UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CUB ELECPARTS INC.,
Petitioner,

v.

ORANGE ELECTRONIC CO., LTD.,
Patent Owner.

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IPR2024-00744
Patent 8,031,064 C3

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Before PATRICK R. SCANLON, KEVIN C. TROCK, and
AMBER L. HAGY, *Administrative Patent Judges*.

SCANLON, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

CUB Elecparts Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting an *inter partes* review ("IPR") of claims 16–19, 21, and 23–29 of U.S. Patent No. 8,031,064 C3 (Ex. 1001, "the '064 patent"). Orange Electronic Co., Ltd. ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp."). With our authorization, Petitioner filed a Reply (Paper 9) to the Preliminary Response, and Patent Owner filed a Sur-reply (Paper 10).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2023). To institute an *inter partes* review, we must determine that the information presented in the Petition shows "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). For the reasons set forth below, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail with respect to at least one challenged claim. Accordingly, we do not institute an *inter partes* review of the challenged claims on the grounds set forth in the Petition.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 7. Patent Owner identifies itself as the real party in interest. Paper 3, 1.

B. Related Matters

The parties indicate that the '064 patent was at issue in the following matters:

Orange Electronic Co. Ltd. v. Autel Intelligent Technology Corp., Ltd., No. 2:21-cv-00240 (E.D. Tex.);[1] and

Autel Intelligent Technology Corp. v. Orange Electronic Co. Ltd., IPR2021-01545 (PTAB) (institution denied).

Pet. 7–8, Paper 3, 1.

The parties also indicate that the '064 patent was the subject of the following three ex parte reexaminations: Reexamination No. 90/012,430, Reexamination No. 90/013,169, and Reexamination No. 90/014,362. Pet. 8, Paper 3, 1.

In addition, Petitioner indicates that a Taiwan counterpart patent of the '064 patent has been the subject of several invalidation proceedings and all claims of the Taiwan patent have been finally invalidated as of January 24, 2024, when Patent Owner's appeal was denied. Pet. 7.

C. The '064 Patent

The '064 patent issued on October 4, 2011, from U.S. Patent Application No. 12/283,979. Ex. 1001, codes (21), (45).[2] The '064 patent was reexamined a first time in Reexamination No. 90/012,430. Ex. 1001, 9; Ex. 2002. The '064 patent was reexamined a second time in Reexamination No. 90/013,169 (the "Second Reexamination"). Ex. 1001, 11; Ex. 2003. The '064 patent was reexamined a third time in Reexamination No. 90/014,362 (the "Third Reexamination"). Ex. 1001, 14; Ex. 2004.

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[1] According to Petitioner, this proceeding resulted in a jury verdict of infringement in favor of Patent Owner on June 8, 2023. Pet. 7.

[2] When citing Exhibit 1001, we first list a page number on which the cited material appears. In many instances, after the page number, we include more specific locating information, such as a code number or column and line numbers.

The '064 patent discusses "Tire Pressure Monitoring Systems (TPMSs)." Ex. 1001, 6, 1:13–18. These systems monitor tire air pressures to confirm normal pressure or identify abnormal pressure. *Id.* The '064 patent discusses a prior tire pressure monitoring system in connection with Figure 4. *Id.* at 6, 1:25–26, 2:29–30. Figure 4 is reproduced below.
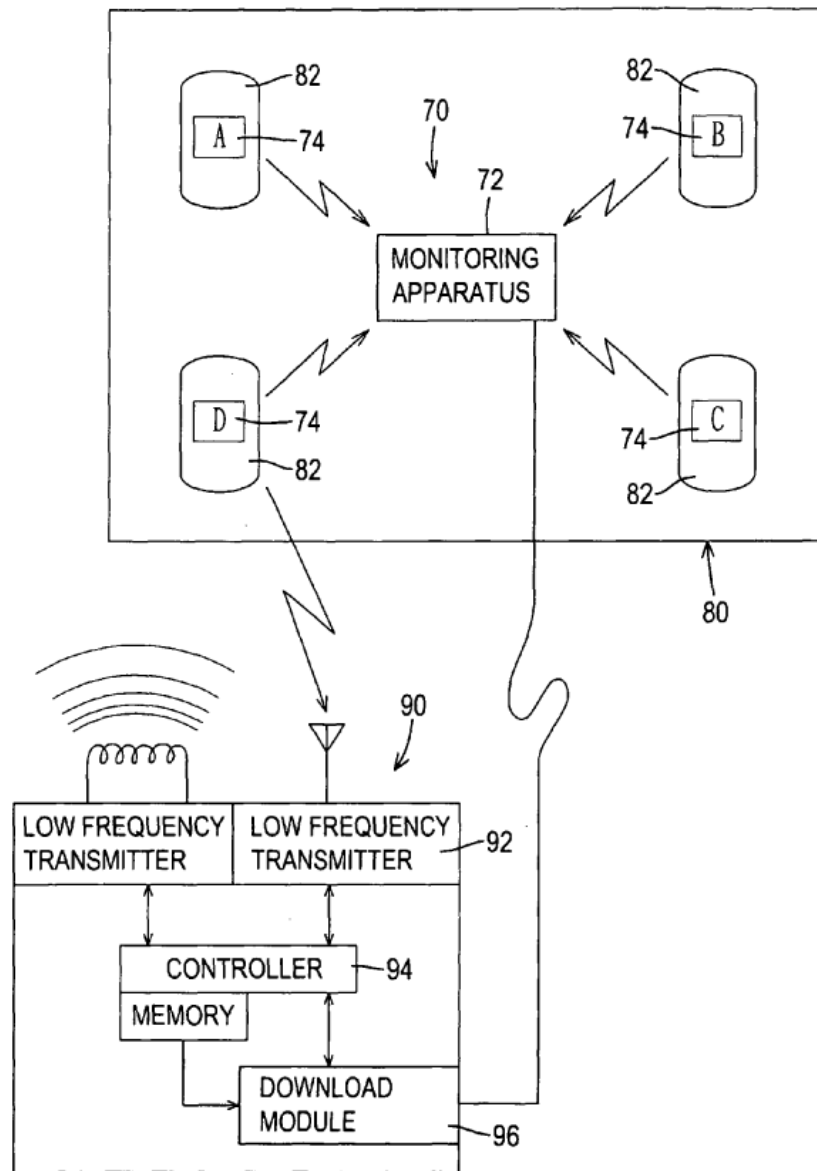
FIG.4

