by pressing the appropriate button on the screen. AT-2001 at ¶ 23. As such, P3 explicitly discloses that one of the inputs to determine the start of a driving period may comprise a user pressing the “Start/Stop” button on the touch screen. *Id.*

P3 further makes clear that the invention can detect the speed at which a vehicle is being driven using GPS. USAA-1505 at 8:35 (the recorded input from the sensors can be used to aid an insurance company in assessing the risk profile of a driver by determining whether the driver is “[d]riving faster than the speed limit allocated to a given road (detected by GPS).” Further, when describing Figure 1, P3 indicates that the “detected speed” of the vehicle, as well as the direction the vehicle has traveled, may be overlaid on the video feed being displayed on the mobile device’s screen. USAA-1505 at 10:16. This same concept is repeated on p. 12 wherein P3 states:

For example, date, time, speed, forward/backward G-forces, latitude, longitude and heading information is overlaid onto the video feed. As the video is played back, these values will typically change depending on the behavior of the vehicle, as recorded by the mobile device.

USAA-1505 at 12:18-21. As such, it is clear that P3 discloses an application collecting inputs from both the user interface and sensors on the mobile device. AT-2001 at ¶ 24.

As to using those inputs to determine the start of a driving period, P3 is also clear. In this regard, Figure 8 clearly shows the ability of the application to switch from displaying a video feed on the mobile device’s screen to a map once the vehicle has reached a predesignated speed. This functionality, P3 explains, is included as a safety feature:

Here[,] it is possible for the user to select speed units and also select whether the map should be displayed during recording, and at which speed it should be displayed in favor of the video feed. ***This is a safety feature of the witness application that hides the video feed during recording when the vehicle is detected as traveling above a pre-determined speed.*** The video speed is replaced by a map of the location of the vehicle – as is typical with in-vehicle GPS devices. Note that although the onscreen video feed is replaced with a map, video recording continues in the background.

In alternatives, the application may be arranged to detect the vehicle speed, and at a particular speed, switch off the screen entirely. It should be understood that the device will continue to record video, telemetry and other information even when the screen is switched off. Entirely switching off the screen of the device is advantageous as it significantly reduces the drain on the battery and the mobile device.

USAA-1505 at 14:34-15:9 (emphasis added).

This disclosure makes clear that the display screen of the mobile device may be switched from a video feed to a map view when the detected speed of the vehicle is above a predetermined speed. The user can set this predetermined speed as indicated by the touch screen slider in Figure 8. Given this disclosure that the screen may be programmed to switch from a live video feed to a map view as a “safety feature,” a person of ordinary skill in the art would have known that the application could make this same determination. It is at the “start of a driving

period” (as determined by the vehicle’s speed crossing a pre-determined threshold) wherein this safety feature could be activated. AT-2001 at ¶ 26.

A real-world example includes a user entering her vehicle, removably attaching her smart phone to the car via a docking station, USB connection, or some other means, pressing the user interface button to start recording and then reversing her car out of a garage and then turning onto a roadway. The recording starts once the user presses the start button, however, there is little concern for distraction of the driver being caused by the video display during the period of time where the user is reversing out of her garage and getting up to driving speed. Indeed, while reversing out of the garage, the video feed may actually prove advantageous. However, once the vehicle reaches a predetermined speed (*e.g.*, 10 mph) as determined by the sensor set, then the driving period during which a distracted driver may be a real safety concern is initiated. Accordingly, both the user interface input and sensor data are used together to determine the “start of a driving period.” AT-2001 at ¶ 27. Accordingly, P3 very clearly discloses the element of “determining based on the inputs received by the user interface and the 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.” AT-2001 at ¶ 28.

b. P3 Sufficiently Describes Elements 1.9, 4.9, 6.8 and 7.8¹⁰

(i) P3 Sufficiently Discloses to a POSITA the Derivation of Driving Information “Without Data from Vehicle Sensors”

Contrary to USAA’s assertions, P3 sufficiently describes the derivation of driving information “without data from vehicle sensors.”¹¹ In this regard, P3

¹⁰ Each of the independent claims include the element “...the driving information derived without data from vehicle sensors....” This element is identified by Petitioner in each of the independent claims as 1.9 (Claim 1), 4.9 (Claim 4), 6.8 (Claim 6) and 7.8 (Claim 7).

