

**HIGH COURT OF DELHI**

**Bench: Hon'ble Mr. Justice Sanjeev Narula**

**Date of Decision: May 29, 2024**

C.A.(COMM.IPD-PAT) 328/2022

**MAHESH GUPTA ...APPELLANT**

**Versus**

**ASSISTANT CONTROLLER OF PATENTS AND DESIGNS**

**...RESPONDENT**

**Legislation:**

Sections 2(1)(j) and 2(1)(ja) of the Indian Patent Act, 1970

**Subject:** Appeal against the refusal of Indian Patent Application No. 201611041718 for a “PORTABLE VEHICLE MANAGEMENT SYSTEM” on the grounds of lack of inventive step.

**Headnotes:**

Patent Law – Inventive Step – Assessment – Appeal against the Assistant Controller of Patents & Designs’ refusal of a patent application for a portable vehicle management system – Refusal based on the application not meeting the inventive step requirement under Section 2(1)(ja) of the Patents Act, 1970 – Claims rejected as obvious in light of prior art D4 (US2002019703A1) and D5 (US2015019266A1) – Court upheld the refusal, stating the claimed

features of portability and comprehensive monitoring were well-known and lacked inventive ingenuity. [Paras 7-26]

Patent Law – Doctrine of Non-Obviousness – Analysis – Court found the invention lacked inventive step as the features of portability and anomaly detection were already disclosed in prior arts – The combination of known technologies from prior arts D4 and D5 was deemed obvious and within the capabilities of a person skilled in the art – Appeal dismissed. [Paras 15-26]

Decision – Rejection of Patent Application – Court affirmed the Assistant Controller’s decision to reject the patent application under Section 2(1)(ja) of the Patents Act, 1970 – Held that the subject invention did not exhibit an inventive step over prior arts – Patent refusal justified. [Para 25-26]

#### **Referred Cases:**

- Hoffmann-La Roche Ltd & Anr. V. Cipla Ltd. 2016(65) PTC 1 (Del)
- Technograph v. Mills & Rockley [1972] RPC 346
- Enercon (India) Limited vs. Aloys Wobben (IPAB)
- Pfizer Ltd’s Patent [2000] FSR 734

#### **Representing Advocates:**

Mr. Abhishek Jan and Mr. Pramod Kumar for the appellant

Mr. Harish Vaidyanathan Shankar, CGSC with Mr. Srish Kumar Mishra, Mr. Alexander Mathai Paikaday, Mr. Lakshay Gunawat, and Mr. Krishnan V. for the respondent

## **JUDGMENT**

### **SANJEEV NARULA, J.:**

1. This judgment addresses the refusal of Indian Patent Application No. 201611041718 for the 'PORTABLE VEHICLE MANAGEMENT SYSTEM' (*'subject patent application'*). The refusal order, issued by the Assistant Controller of Patents & Designs on 27<sup>th</sup> December, 2018 (*'the impugned order'*), asserts that the subject patent does not meet the inventive step requirement as stipulated under Section 2(1)(ja) of the Indian Patent Act, 1970 (*'the Act'*). Thus, according to the Controller, the subject patent fails to qualify as an invention under Section 2(1)(j) of the Act.

### **PROCEEDINGS LEADING TO THE PRESENT APPEAL:**

2. The appellant applied for the subject patent on 6<sup>th</sup> December, 2016 before the Indian Patent Office (*'IPO'*). Thereafter, the appellant filed the request for examination dated 1<sup>st</sup> December, 2017. Consequently, the First Examination Report (*'FER'*) dated 21<sup>st</sup> March, 2018 was issued by the IPO claiming that the subject patent application lacked novelty and inventive step required under Section 2(1)(ja) of the Act. The FER was issued referencing prior art D1: US7103460B1, D2: DE60036650T2, and D3: US20140306817A1. Furthermore, the claims were found to be nonpatentable under Sections 3(m) and 3(k) of the Act. In response, the appellant submitted a response to the said FER with amendments to the claims and certain explanations on 9<sup>th</sup>

April, 2018. Despite these submissions, the Patent Office remained unconvinced, leading to the issuance of a hearing notice on 29<sup>th</sup> June, 2018. This notice restated the existing objections under Sections 3(m), 3(k), and 2(1)(j) of the Act and introduced a new prior art reference, D4: US20020197033. During the subsequent hearing, the appellant successfully addressed the novelty objection. Nevertheless, an additional hearing notice dated 17<sup>th</sup> July, 2018, introduced a fresh objection under Section 2(1)(ja) of the Act. The notice detailed:

*“As discussed during hearing held on 16/07/2018 for the application no. 201611041718, Following citations are found relevant in addition to the citation cited in hearing notice:*

*D5: US20150019266A1 (Whole document, especially Para [0018]-[0020]; Para [0045]; Para [0127]; fig 1)*

*D6: US20150112504A1 (Para [0106])*

*As in the hearing, you argued that in present application device is a portable device which can be ported from one vehicle to another, having all the sensors inbuilt which can be monitored wirelessly, the same is being disclosed in the cited document D5 where a portable device is disclosed which has all the sensors inbuilt and can be monitored wirelessly through a remote server. For more information, refer to the relevant description given in the parenthesis.*

*In addition to above citations, many similar devices were available in the market before the priority date of present application. Few examples of such devices are following: 1) Vectu Portable Vehicle Tracker (Date first listed on Amazon February 3, 2016)*

2) *LandAirSea SilverCloud SYNC Real-time Tracking Device Covert OBD2 GPS Tracker for Vehicles”*

3. Following the hearing, the appellant submitted a revised set of claims, numbered 1-14. Of these, Claim 1 stands as the sole independent claim and is detailed below:

*“1. A vehicle tracker (102) for monitoring operation of a vehicle, wherein the vehicle tracker (102) comprises: a connection port (216) configured to selectively connect the vehicle tracker (102) with a power source of the vehicle, the connection port configured to receive power from the power source; a rechargeable battery to power the portable vehicle tracker (102) when power is unavailable from the power source of the vehicle, the rechargeable battery configured to be charged using power from the power source; a plurality of sensors (504), the plurality of sensors interfaced with a processor (502) of the vehicle tracker (102) for sensing a plurality of parameters from inside a vehicle cabin, wherein the sensing results in generation of a plurality of current parameter values (518) of the plurality of parameters; a processing module 506 to process the plurality of current parameter values (518) relative to a plurality of parameter threshold values (520) stored in a parameter database; and an anomaly determining module (508) to determine one or more anomalies based on the processing, wherein the one or more anomalies indicate state of the vehicle's operation wherein the vehicle tracker is configured as a portable device for selectively connecting the vehicle tracker with a vehicle and the vehicle tracker is configured to monitor operation of the vehicle by removably*

*mounting the vehicle tracker inside the vehicle cabin for sensing the plurality of parameters.”*

4. Despite the amendments, the Assistant Controller of Patents and Designs remained unconvinced, ultimately refusing the application under Section 15 of the Act. The conclusion reached by the Assistant Controller is reproduced below:

*“i) D4 teaches the on-board system includes a plurality of sensors, each of which detects a different type of movement or condition of the vehicle. Thus upon the system detecting any one of the abnormal movement/condition, the timer 16 is activated to enable signals from the various sensors to pass through to the processor. The function of the processor is to accumulate and analyse the various sensor signals received during the timed interval and determine whether the vehicle is being operated recklessly and unsafely. D4 fails to disclose a portable device to detect above conditions (anomalies in the operation of vehicle) which wirelessly communicate to remote server (Paragraphs [0004]-[0005];[0014]-[0016];[0022]-[0024]; [0034][0036]). However, D5 in same field of D4, discloses a portable device which can be ported from one vehicle to another, having all sensors inbuilt which can be monitored wirelessly through remote server (Paragraphs [0018]-[0020], [0045], [0127]; Figure 1). As such, all the essential features of independent claims 1, and 8 are found disclosed in D4 and D5 considered together. Therefore, it would be obvious for any skilled person to arrive at the said claimed features of this instant alleged invention in the light of D4, D5 and common knowledge in the course of normal research, experimentation and trial & error. Hence, the claimed subject matter of*

*the independent claims 1 and 8 is obvious and lacks inventive step. ii) Without prejudice, the claimed subject matter of the dependent claims 2 to 7 and 9 to 14 falls within the scope of the independent claims. Since the independent claims are found to involve no inventive step over the cited art as detailed in the preceding paragraphs, the claimed subject matter of their subsequent dependent claims is also rendered obvious and not inventive mutatis mutandis.*

*13. Therefore, in view of the aforesaid, it is concluded that the subject matter of claims 1 through 14 in this instant application lacks inventive step. As such, the substantive objection in Para 2 under the header “invention u/s 2(1)(j)” of the said Hearing notice still hold good. Therefore, the claimed subject does not constitute an ‘Invention’ as defined under section 2(1)(j) of The Patents Act, 1970 (as amended).”*

### **APPELLANT’S CONTENTIONS:**

5. Mr. Abhishek Jan, counsel for the appellant contends that the Controller erred in assessing the inventive step of the subject matter by neglecting the widely accepted tests for inventive step as articulated in various judicial pronouncements and the “Manual of Patent Office Practice and Procedure” and assails the order on the following grounds:
- 5.1. The primary feature of the invention is its portability, a significant aspect that the Assistant Controller failed to address adequately. No prior art has been cited that references this feature or any other key aspect of the invention.
  - 5.2. The amended claims explicitly state, “*wherein the vehicle tracker is configured as a portable device for selectively connecting the vehicle tracker with a vehicle and the vehicle tracker is configured to monitor operation of*

*the vehicle by removably mounting the vehicle tracker inside the vehicle cabin for sensing the plurality of parameters*". The respondent has neither cited any prior art nor provided any reasoning during the prosecution to render these features obvious. Additionally, the respondent has entirely overlooked the features recited in the dependent claims, failing to cite any prior art or provide reasoned objections regarding these claims.

- 5.3. The Respondent has neglected to establish the standard of a Person Having Ordinary Skill In The Art ('*PHOSITA*') relevant to the invention. Instead, the Controller appears to have evaluated the prior arts from the perspective of a highly skilled and innovative researcher, which is inappropriate for determining the inventive step.
- 5.4. The subject invention is distinguishable from the cited prior art. Prior art US2002019703 (D4) is directed towards an on-board system for an automotive vehicle that is permanently installed. The system in D4 utilizes the vehicle's on-board sensors to generate output and is integrated with various vehicle components such as turn indicators and horn. Therefore, D4 is not portable and cannot be readily transferred from one vehicle to another. It does not address the problem solved by the subject invention, which provides a device for remotely monitoring vehicle operation.
- 5.5. Document US20150019266A1 (D5) discloses portable devices used for risk assessment and also utilizes vehicle sensor information. D5 determines the relative motion between a portable device and a vehicle, assessing the operation of the vehicle in relation to the movement of the portable device. Thus, relative movement between the portable device and the vehicle is a prerequisite for the system's functionality.
- 5.6. The subject invention enables a vehicle owner to remotely monitor the vehicle's operation, a problem not addressed by D4 or D5. D4 is focused on



warning nearby drivers of reckless driving, while D5 assesses the risk associated with operating a portable device and other distracting activities while driving. Neither document addresses the problem solved by the subject invention as claimed in claim 1. Consequently, a person skilled in the art has no reason, suggestion, or motivation to combine D4 with D5. Even if such a combination were attempted, it would not result in the invention claimed in the present application. Therefore, D4 and D5, whether considered individually or in combination, do not render the claims of the present application obvious or lacking in inventive step.