Figure 4 is a block diagram showing car 80 with tire pressure detecting system 70. *Id.* at 6, 1:25–30, 2:29–30.

Tire pressure detecting system 70 includes monitoring apparatus 72 and four tire pressure detectors 74. *Id.* at 6, 1:25–30. Each tire pressure detector 74 is mounted within one of four tires 80. *Id.* at 6, 1:28–30. Each tire pressure detector stores an "identification (ID)." *Id.* at 6, 1:32–34. Monitoring apparatus 72 "continuously receives wireless signals sent from the tire pressure detectors," and "the wireless signal stream comprises the identification." *Id.* at 6, 1:30–37. Monitoring apparatus 72 "recognizes the tire pressure detectors 74 by identifying the IDs in the received wireless signals." *Id.* at 6, 1:37–39.

In the example of Figure 4, replacing a failed tire pressure detector 74 with a new tire pressure detector 74 involves using setting apparatus 90 for "introducing a new ID of the new tire pressure detector (74) to the monitoring apparatus (72)." *Id.* at 6, 1:39–43. According to the '064 patent,

> the setting apparatus (90) is only fitted with some specific tire pressure detectors (74) that have to be manufactured by the same company. Flexibility and convenience of changing the tire pressure detector (74) are not good since users have to look for specific service centers that have the setting apparatus (90) to change the tire pressure detectors (74).
>
> The present invention provides a tire pressure detecting apparatus to obviate or mitigate the shortcoming of the conventional tire pressure detector.

Id. at 6, 1:52–61.

Figure 1 of the '064 patent provides "a block diagram of a tire pressure detecting apparatus in accordance with the present invention." *Id.* at 6, 2:21–22. Figure 1 is reproduced below.
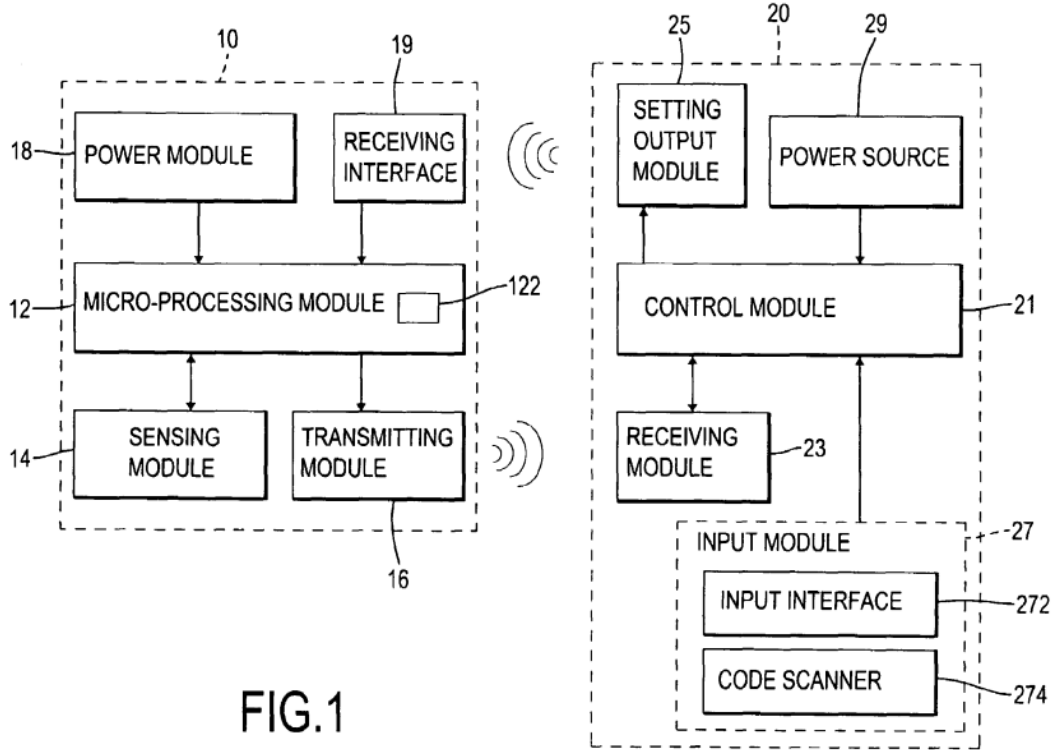
FIG.1