¹¹ The ‘271 patent’s claim term of deriving driving information “without data from vehicle sensors” is an example of a negative limitation. As the Manual of Patent Examining Procedure (“MPEP”) makes clear, there is nothing inherently ambiguous or uncertain about a negative limitation so long as the boundaries of the patent protection being sought are sufficiently set forth to comply with the requirements of 35 U.S.C. § 112. MPEP § 2173.05(i). As with any claim limitation, and contrary to Petitioner’s assertion that some type of heightened standard must be met (Petition at p. 7), to satisfy the written description requirement when evaluating a negative limitation, a patent’s specification, like with any other claim element, must simply reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter as of the

makes clear that the witness application “interfaces with the hardware on a mobile device, such as a smart phone.” USAA-1505 at 5:14. P3 goes on to state that “it will be appreciated that a more sophisticated telephone (*e.g.*, a smart phone) has a *richer* sensor set with which to record and determine the occurrence of an incident.” USAA-1505 at 5:20-21 (emphasis added).¹² This disclosure makes clear that the sensor set on which the invention is relying to gather driving data is that of filing date. *Novartis Pharmaceuticals v. Accord Healthcare, Inc.*, Docket no. 2021-1070 (Fed. Cir. June 21, 2022) citing *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F. 3d 1336, 1351 (Fed. Cir. 2010) (*en banc*). A negative limitation need not be recited in the specification *in haec verba*. *Novartis, supra*. It need only generally include sufficient disclosure in the specification to convey to a skilled artisan that the inventor intended the exclusion. *Id.* A negative limitation may be satisfied when a skilled artisan would understand the specification as inherently disclosing it. *Id.*

¹² “Richer sensor set” is a comparative term – the sensor set being “richer” than some other sensor set. While the disclosure does not expressly identify the sensor set which is less rich than the mobile device’s sensor set, it would have been recognized by a POSITA that the less rich sensor set would be that of the vehicle as the vehicle’s sensor set is the only other sensor set that reasonably could have been used as part of the disclosed invention. AT-2001 at ¶ 30.

the smart-phone, and not sensors that are included in some other component with a “less rich” sensor set (*i.e.*, vehicle sensors). AT-2001 at ¶ 30.

Further support is found in P3 wherein a full list of sensor/data inputs common to modern smart phones is identified. USAA-1505 at 5:25-35 (“The Witness application can receive the following sensor/data inputs, *as is typical for modern smart-phones*: G-force/accelerator; Microphone (Audio); Camera (Picture/Video); GPS module (Speed, location, evaluation, direction etc); 3D compass (Orientation; Pitch, Roll and Yaw); Time/date; [and] Touch-sensitive screen (receiving user data inputs)”). (Emphasis added). P3 goes on to make clear that the application “is arranged to record a number of *these sensor inputs* continuously.” USAA-1505 at 6:1-2 (emphasis added). Reference to “*these* sensor inputs” is a reference to the sensor inputs of the smart phone referenced immediately above on p. 5. AT-2001 at ¶ 31.

These references to the mobile phone sensor set would make clear to a person of ordinary skill in the art that the Witness application disclosed in P3 was designed to rely on inputs received from the sensor set of the mobile phone. This, combined with the disclosure’s teaching that the smart-phone’s sensor set is “richer” than any other sensor set that could be utilized by the invention makes clear that that the claim limitation of deriving driving information without data from the “less rich” vehicle sensors is clearly disclosed in P3. AT-2001 at ¶ 32.

(ii) P3 Sufficiently Discloses the Derivation of Driving Information Using Data from Both Vehicle and Mobile Device Sensors such that the Claim of Deriving Driving Information Without Data from Vehicle Sensors is Supported

Support for P3's disclosure of the derivation of driving information without data from vehicle sensors does not end there. P3 discloses the notion of utilizing the vehicle's sensors to, among other things, derive driving information. In this regard, P3 provides:

It would not be beneficial from the perspective of the insurance company if the user could choose when to enable the application. For example, if a user could choose to disable the application when speeding then the effectiveness of the application would be reduced.