- 5.7. The Respondent has incorrectly concluded that various components of the present invention have been disclosed in prior documents, thereby demonstrating obviousness. This constitutes mere mosaicing of features from alleged prior arts, which is apparent only in hindsight. The Respondent's analysis suffers from the hindsight effect, and combining separate prior disclosures of individual components does not make the present invention obvious.
- 5.8. The opinion expressed by the Controller in the order dated 27<sup>th</sup> December, 2018, stating that the invention is obvious in view of the combined teachings of D4 and D5, was never conveyed to the appellant during the prosecution. The Appellant only became aware of this opinion upon receiving the order dated 27<sup>th</sup> December, 2018, thereby denying the appellant a fair opportunity to respond, which is against the principles of natural justice and the provisions of the Act. The Act mandates that the respondent provide an opportunity for a hearing before issuing any adverse order. Furthermore, a review of the objections raised during the prosecution shows that the respondent did not adequately consider all the claims when issuing objections in the First Examination Report and hearing notices. None of the communications from the respondent provide a thorough analysis or

- reasoning for all the features recited in the claims. This indicates a lack of appreciation for the claimed invention and a failure to adhere to the standards of natural justice required in administrative adjudication.
- 5.9. The differences from the cited prior art D4 & D5 and the relevant common general knowledge of the person skilled in the art at the priority date, a solution to the said problems would not magically appear to a PHOSITA without the requisite inventive ingenuity. It is well-settled that a prior art reference must be considered in its entirety, as a whole, including portions that would lead/teach away from the claimed invention. A prior art reference teaches away when “*a person of ordinary skill in the art, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the Applicant*”.
- 5.10. In the obviousness analysis, the Respondent has asserted various components of the present invention disclosed in various prior documents. As such, it is nothing but mere mosaicking of the features of alleged prior arts, which is obvious only in light of hindsight effect. Thus, the analysis of the Respondent suffers from hindsight bias and that imputing separate prior disclosures of individual components of the present invention does not make the present invention obvious.
- 5.11. Respondent No.1 has ignored the ingenuity and innovation of the Petitioner while labelling the method (as presented in the present invention) non-inventive. There is a disregard for Steps 3 to 5 of the test for inventive step laid down by the Division Bench in ***Hoffmann-La Roche Ltd & Anr. v Cipla Ltd.***,<sup>1</sup> case, which makes the present invention appear obvious to the Respondent No.1 owing to hindsight bias. This is not sustainable and ought

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<sup>1</sup> 2015:DHC:9674-DB

to have been avoided. This avoidance of hindsight approach has also been emphasized by the IPAB in the matter of ***Enercon (India) Limited vs. Aloys Wobben***<sup>2</sup>. The impugned order thus lacks application of mind and is explicitly unfair. Therefore, it cannot be sustained in law and should be set aside.

**RESPONDENT'S CONTENTIONS:**

6. *Per contra*, Mr. Harish Vaidyanathan Shankar, CGSC for Respondent strongly defended the impugned order and argued that each feature of the invention is obvious in light of cited prior arts under Section 2(1)(ja) of the Act. Mr. Shankar's submissions are summarised as follows:

6.1. The Appellant's invention lists the following features:

- A. Plurality of sensors to detect the various parameters of a vehicle.
- B. Analyse the parameters to determine any anomaly/ risk.
- C. Communicate to a remote location.
- D. Removably Portable (Plug-and-Play) (connection port, rechargeable

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battery, powered by vehicle etc. are implicit requirements of plugand-play).

6.2. Respondent further compares each feature in light of the prior arts. D4:US2002019703 teaches that the on-board system includes a plurality of sensors, each of which detects a different type of movement or condition of the vehicle {Feature A of the claimed invention}. Thus, upon the system detecting any one of the abnormal movements/conditions, timer 16 is activated to enable signals from the various sensors to pass through to the processor. The function of the processor is to accumulate and analyse the

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<sup>2</sup> ORA/41/2009/PT/CH (MANU/IC/0057/2013)

various sensor signals received during the timed interval and determine whether the vehicle is being operated recklessly and unsafely {Feature B of the claimed invention}. D4 discloses a safety system for automotive vehicles to automatically detect and monitor various movements of a driven vehicle and automatically communicate such movements to others and the police {Feature C of the claimed invention}.

- 6.3. The system of the appellant's invention detects violations of traffic laws, including speeding, running stop signs, aggressive driving, and other behaviours. It also detects turns, lane changes, U-turns, accelerations, decelerations, proximity to other vehicles, slow driving, and weaving from lane to lane. Where a pattern of vehicle movements demonstrates aggressive driving, a warning is given to other vehicles. The detected movements may be recorded and/or transmitted wirelessly to the police to enforce penalties against traffic violations. Warnings and other communications may be provided inside the monitored vehicle to remind the driver, discourage future improper conduct, and assist impaired drivers who may lose concentration or hand-eye coordination in vehicle control. Exterior communication with others may include flashing lights, horn sounds, and sirens, while interior communication with the monitored vehicle's driver may be through visual displays or audible announcements. {mentioned in D4: Paragraphs [0004], [0005], [0014]-[0016], [0022]-[0024], [0034][0036]}
- 6.4. The only feature not disclosed in D4 is the device's portability. However, portability is considered a standard design variation in the field of automobile accessories. Many automobile accessories, such as music systems, information systems, or navigation systems, can be pre-installed or installed as plug-and-play devices. Mobile devices can also be used in vehicles as plug-and-play through a connection port. Moreover, D5, which belongs to the

analogous field of telematics, discloses a portable device that can be moved from one vehicle to another, with inbuilt sensors monitored wirelessly through a remote server {Feature D of the claimed invention}. {D5: Paragraphs [0018]-[0020], [0045], [0084], [0127]; Figure 1}. D5 clearly discloses the concept of portable (plug-and-play) sensors, and D4 uses the same method for risk assessment as the alleged invention.