Figure 1 shows a tire pressure detector that includes identification rewritable tire pressure detector 10 and setting apparatus 20. *Id.* at 6, 2:34–37.

Identification rewriteable tire pressure detector 10 "has a micro-processing module (12), a sensing module (14), a transmitting module (16), a power module (18) and a receiving interface (19, 19A)." *Id.* at 6, 2:38–42. Micro-processing module 12 includes memory unit 122, which may store an identification. *Id.* at 6, 2:43–48.

Setting apparatus 20 includes "a control module (21), a receiving module (23), a setting output module (25), an input module (27), and a power source (29)." *Id.* at 7, 3:29–34. "[S]etting apparatus (20) communicates with the identification rewriteable tire pressure detector (10) and tire pressure detectors that are generally using a same range of frequencies." *Id.* at 7, 3:29–32. Setting apparatus 20 can read an identification from a failed tire pressure detector. *Id.* at 6, 2:9–10. "[R]eceiving module (23) . . . receives the RF signal from the identification

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rewriteable tire pressure detector (10) or the tire pressure detectors that are capable of sending the RF signals." *Id.* at 7, 3:35–38.

Setting apparatus 20 can send the identification to identification rewritable tire pressure detector 10. *Id.* at 6, 2:9–12. In particular,

> [t]he setting output module (25) is controlled by the control module (21) to send the external signal to the receiving interface (19, 19A). Wherein, the external signal is generated by the control module (21) and may comprise the external identification that is identical to preset identification in the RF signal received from the receiving module (23).

Id. at 7, 3:43–48. Receiving interface 19, 19A provides the identification to micro-processing module 12, which "receives and memorizes the external identification into the memory unit (122)." *Id.* at 7, 3:6–14.

In connection with Figure 3, the '064 patent describes "a tire pressure detector identification copying method." *Id.* at 7, 4:7–8. Figure 3 is reproduced below.
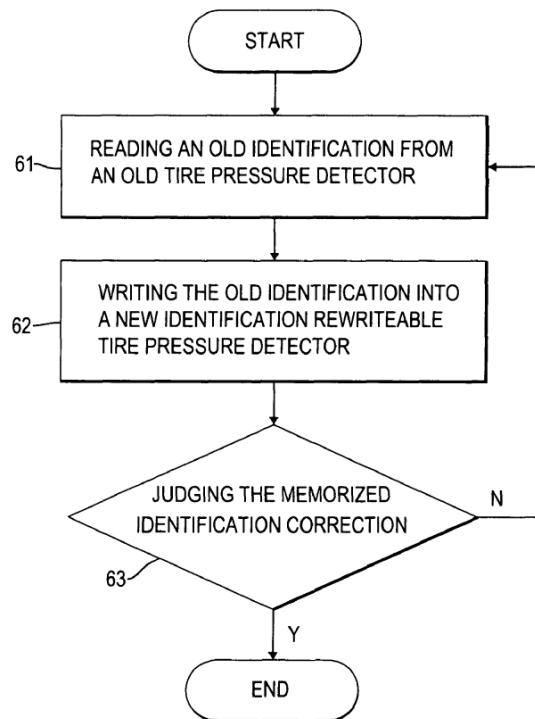

FIG.3

Figure 3 "is a flow chart of a tire pressure detector identification copying method in accordance with the present invention." *Id.* at 6, 2:26–28.

The method begins with step 61, which involves "reading an old identification from an old tire pressure detector." *Id.* at 7, 4:14–15. In this step, "a serviceman may use the setting apparatus (20) to receive the RF signal wirelessly from any old tire pressure detector." *Id.* at 7, 4:14–17.