Accordingly, the application may include measures to guarantee that the application is enabled whenever a given insured vehicle is being driven. *Such measures may involve matching data recorded by the Witness application with that recorded independently by the vehicle.* For example, the Witness application records the distance travelled during every journey. To ensure the summed distances of all journeys tracked by the Witness application tally with the total travelled distance of the vehicle, *the user may be prompted to enter the odometer mileage periodically.*

If the distance recorded by the Witness application does not correlate with the difference between odometer readings, then the discrepancy will be flagged to the user and/or the insurance company. A substantial discrepancy will typically indicate that the

Witness application has not been monitoring all vehicle journeys and the appropriate action can be taken (e.g. the user can be warned, insurance premium may be raised etc).

USAA-1505 at 19:31 – 20:14 (emphasis added). Here, the odometer, which itself is a vehicle sensor, is used to confirm that the application is accurately tracking the beginning and end of each driving period. As such, P3 discloses the use of both mobile device and vehicle sensors to derive driving information. AT-2001 at ¶ 33.

While any negative limitation included in a claim must have a basis in the disclosure, that basis may be met, among other means, if alternative elements are positively recited in the specification and then explicitly excluded in the claims. *See, e.g., In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) (“[the] specification, having described the whole, necessarily described the part remaining.”); *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff’d mem.*, 738 F.2d 453 (Fed. Cir. 1984). The invention at issue in *Johnson* related to linear thermoplastic polyarylene polyether polymers composed of recurring units having the general formula –O-E-O-E’—where O represents an oxygen atom, E represents the residuum of a dihydric phenol compound, and E’ represents the residuum of a benzenoid compound having one or more inert electron withdrawing groups. The claim at issue included a negative limitation that “E and E’ may not both include a

divalent sulfone group and may not both include a divalent carbonyl group linking two aromatic nuclei. *Id.* at 13.

While the specification did not include any express language supporting this negative limitation, it did include a description of a broad set of fifty (50) potential options for the E precursor compound and fifteen (15) species of polyarylene polyethers. *Id.* at 1018. Only fourteen (14) of those species fell within the scope of the negative limitation in the claim. *Id.* Notwithstanding the lack of any expressed support for the negative limitation, the Court still found that the claim met the requirements of Sec. 112.

The notion that one who fully discloses, and teaches those skilled in the art how to make and use a genus and numerous species therewithin has somehow failed to disclose and teach those skilled in the art how to make and use that genus minus two of those species, and has thus failed to satisfy the requirements of § 112 ... appears to result from a hypertechnical application of legalistic prose relating to that provisions of the statute. All that happened here is that appellants narrowed their claims to avoid having them read on a [prior art reference] [The] specification, having described the whole, necessarily described the part remaining.

Id. at 1019. This is exactly the situation here.

As set forth above, the use of data from the mobile device's sensor set, as well as from the vehicle's sensor set, to derive driving information is disclosed as

an alternative embodiment in P3. As such, like in *Johnson*, the claims' exclusion of data from one of those sensor sets, *i.e.*, the vehicle's sensor set, is also disclosed and supported. Having described the use of data from both vehicle and mobile device sensors, the inventors necessarily described the use of data only from the mobile device's sensors. Accordingly, P3 provides the necessary disclosure to support Claim Element 1.9 thereby providing support for the '271 patent's reliance on the June 10, 2011 priority date; predating Peng by several weeks. AT-2001 at ¶ 35.¹³

c. P3 Sufficiently Describes Elements 6.9/7.9, 6.10/7.10 and 7.11

Each of Claims 6 and 7 require that the system process driving information to “generate a driving score used to determine a risk profile...” for at least one of

¹³ Petitioner takes the curious position that because the specification indicates that the mobile communication device *can* receive data from vehicle sensors, that the negative limitation of deriving driving information “without data from vehicle sensors” is not supported. Petition at p. 7. This argument is misplaced as patents routinely claim less than everything disclosed in its specification. *See, e.g., In re Johnson, supra; Ex parte Grasselli, supra. See also, Teleflex, Inc. v. Ficosa North America Corp.*, 299 F. 3d 1313, 1326 (Fed. Cir. 2002) (not everything expressed or disclosed in the specification must be read into all the claims).