6.5. Similar inventions are part of the common general knowledge before the priority date by citing examples. Such as,

- a) Vectu Portable Vehicle Tracker (Date first listed on Amazon February 3, 2016).
- b) LandAirSea SilverCloud SYNC Real-time Tracking Device Covert OBD2 GPS Tracker for Vehicles.
- c) Letstrack Vehicle Security | Voice-Enabled Realtime GPS Tracking Device for 2-Wheelers, Bike, Scooty with Mobile App Track Your Bike or Scooty Pan-India (Date first Available on Amazon: July 19, 2016)

(URL:[https://www.amazon.in/dp/B01ISLTW4M?ref=emc\\_p\\_m\\_5\\_i](https://www.amazon.in/dp/B01ISLTW4M?ref=emc_p_m_5_i))

- d) Letstrack Plug & Play Vehicle Security | Voice-Enabled Real-Time GPS Tracking device for 4-Wheelers with Mobile App Track Your Car Pan-India (Date first Available on Amazon: July 20, 2016).

6.6 At the time of the alleged invention, it would have been obvious to a person skilled in the art to arrive at the claimed features in light of D4, D5, and common general knowledge. The subject matter of the alleged invention would have been obvious to a person skilled in the art through normal research, experimentation, and trial and error. Hence, the claimed subject matter of amended Claims 1-14 is obvious and lacks an inventive step under Section 2(1)(ja) of the Act.

**ANALYSIS AND FINDINGS:**

7. The decision to reject the subject application under Section 15 of the Act was based entirely on Section 2(1)(j)<sup>3</sup>, more specifically, Section 2(1) (ja)<sup>4</sup> of the Act. Consequently, the crucial question is whether Claims 1-14 of the subject application exhibit an inventive step when considered in light of the teachings disclosed independently or cumulatively in prior art documents D4 and D5.

8. Section 2(1)(ja) of the Patents Act, 1970, has been analysed in various judicial and quasi-judicial interpretations, providing a robust legal framework for assessing the inventive step of a claimed invention<sup>5</sup>. Keeping those principles in mind along with the legislative intent discernible from the definition provided in Section 2(1)(ja) of the Act, we proceed with our analysis.

#### *Inventive Concept of the Invention*

9. The subject matter of the invention pertains to a portable vehicle tracker designed to monitor the operation and conditions within a vehicle. As per the said invention, the device is equipped with a connection port that allows it to be powered by the vehicle's power source and includes a rechargeable battery to maintain operation when the primary power source is unavailable. This ensures continuous monitoring capabilities. The vehicle tracker is integrated with multiple sensors interfaced with a processor, enabling it to sense various parameters such as sound, speed, temperature, vibration, image, location, and engine status. These sensors provide realtime

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<sup>3</sup> 2(1) (j) – “invention” means a new product or process involving an inventive step and capable of industrial application;

<sup>4</sup> 2(1) (ja) – “inventive step” means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art;

<sup>5</sup> See, Biswanath Prasad Radhey Shyam v. Hindustan Metal Industries Ltd. (1979) 2 SCC 511. See also,

data that is processed against predefined threshold values stored in a parameter database. Using the abovementioned sensor array and configuration, the processing module described in the invention, analyses the sensor data to detect anomalies indicative of the vehicle's operational state. Anomalies include engine idling, high cabin temperatures, excessive vibrations, loud noises, and tampering with vehicle components or the tracker itself. In response to detected anomalies, an alert generating module creates alerts in various formats, including text messages, images, notifications, and videos, which are then transmitted to a user device via a transmitter. 9.1 Additionally, the vehicle tracker features an emergency switch that can send emergency notifications either when pressed for a specific duration Hoffmann-La Roche Ltd & Anr. v Cipla Ltd., 2016(65) PTC 1 (Del). or when predefined words are recognized by the sound sensor through voice recognition. The invention also utilises a front camera in the tracker, which captures traffic and path data, such as road conditions, street signs, and potholes. This data is processed to provide real-time driving assistance. Additionally, this tracker is also stated to be capable of detecting and masking faces in videos to ensure privacy before transmitting the video to the user device.

#### *Components of the Invention and their functionalities*

10. From the summary of the invention, and detailed description in the subject application, we can identify the key components and functionalities as follows:

- (a) Connection Port (216): Allows the tracker to connect to and receive power from the vehicle's power source.
- (b) Rechargeable Battery: Ensures the tracker remains operational when the vehicle's power is unavailable.

- (c) Sensors (504): Monitors parameters inside the vehicle cabin: sound, speed, temperature, vibration, image, location, and engine status.
- (d) Processor (502) and Processing Module (506): Analyses current parameter values against predefined values to identify anomalies.
- (e) Anomaly Determining Module (508): Detects anomalies indicating the state of the vehicle's operation.
- (f) Alert Generating Module (510): Creates alerts in formats like text messages, images, notifications, and videos.
- (g) Transmitter (512): Sends alerts to a user device.
- (h) Emergency Switch (514): Sends emergency notifications based on specific conditions.
- (i) Front Camera (322): Captures traffic and path data, including road conditions, street signs, and potholes.
- (j) Real-time Assistance Information: Provides driving assistance based on processed traffic and path data.
- (k) Face Masking in Videos: Ensures privacy by detecting and masking faces in videos before transmission.

11. The above key components and functionalities have been explained in Claim No. 1 extracted above, the abstract, Figures 1 and 5 of the complete specification of the subject patent. The abstract of the subject patent and the relevant figures are extracted as under:

*“Abstract*

*Present disclosure addresses need for a portable device for monitoring operation of a vehicle. Present disclosure discloses a vehicle tracker (102) and a method for monitoring vehicle’s activity. Vehicle tracker as disclosed herein provides for a portable device that may be placed inside a vehicle cabin to monitor handling and*



operation of vehicle. The vehicle tracker (102) has a connection port (216) which provides plug and play functionality. The vehicle tracker (102) further has a plurality of sensors (504) for sensing various parameters from inside the vehicle cabin. The sensing results in generation of current parameter values (518) which are processed to determines anomalies in the operation of the vehicle. Once the anomaly is detected, the vehicle tracker (102) generates an alert and sends it to the concerned person or user.”