Step 62 involves "writing the old identification into a new identification rewriteable tire pressure detector." *Id.* at 7, 4:23–24. "[A]fter the external identification of the old tire pressure detector is acquired, the serviceman may rewrite the external identification into a new identification rewritable tire pressure detector." *Id.* at 7, 4:24–28.

Step 63 involves "judging the memorized identification correction." *Id.* at 7, 4:32–33. The '064 patent explains that

> after the external identification of the old tire pressure detector has been memorized in the new identification rewriteable tire pressure detector, the serviceman may use the setting apparatus (20) to receive wireless signals from the new identification rewriteable tire pressure detector. The setting apparatus (20) judges the consistence of the identifications acquired from the old tire pressure detector and the new identification rewriteable tire pressure. When the identification is not consistence, the setting apparatus performs the step of writing the old identification into a new identification rewriteable tire pressure detector (62) again.

Id. at 7, 4:34–44.

D. Challenged Claims

As noted above, Petitioner challenges claims 16–19, 21, and 23–29 of the '064 patent.[3] Claims 16, 18, 23, and 26–28 are independent. Claim 16 is illustrative of the claimed subject matter and is reproduced below.

16.   A tire pressure detecting system, comprising:

an identification rewritable tire pressure detector comprising:

a micro-processing module having a rewritable memory unit to record an identification;

a sensing module electrically connected to the micro-processing module and having a pressure-detecting unit to detect a tire pressure and send a detection result to the micro-processing module;

a transmitting module controlled by the micro-processing module to transmit a radio frequency (RF) signal, wherein the RF signal comprises the detection result and the identification of the identification rewritable tire pressure detector;

a power module electronically connected to the micro-processing module to supply power to the identification rewriteable tire pressure detector; and

an interface arranged to receive an external signal and send the external signal to the micro-processing module, wherein the external signal comprises an external identification to be written into the rewriteable memory unit or to be used to overwrite a preset identification in the rewriteable memory unit; and

a portable setting apparatus arranged to communicate with the identification rewriteable tire pressure detector, comprising:

a control module;

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[3] Claims 17 and 19 were added as part of the Second Reexamination, and claims 16, 18, 21, and claims 23–29 were added as part of the Third Reexamination. Ex. 1001, 12–18.

an input module connected to the control module to enable an
   operator to manually input an identification to be written
   into the identification rewriteable tire pressure detector:

a receiving module connected to the control module to receive
   the RF signal from the identification rewriteable tire
   pressure detector or a tire pressure detector and to send the
   RF signal to the control module;

a setting output module controlled by the control module to
   send the external signal to the interface of the identification
   rewriteable tire pressure detector, wherein the external
   signal is generated by the control module and comprises the
   identification that is provided by the input module or
   provided by the RF signal received from the receiving
   module; and

a power source connected to the control module to supply
   power to the setting apparatus;

wherein the setting apparatus is configured to:

obtain an update identification to be written into a new
   identification rewriteable tire pressure detector either by (1)
   receiving the RF signal from an old tire pressure detector by
   the receiving module, retrieving an old identification of the
   old tire pressure detector from the RF signal, and using the
   old identification as the update identification, or by (2)
   receiving a manual input of the identification from the input
   module, and using the identification as the update
   identification;

store the update identification in the setting apparatus; [and]

generate the external signal comprising the update identification
   as the external identification, and send the external signal to
   the new identification rewriteable tire pressure detector such
   that the new identification rewriteable tire pressure detector
   records the update identification in the rewritable memory
   unit or overwrites the preset identification in the rewritable
   memory unit by the update identification; and

verify the update identification newly recorded in the rewritable
memory unit of the new identification rewriteable tire
pressure detector, wherein the verifying step comprises:

receiving, by the setting apparatus, a wireless signal from the
new identification rewriteable tire pressure detector, wherein
the wireless signal comprises the update identification newly
recorded in the rewritable memory unit: and

judging by the setting apparatus, consistency of the update
identification newly recorded in the rewritable memory unit
and the old identification of the old tire pressure detector.

Ex. 1001, 15, 1:26–2:36.