the vehicle and driver. USAA-1505 at 33:1-4; 34:11-14.¹⁴ This driving score is a number associated with the risk profile of the driver. In other words, it's an assessment of what type of driver the individual is. The specification makes this point clear:

Advantageously, by pairing an identifier uniquely associated with the mobile device enables the remote system to unambiguously determine the source of the driving information. Accordingly, said driving information can be matched to a particular driver and/or vehicle. ***This is particularly useful when assessing a risk profile of said driver.***

Preferably, ***the mobile device is controlled by the executed application to process the driving information to generate a driving score. The driving information may comprise the driving score.***

...

Preferably, the system is arranged to process the driving information logged to the corresponding account to generate a driving score. ***The driving score may be used to determine a risk profile for at least one of the vehicle and driver.*** The driving score may be used to define an insurance premium associated with the account.

USAA-1001 at 10:10.17; 12:4-9 (emphasis added).

¹⁴ Claim 7 includes the additional element that “the driving score is used to define an insurance premium associated with the account” with the system being further arranged to send “an insurance offer generated in response to the driving information” to the mobile telecommunications device. USAA-1001 at 34:15-21.

P3 includes a sufficient description of the assessment of a driver risk profile to support the '271's patent to claim priority to it. In this regard, P3 provides:

As mentioned, *the sensor data is used to determine the occurrence of 'an event of significance' such as a vehicle crash*. Example ways this could be detected include one or a combination of the following inputs:

- A change in pitch + sharp deceleration (braking heavily/impact)
- A change in yaw at a given speed (swerve/skid)
- A roll (vehicle overturned)
- The sound of:
 - Tyre squeal
 - The crumple zone being crushed
 - Airbags deploying
 - Breaking Glass
 - Impact (thud) with the vehicle's chassis
 - Passengers shouting/screaming
- GPS – zero velocity for a predetermined period (vehicle not moving anymore)
- An input from a user to say that an event to be recorded has taken place (USAA 1505 at 6:20-36) (emphasis added).

...

It will be appreciated that different sensor types, phones, mounting positions, vehicles, drivers and road conditions may generate differing outputs for driving behavior that is ‘safe’. (USAA 1505 at 7:10-12) (emphasis added).

...

The recorded input from the sensors can be used for other purposes.

In particular, for aiding the insurance company assess the risk profile of the driver (and potentially modify an insurance premium accordingly). Various parameters may be used to determine this:

- If the Witness application incorrectly detects an incident of significance, and receives feedback that the vehicle was not in accident (but in a near miss) – this could alter the risk profile of the driver. For example – if this happens frequently, but no accident occurs over a given period, this could be an indicator that the driver is good at reacting to potential hazards.
- Erratic driving (e.g. jerky steering or braking detected by G-force sensor).
- Driving faster than the speed limit allocated to a given road (detected by GPS). USAA 1505 at 8:24-35 (emphasis added).

P3 clearly discloses the concept of relying on driving information to determine whether a driver is “safe” or not, *i.e.*, to generate a risk profile for a particular driver. A POSITA would understand that generation of a risk profile is generation of a type of driving score. AT-2001 at ¶ 40. P3 further discloses using this risk assessment to assist an insurance company in determining a car insurance premium. Accordingly, P3 provides the necessary disclosure to support claim

elements 6.9/7.9, 6.10/7.10 and 7.11 thereby providing support for the '271 patent's reliance on the June 10, 2011 priority date; predating Peng by several weeks. AT-2001 at ¶ 41.

VIII. CONCLUSION

In summary, USAA's Petition fails as each and every argument raised therein is based primarily on the Peng reference. As set forth above, the Peng reference does not predate the priority date applicable to the '271 patent, and therefore, Peng may not be relied on as prior art. 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.

IPR2023-00912

U.S. Patent No. 9,311,271 B2

August 31, 2023

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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 7,165. 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 31, 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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