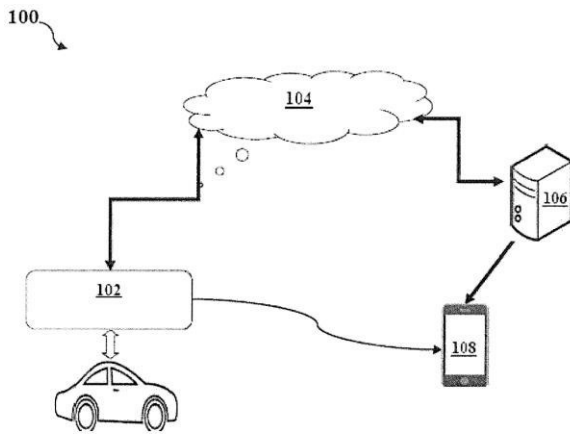
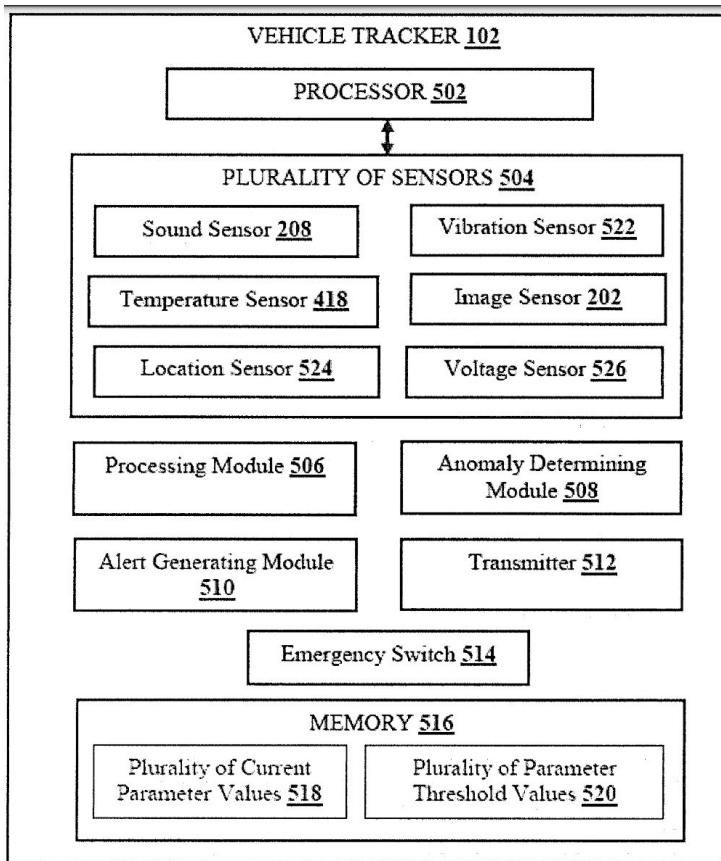


FIG. 1



**FIG. 5**

12. It is clear that the inventive concept of the patent centres around a multifunctional, portable vehicle tracker (vehicle tracker [102]) characterized by its capabilities in real-time monitoring, anomaly detection, alert generation, and emergency response as delineated in Claim No 8. This concept is encapsulated within the device itself, which amalgamates multiple technical features into a singular, compact unit. By integrating various sensors and processing modules, the device enables comprehensive vehicle and environmental monitoring. This integration facilitates the immediate detection of and response to anomalies, ensures timely alerts and

notifications to users, and supports real-time assistance with traffic and route analysis to help drivers navigate safely and efficiently

*Technical Advancement Claimed in the Invention compared to prior art 13.* The Appellant asserts that the technical advancement of the invention lies in the integration of multiple functionalities within a single, portable vehicle tracker device. Specifically, the advancement stems from the synergistic combination of various features within the invention, rather than from the individual features themselves. These features of the invention include:

- (a) Ability to monitor a comprehensive set of parameters inside the vehicle cabin using a diverse array of sensors.
- (b) Real-time processing of sensor data against stored threshold values to detect and report anomalies.
- (c) Generation and transmission of alerts in multiple formats to a user device, enhancing situational awareness.
- (d) Inclusion of an emergency switch that can trigger notifications based on user interaction or voice recognition, providing an added layer of safety.
- (e) Capability to capture and analyse traffic and path data for real-time driving assistance, improving driving efficiency and safety.
- (f) Detection and masking of faces in video recordings, ensuring the privacy of vehicle occupants.

14. We will now proceed to assess the technical advancement of the subject patent by comparing the technical features of the current patent application with those outlined in the cited prior arts D4 and D5. This comparison will provide a clearer understanding of the invention's patentability. For clarity, the side-by-side comparison of the technical features, is presented below:

<b>Technical Feature</b>	<b>Covered by D5 (US2015019266A1)</b>	<b>Covered by D4 (US2002019703A1)</b>
<b>Real-time monitoring of vehicle operation using various sensors</b>	Yes, D5 discusses using various sensors to monitor vehicle operation in real-time. Paragraphs [0018], [0020], [0045], [0060], [0103]	Yes, D4 mentions the use of sensors for real-time monitoring of vehicle operations. Paragraphs [0014], [0024], [0037], [0050], Claims [1], [10]
<b>Portability</b>	Yes, advanced portable tracker, where the facility even can be incorporated in a personal device (mobile phone, laptop). Paragraphs [0018 - 0020]	No, D4 teaches of a tracker which is moulded to the dashboard of vehicle
<b>Anomaly detection based on predefined thresholds</b>	Yes, D5 includes anomaly detection based on processing sensor data against predefined thresholds. Paragraphs [0019], [0040], [0052]	Yes, D4 discusses detecting reckless driving based on predefined patterns and thresholds. Paragraphs [0016], [0017], [0019],