E. Asserted Grounds of Unpatentability

Petitioner contends that the challenged claims are unpatentable based
on the following grounds:

Claims Challenged	35 U.S.C. §[4]	References/Basis
26–28	103(a)	Tang,[5] Lemense[6]
16, 18, 21, 23, 24, 29	103(a)	Tang, Lemense, Matsui[7]
17, 19, 25	103(a)	Tang, Lemense, Matsui, Corniot[8]

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[4] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, 125
Stat. 284 (2011), amended 35 U.S.C. § 103. Because the challenged claims
of the '064 patent have an effective filing date before the effective date of
the applicable AIA amendments, we apply the pre-AIA version of 35 U.S.C.
§ 103.
[5] Petitioner identifies two different references as "Tang": US 7,518,495 B2,
issued April 14, 2009 (Ex. 1002), and US 2005/0104722 A1, published
May 19, 2005 (Ex. 1003). *See* Pet. 4, 9–10. As described in more detail
below, we refer to US 7,518,495 B2 (Ex. 1002) as "Tang" in this Decision.
[6] US 6,941,801 B2, issued Sept. 13, 2005 (Ex. 1004).
[7] JP 2006/15832 A1, published Jan. 19, 2006 (certified English translation)
(Ex. 1005; Ex. 1012).
[8] US 2006/0136782 A1, published June 22, 2006 (Ex. 1006).

Pet. 18. Petitioner relies on the Declaration of Tom Qingfeng Tang, Ph.D. (Ex. 1007) to support its challenges.[9]

III. ANALYSIS

A. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, 35 U.S.C. § 103 requires us to resolve the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.*

Petitioner contends that a person having ordinary skill in the art ("POSA") "would have a bachelor's degree in electrical engineering and at least one year of experience in sensor/detector design or RF communications (RFIDs)" and "would have a working knowledge of tire pressure management systems and, as most POSA would also be automobile owners, would have had personal experience with tire pressure management systems which have been required in all new cars, trucks, and SUVs in the United States since 2007." Pet. 17. Petitioner adds that "[e]ducation may substitute for experience and vice versa." *Id.*

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[9] Petitioner's expert, Dr. Tang, is a listed inventor on both the Tang and Lemense patents. Ex. 1002, code (75); Ex. 1004, code (75); Ex. 1007 ¶ 1.

At this stage, Patent Owner does not dispute Petitioner's definition of the level of ordinary skill in the art. Prelim. Resp. 16.

Based on our review of the record before us, we determine that Petitioner's stated level of ordinary skill in the art is reasonable because it appears consistent with the evidence of record, including the asserted prior art. Accordingly, we adopt Petitioner's definition for the purposes of this Decision.

B. Claim Construction

In *inter partes* reviews, the Board interprets claim language using the district-court-type standard, as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See id.* at 1317–19.

Petitioner contends that all claim terms should be given their ordinary and customary meaning. Pet. 17. Petitioner notes that, in the tire pressure detecting field, terms such as "detector," "sensor," and "monitor" relate to the same device and can be used interchangeably. *Id.* at 17–18. Patent Owner contends that no claim term needs construction to resolve the grounds asserted in the Petition. Prelim. Resp. 16.

On the present record, we do not discern a need to construe explicitly any claim language because doing so would have no effect on our analyses below of Petitioner's asserted grounds and will not assist in resolving the

present controversy between the parties. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.'") (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. *Asserted Obviousness Based on Tang and Lemense*

Petitioner challenges claims 26–28 as unpatentable under 35 U.S.C. § 103(a) based on the combination of Tang and Lemense. Pet. 18; *see also id.* at 29–31 (discussing alleged reasons to combine the references), 31–75 (providing claim analysis for all asserted grounds). As noted above, Petitioner purportedly relies on two different references as "Tang": US 7,518,495 B2 (Ex. 1002), and US 2005/0104722 A1 (Ex. 1003). *See id.* at 4, 9–10. Petitioner's claim analysis, however, relies on Exhibit 1002 only. *See id.* at 31–75; *see also id.* at 10 (asserting that citations in the claim analysis section of the Petition are to Exhibit 1002 "for more convenient column/line number reference"). As such, for purposes of this Decision, we do not consider the asserted grounds to rely on Exhibit 1003 (to which the Petition does not cite), and our references to "Tang" in this Decision refer to Exhibit 1002.

Patent Owner provides arguments addressing this asserted ground of unpatentability. Prelim. Resp. 45–49.

1. *Tang (Ex. 1002)*

Tang relates to a universal monitor for use in a remote tire pressure monitoring ("TPM") system for a vehicle. Ex. 1002, 1:6–8. Tang states that "[e]xisting TPM systems are different from one manufacturer to the next," such that "different manufacturers' codes are used to represent different TPM systems." *Id.* at 1:23–28. The manufacturers' codes can indicate

various characteristics for wireless signals used in the system, such as carrier frequency, modulation scheme, data format, and/or encryption techniques. *Id.* at 1:28–34.
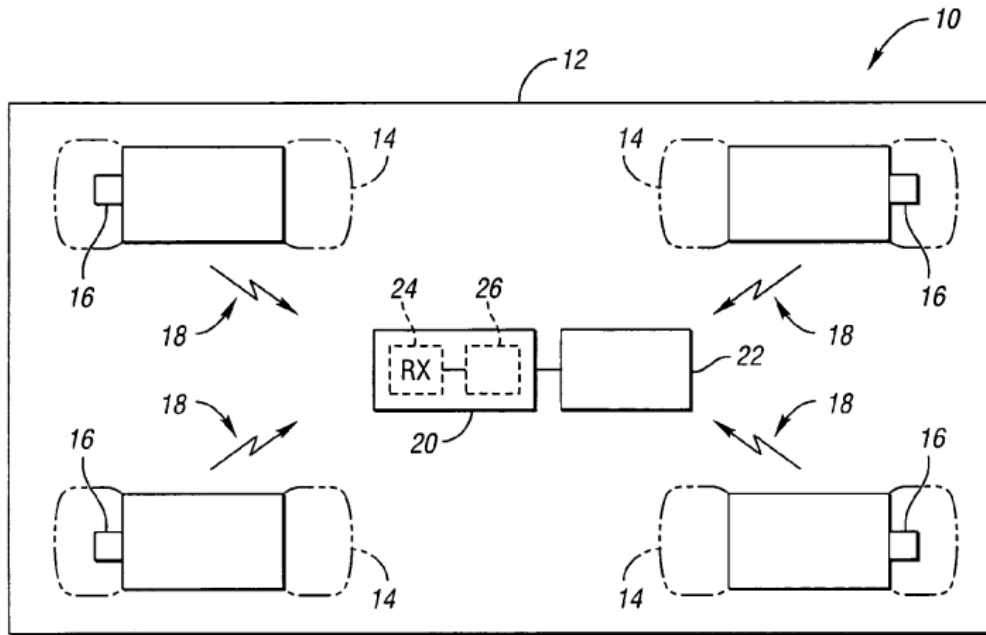
Tang's Figure 1 is reproduced below.

Fig. 1

Figure 1 is a block diagram of remote tire pressure monitoring system 10. Ex. 1002, 2:26–28, 2:40–42. Tire pressure monitoring system 10 is used with vehicle 12 having tires 14. *Id.* at 2:42–45. System 10 includes a plurality of tire monitors 16, with each tire monitor being mounted to an associated tire for monitoring at least the pressure of the associated tire and transmitting wireless signal 18 that includes tire pressure data. *Id.* at 2:51–59. Wireless signals 18 are transmitted from tire monitors 16 to control module 20 on board vehicle 12. *Id.* at 2:59–61. The tire pressure data from the wireless signals is conveyed to the vehicle operator via display 22. *Id.* at 61–65.
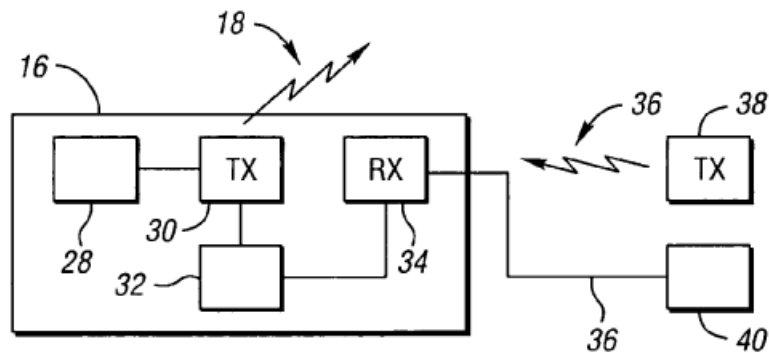
Tang's Figure 2 is reproduced below.

Fig. 2

Figure 2 is a block diagram depicting details of tire monitor 16. Ex. 1002, 2:29–31, 3:64–66. Tire monitor 16 includes sensor 28 for sensing at least tire pressure. *Id.* at 4:1–4. Transmitter 30 is in communication with sensor 28 and transmits wireless signals 18. *Id.* at 4:10–13. Controller 32 is in communication with transmitter 30 and receiver 34 and has memory for storing a plurality of manufacturers' codes. *Id.* at 4:21–27.

Receiver 34 receives program signal 36 wirelessly from low frequency ("LF") transmitter 38 or via external interface 40. *Id.* at 4:33–43. Program signal 36 includes a command used by controller 32 to select one of the plurality of stored manufacturers' codes. *Id.* at 4:44–52. Accordingly, during operation of the TPM system, controller 32 causes transmitter 30 to transmit a wireless signal in accordance with the signal format indicated by the selected manufacturer's code. *Id.* at 4:53–56. Alternatively, instead of storing a plurality of manufacturers' codes, controller 32 may store a particular manufacturer's code received from program signal 36 and cause transmitter 30 to transmit a wireless signal in accordance with the signal format indicated by the particular manufacturer's code. *Id.* at 4:66–5:9.