		Claims [1], [3]
<b>Alert generation in various formats</b>	Yes, D5 describes generating alerts in various formats such as text messages, images, and videos. Paragraphs [0109], [0110], [0111]	Yes, D4 includes generating alerts and warnings to other drivers and the police. Paragraphs [0020], [0021], [0039], Claims [1], [9]
<b>Emergency response features</b>	Yes, D5 describes emergency notifications and response mechanism. Paragraphs [0064], [0110], [0111]	No, D4 does not specifically mention emergency response features.
<b>Integration of various sensors and processing modules</b>	Yes, D5 includes integration of multiple sensors and processing modules into a single device. Paragraphs [0018], [0020], [0032], [0053], [0060], [0129]	Yes, D4 discusses the integration of various sensors for monitoring vehicle operations. Paragraphs [0014], [0020], [0037], claims [1], [10]

<p><b>Detecting and masking faces in videos</b></p>	<p>No, however D5 does mention the use of a face tracking sensor in paragraph [0040]</p>	<p>No, D4 does not cover face detection and masking.</p>
<p><b>Technical Feature</b></p>	<p><b>Covered by D5 (US2015019266A1)</b></p>	<p><b>Covered by D4 (US2002019703A1)</b></p>
<p><b>Real-time assistance through traffic and path data analysis</b></p>	<p>Yes, D5 discusses real-time assistance based on traffic and path data. Paragraphs [0019], [0039], [0109]</p>	<p>No, D4 does not cover realtime assistance through traffic data analysis.</p>
<p><b>Prompt detection and response to anomalies</b></p>	<p>Yes, D5 describes prompt detection and response to anomalies. Paragraphs [0020], [0052], [0111]</p>	<p>Yes, D4 includes prompt detection of reckless driving and response through alerts. Paragraphs [0016], [0020], [0039], Claims [1], [10]</p>
<p><b>Enhanced safety and privacy features</b></p>	<p>D5 does not mention enhanced safety or privacy as a feature, however, the legal analysis algorithm given in paragraph [0103] and</p>	<p>No, D4 does not explicitly mention enhanced safety and privacy features.</p>

	<p>other descriptions given in paragraphs [0110], [0111] do broadly cover the similar functionality</p>	
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15. On the basis of the above analysis, it becomes evident that the subject invention does not disclose a technical advancement over the prior art documents D4 (US2002019703A1) and D5 (US2015019266A1). The core functionalities and features claimed in the present invention are already comprehensively covered by the disclosures in D4 and D5 for the following reasons:

*Technical Features and Coverage:*

15.1 Real-time Monitoring: Both D4 and D5 describe systems for real-time monitoring of vehicle operations using various sensors. D5 details the use of sensors such as accelerometers, gyroscopes, and GPS for real-time data collection and analysis. Similarly, D4 discusses the use of multiple sensors to detect vehicle movements and conditions.

15.2 Anomaly Detection: Anomaly detection based on predefined thresholds is addressed in both prior arts. D5 includes processing sensor data against predefined thresholds to identify anomalies. D4 also mentions the detection of reckless driving based on a pattern of specific sensor signals within a short time interval.

15.3 Alert Generation: Generation of alerts in various formats is covered by both D5 and D4. D5 specifically describes generating text messages ([0109]). D4 includes generating alerts and warnings to other drivers and the police.

15.4 Emergency Response: D5 covers displaying emergency notifications and response mechanisms, D4, although not explicitly mentioning emergency response, covers related functionalities which contribute to emergency responses through real-time monitoring and alerting systems.

15.5 Integration of Sensors and Processing Modules: Both prior arts discuss the integration of multiple sensors and processing modules. D5 provides details on integrating sensors and processing modules within a single device. D4 also covers the integration of various sensors for comprehensive vehicle monitoring.

15.6 Real-time Assistance: D5 specifically discusses real-time assistance through traffic and path data analysis, which is not explicitly covered in D4 but is implied through the use of monitoring and alert systems. 15.7 Detection and Masking of Faces – An Additional Feature.

15.7.1. The concept of face detection itself was known at the priority date of the invention. Techniques for detecting and recognizing faces were widely used in various applications, including surveillance, security systems, social media platforms, and mobile devices. Similarly, the concept of masking faces to protect privacy was well-known and extensively implemented in contexts where anonymity was required, such as in news media, legal proceedings, and digital image processing.

15.7.2. Applying these well-known techniques to vehicle tracking systems does not constitute an inventive step. The incorporation of face detection and masking into vehicle tracking systems is only an application of existing technology to a new context. This is particularly true given the widespread recognition of privacy as a fundamental right. Given this legal backdrop, it is a natural corollary to consider privacy protections when designing new technologies. Ensuring the privacy of facial data and other identifiers would



be a standard consideration for professionals in the field, based on both legal and ethical considerations.

15.7.3. Therefore, incorporating face detection and masking into vehicle tracking systems to enhance privacy is an obvious step. The motivation to protect personal data would naturally lead a person skilled in the art to apply existing face detection and masking techniques to any system that collects visual data. The goal of enhancing privacy through masking identifiable features in video footage or images is a well-understood and expected practice.

15.7.4. Therefore, the feature of detection and masking of faces in the present invention, while useful, does not meet the criteria for patentability. Instead, it represents a logical and expected application of well-established techniques to ensure privacy. Given the widespread recognition of privacy rights and the common use of face detection and masking technologies, this feature enhances privacy but does not contribute to a non-obvious advancement in the field of vehicle tracking and monitoring. Overall, even if the Court were to consider the minor differences between the technical features of the present invention and the disclosures in the prior arts, the invention would still fail to satisfy the criteria for patentability due to obviousness. The minor differences do not contribute significantly to the overall inventive concept and are merely incremental improvements that would be obvious to a person skilled in the art. In conclusion, after combining the teachings of the prior art documents D4 and D5, the only rational conclusion is that the present invention does not represent a technical advancement over these prior arts.