2. *Lemense (Ex. 1004)*

Lemense "relates in general to vehicular tire pressure monitoring systems, and, more specifically, to replacing or otherwise servicing tires mounted on wheels containing tire pressure sensing units." Ex. 1004, 1:14–17.

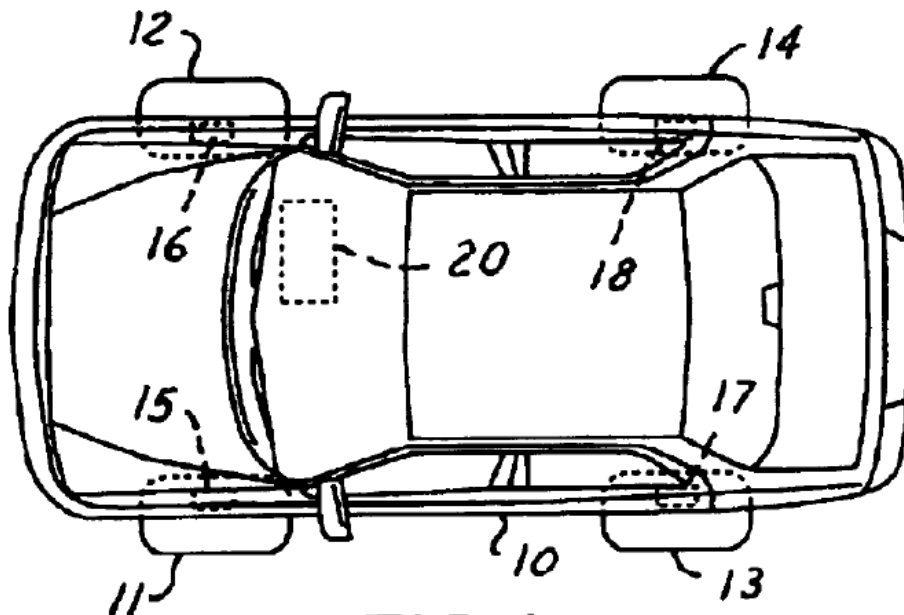Lemense's Figure 1 is reproduced below.

FIG.1

Figure 1 is a schematic view of a vehicle having a tire pressure monitoring system. Ex. 1004, 2:26–27. Specifically, vehicle 10 includes wheels 11–14 having pressure sensor units 15–18, respectively, mounted thereon. *Id.* at 2:35–37. Each sensor unit transmits a data signal indicative of tire pressure and an ID code to control module 20. *Id.* at 2:37–43. Service tool 24 is provided to interact wirelessly with the sensor units. *Id.* at 2:63–3:3, Fig. 2.
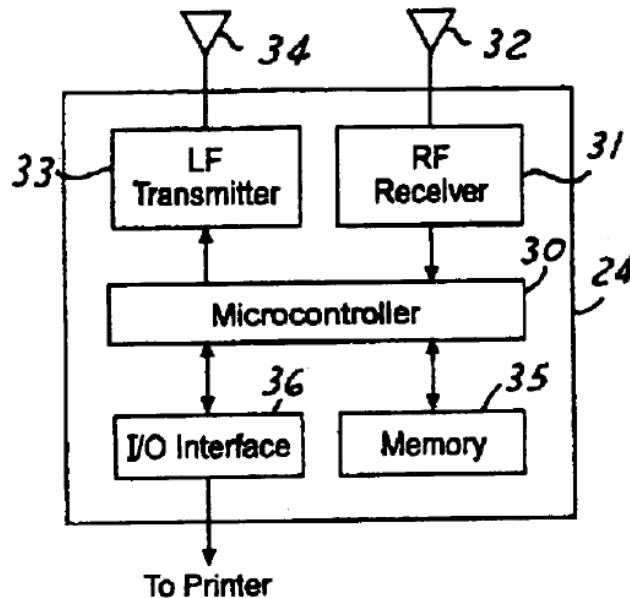
Lemense's Figure 3 is reproduced below.

FIG.3

Figure 3 shows service tool 24 in greater detail. Ex. 1004, 3:4.
Microcontroller 30 is coupled to RF receiver 31 and LF transmitter 33. *Id.*
at 3:4–6. RF receiver 31 receives transmissions from a sensor unit via
antenna 32, and LF transmitter 33 sends a wake-up signal under control of
microcontroller 30 to a sensor unit via antenna 34. *Id.* at 3:6–9.
Microcontroller 30 is coupled to memory 35 for storing the results of testing
sensor units. *Id.* at 3:9–12.

Lemense describes replacing non-working sensor units, wherein the
replacement process includes using "the service tool "to replicate or clone
the ID code of a broken sensor unit into a replacement sensor unit over a LF
communication link between the service tool and the replacement sensor
unit." *Id.* at 3:56–60. In the event sensor unit damage prevents wireless
communication, the ID code may be determined by other mean, such as

reading it from a printed label on the sensor unit or obtaining the stored ID code from the control unit. *Id.* at 3:63–67.