*The combined effect of prior arts*

16. In patent law, the practice of “mosaicing,” which entails the synthesis of multiple prior art references, is permissible only under specific conditions. It must be demonstrably evident that a person skilled in the art, upon consulting one citation, would logically seek further insight from another citation to enhance their understanding of the initial reference. This requirement ensures that the combination of references reflects a rational and informed progression, guided by the expertise of a skilled practitioner in the field. The same has also been considered by Lord Reid in ***Technograph v. Mills & Rockley***<sup>6</sup> and highlighted in ***Terrell on the Law of Patents***, Nineteenth Edition, South Asian Edition<sup>7</sup>. This practice evaluates whether a Person Skilled In The Art (*PSITA*) could have easily and logically conceived the claimed invention by integrating teachings from multiple existing technologies without an inventive effort. The key premise is that if the elements of a claimed invention are found scattered across different prior art documents, and their combination into a single invention is

straightforward and predictable, then the invention may be deemed obvious. However, for a challenge on these grounds to succeed, it must be demonstrated that combining these references would be an obvious step for a PSITA to try, with a reasonable expectation of success, rather than a mere theoretical possibility. The same has been elaborated on in paragraph 12-150 of *Terrell* (supra) and the same is extracted as under:

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<sup>6</sup> [1972] R.P.C. 346 at 355

<sup>7</sup> Paragraph 12-149

*“In Pfizer Ltd’s Patent<sup>8</sup> Laddie J referred to the passage in the 15<sup>th</sup> edn of this work dealing with mosaicing in the context of novelty (see para.11-61), and continued:*

*“This passage is directed particularly at the **issue of mosaicing when applied to the law of novelty. The same approach applies to obviousness.** There may well be invention in patching together disclosures from unrelated sources (see *Von Heyden v Neustadt* (1880) 50 L.J.Ch. 126). But, at least in relation to obviousness, the second part of this statement [that reliance on express cross-referencing is permissible] does not represent a rigid but limited exception. When any piece of prior art is considered for the purposes of an obviousness attack, the question asked is ‘what would the skilled addressee think and do on the basis of this disclosure?’ He will consider the disclosure in the light of the common general knowledge and it may be that in some cases he will also think it obvious to supplement the disclosure by consulting other readily accessible publicly available information. This will be particularly likely where the pleaded prior art encourages him to do so because it expressly cross-refers to other material. However, I do not think it is limited to cases where there is an express cross-reference. For example **if a piece of prior art directs the skilled worker to use a member of a class of ingredients for a particular purpose and it would be obvious to him where and how to find details of members of that class, then he will do so and that act of***

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<sup>8</sup> [2001] F.S.R. 16 at [65]-[66]

**pulling in other information is itself an obvious consequence of the disclosure in the prior art.”**

*(Emphasis supplied)*

17. The Controller had held appraised the inventive step in light of combined effect of prior arts D4 and D5, along with common general knowledge. The afore-noted two prior arts are inter-related as both pertain to

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real-time monitoring of vehicle operation using various sensors. D4 monitors various vehicle parameters such as acceleration, deceleration, lane changes, right and left turns, and braking, generating response signals for each movement. This system alerts others about unexpected and unsignaled manoeuvres by drivers, potentially preventing road accidents. D4 also addresses unlawful driving behaviours by communicating such instances to the police and maintaining records for potential prosecution of the vehicle's unlawful operation. The device in D4 employs several sensors, including accelerometers, proximity detectors, external detectors, and stop-go detectors. These sensors detect a wide range of vehicle movements, such as skidding, tilting, fishtailing, racing, wheel spinning, and overturning. The processor counter in D4 accumulates and analyses these sensor signals over a short interval to determine reckless and unsafe driving. When a pre-set number of such signals is detected within a given interval, the system activates indicators to alert other drivers and the police. This information is wirelessly transmitted to the police, including the vehicle's license number, time, date, and location. While D4 covers extensive vehicle parameter monitoring using multiple sensors interfaced with a processor, it lacks the portability aspect. The system in D4 is permanently mounted on the vehicle's dashboard, limiting its transferability between vehicles.

18. D5 introduces a portable device for monitoring vehicle operation and driver behaviour. The portable device in D5 can be a cellular phone, smartphone, personal data assistant (PDA), personal navigation device (PND) like a GPS system, tablet computer, smartwatch, wearable computer, personal display system, laptop, head-mounted display, eyeglass display, pocket computer, pocket projector, miniature projector, wireless transmitter, micro projector, headphone device, earpiece device, or any mobile health device capable of storing, receiving, or transmitting health-related information. The portable device and/or vehicle in D5 uses a plurality of sensors, including a Global Positioning System (GPS) sensor, accelerometer (such as a 3D accelerometer), gyroscope (such as a 3D gyroscope), magnetometer, touch screen, button or sensor, temperature sensor, humidity sensor, and proximity sensor. These sensors enable comprehensive monitoring of vehicle parameters and driver behaviour. Furthermore, the system in D5 includes a device that physically and/or wirelessly connects to the vehicle, enabling communication between the vehicle and the portable device. This allows for the portable device to be used in multiple vehicles, enhancing its usage and functionality compared to the fixed system in D4.

19. To sum up, D4 lays the technological groundwork for a system that comprehensively monitors various aspects of vehicle behaviour. Building upon this foundation, D5 introduces a significant enhancement—portability. It suggests employing this technology in a removable format capable of wireless communication, a feature that closely mirrors the portability aspect of the subject application. This progression underscores a logical development from the established technology in D4 to the innovative application in D5. Thus, in the court's opinion, on the basis of comparison drawn above, the teachings of D4 could be seamlessly integrated/combined with the enhancements in D5 to arrive at a conclusion very similar to that

claimed by the subject application. The evolution from the fixed system described in D4 to the portable framework detailed in D5 does not constitute a ‘leap’ in innovation but rather represents a natural and expected progression in technological development. This transition aligns with prevailing trends toward greater mobility and flexibility in device usage, indicating that it may be seen as an obvious step to those skilled in the art. This transition, when viewed through the lens of mosaicking, shows a clear logical pathway that a skilled person could follow, using known technologies and without inventive ingenuity.

*Whether the subject invention is non-obvious*

20. We will now assess the doctrine of non-obviousness, a critical legal standard that prohibits the granting of patents for inventions that do not achieve a substantial level of innovation. According to the judicial precedents explaining the concept of a Person Skilled in the Art (*‘PSITA’*),<sup>9</sup> in this case, the PSITA would be a person proficient in the general practices of on-board diagnostics (*‘OBD’*) designing and up-to-date with the latest developments, particularly those related to OBD for vehicles. Next, it is essential to evaluate whether PSITA could have combined existing teachings to conceive the invention and, crucially, whether there was a compelling motivation to combine these elements in the manner proposed by the invention. In this analysis, considering the technical features of D4 and D5 discussed above, it would be a logical progression for PSITA aiming to enhance vehicle tracking systems to amalgamate these elements. PSITA would easily recognize the benefits of merging D5’s portable design with D4’s extensive monitoring capabilities to forge a versatile and efficient tracking device. Moreover, no

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<sup>9</sup> See, *Biswanath Prasad Radhey Shyam v. Hindustan Metal Industries Ltd*, (1979) 2 SCC 511, *F.Hoffmann-La Roche Ltd & Anr. v Cipla Ltd.*, 2015: DHC:9674-DB, *ALIMENTARY HEALTH LIMITED v. CONTROLLER OF PATENTS AND DESIGN* 2024: DHC: 3920

economic benefits of creating a device that is both portable and capable of comprehensive monitoring, have been set out in the subject invention. The fusion of portability with comprehensive monitoring, though beneficial, aligns with the expected competencies of a PSITA informed by D4 and D5. Therefore, this combination does not manifest as an inventive step but rather a predictable refinement of existing technologies.

21. Furthermore, in the court's opinion, if the PSITA were aware of the relevant prior art D4 and D5, coupled with the common general knowledge, they would be evidently motivated to combine elements from these prior arts. The motivation to combine can arise from recognized industry needs or problems, which may be suggested within the prior art itself or known generally in the field at the time. In this case, the primary motivations for merging the teachings of D4 and D5 include the industry-wide push to enhance the flexibility and usability of vehicle monitoring systems. This need is further highlighted by D5's focus on portability and its emphasis on real-time data transmission capabilities. Additionally, the common challenges identified in both D4 and D5, such as the need for more proactive and comprehensive monitoring, underscores the clear incentive to improve these systems by making them more adaptable and user-friendly, including enhancing their portability.

*Combining common general knowledge*

22. The assessment of obviousness must also consider common general knowledge in the field, which includes widely known and accepted technical information that a PSITA would possess. The examples cited in the impugned order, such as a) Vectu Portable Vehicle Tracker (Date first listed on Amazon February 3, 2016), b) LandAirSea SilverCloud SYNC Real-time Tracking Device Covert OBD2 GPS Tracker for Vehicles, c) Letstrack Vehicle Security

| Voice-Enabled Realtime GPS Tracking Device for 2Wheelers, Bike, Scooty with Mobile App Track Your Bike or Scooty PanIndia (Date first Available on Amazon: July 19, 2016), d) Letstrack Plug & Play Vehicle Security | Voice-Enabled Real-Time GPS Tracking Device for 4-Wheelers with Mobile App Track Your Car Pan-India (Date first Available on Amazon: July 20, 2016)). These devices available in the market demonstrate that portable tracking devices with various sensors were well-known before the priority date of the subject invention. These examples highlight that the integration of portability and comprehensive monitoring capabilities was within the expected knowledge of the skilled person. Therefore, the subject invention, also viewed in the context of common general knowledge, does not meet the threshold for inventive step under Section 2(1)(ja) of the Act.

*Hindsight bias*

23. The Court recognizes that hindsight bias often clouds judgment. In patent jurisprudence, hindsight bias refers to the erroneous inclination to see events as having been predictable or obvious only after they have occurred. This bias arises when knowledge of the invention influences how prior art is perceived, leading to the erroneous conclusion that the invention was obvious from the start. To counteract this bias, it is crucial to consider the prior arts from the perspective of a skilled person at the time of the invention, without any knowledge of the subsequent invention.
24. Keeping the aforementioned principles in mind, both D4 and D5 nonetheless provide a clear roadmap that leads to the claimed invention. D4 offers a detailed description of a vehicle monitoring system that could benefit from increased flexibility and ease of use, while D5 explicitly introduces the concept of a portable device that can be easily integrated into different vehicles without complex installation processes. The step towards combining



these systems does not require inventive acumen but follows logically from the existing technological trends and needs identified in these prior arts. Therefore, even when avoiding hindsight bias, the subject invention emerges as a predictable application of prior art technologies. Moreover, the subject invention did not overcome any significant technical hurdles that were not already addressed in the teachings of D4 and D5. The shift from fixed to portable systems represents a natural evolution of technology rather than a distinct inventive step.

**Conclusion:**

25. Based on the detailed comparison and the combined teachings of D4 and D5, along with examples of common general knowledge, it is established that the claimed invention lacks an inventive step. The features of portability, comprehensive monitoring, and anomaly detection are either disclosed in or can be inferred from the prior arts. Therefore, the patent office's decision to reject the application under Section 2(1)(ja) of the Patents Act, 1970, is justified and should be upheld.
26. Accordingly, there is no merit in the present appeal. Dismissed.

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