3. *Independent Claims 26 and 27*

Petitioner contends that the proposed combination of Tang and Lemense discloses the limitations of independent claims 26 and 27.[10] Pet. 60–67. Petitioner also articulates reasons to combine the relied-upon aspects of Tang and Lemense. *Id.* at 29–30. Claim 26 recites a portable setting apparatus configured to:

> obtain an update identification to be written into a new identification rewriteable tire pressure detector either by (1) receiving the RF signal from an old tire pressure detector by the receiving module, retrieving an old identification of the old tire pressure detector from the RF signal, and using the old identification as the update identification, or by (2) receiving a manual input of the identification from the input module, and using the identification as the update identification, wherein the old tire pressure detector stores only the old identification.

Ex. 1001, 17, 5:48–61. Claim 27 recites a substantially similar limitation. *Id.* at 17, 6:57–66.

For the bulk of this limitation (i.e., all of the limitation except "wherein the old tire pressure detector stores only the old identification"), Petitioner merely points to its analysis of a substantially identical limitation from claim 16 (which is challenged in Petitioner's second asserted ground of unpatentability). Pet. 62. For the claim 16 limitation, Petitioner argues that Lemense's disclosure of replicating or cloning the ID code of a broken

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[10] Claim 26 is substantially similar to claim 16. *Compare* Ex.1001, 17, 5:3–6:7, *with id.* at 15, 1:26–2:36. Claim 26 does include the limitation "wherein the old tire pressure detector stores only the old identification" (discussed below), which is not recited in claim 16. *Id.* at 17, 5:60–61. Claim 27 also recites this limitation. *Id.* at 17, 6:65–66.

sensor unit into a replacement sensor unit teaches writing a new ID into a universal tire pressure detector and obtaining the new ID "by wirelessly or manually reading [a]n old ID from an old tire pressure sensor to be replaced." *Id.* at 44 (citing Ex. 1004, 3:57–4:4).

Petitioner's entire argument regarding the claim language "wherein the old tire pressure detector stores only the old identification" is "[t]ypically, an OEM tire pressure sensor (that is 'the old tire pressure detector') has only the ID programmed into it as part of the factory installation."[11] Pet. 63, 66. As such, Petitioner does not assert that—let alone explain adequately how—Tang or Lemense (either individually or in combination) disclose the claim language in question. *Id.*

In response, Patent Owner argues that "the Petition does not cite to any reference or evidence for a prior art teaching of the old tire pressure detector storing only the old identification," and Petitioner's statement is "unsupported and conclusory attorney argument [that] does not satisfy Petitioner's burden of establishing a reasonable likelihood that the prior art discloses or renders obvious each and every element of claims 26–28." Prelim. Resp. 46–47 (citing *Enzo Biochem v. Gen-Probe, Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005)).

We agree with Patent Owner that Petitioner's unsupported assertion that tire pressure sensors typically are programmed with only the ID as part of the factory installation is insufficient to establish obviousness in this instance. Petitioner does not provide adequate reasoning or evidence to

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[11] Petitioner relies on the same analysis of this claim 26 limitation for the substantially similar limitation of claim 27. Pet. 66. Accordingly, our analysis of the claim 26 limitation applies equally to the corresponding limitation of claim 27.

support the assertion or explain sufficiently why one of ordinary skill in the art would have known that tire pressure sensors typically are programmed at the factory with a single ID. Furthermore, even if assuming for the sake of argument that Petitioner's assertion is correct, the Petition fails to explain adequately how or why one of ordinary skill in the art would have modified the combination of Tang and Lemense to store only the old identification in the old tire pressure detector.

We also agree with Patent Owner's argument that Petitioner's assertion is contradicted by prior art of record. *See* Prelim. Resp. 47–48 (citing Ex. 2004, 1495). Specifically, prior art reference Nantz,[12] considered by the Examiner during the Third Reexamination, discloses storing "a bank" of tire pressure monitoring sensor IDs in the memory of a tire pressure monitoring sensor. Ex. 2007 ¶ 30. This disclosure of storing multiple IDs in a tire pressure sensor suggests that programming tire pressure sensors with a single ID may not be typical.

For the above reasons, Petitioner fails to persuade us that the combination of Tang and Lemense discloses the limitation "wherein the old tire pressure detector stores only the old identification."

In addition, Patent Owner argues that the Petition relies on Tang for disclosing the claimed detector ID, but Tang fails to disclose an ID for a tire pressure sensor. Prelim. Resp. 48 (citing Pet. 45). In particular, Patent Owner contends that Tang's manufacturers' codes, which Petitioner maps to the claimed detector ID, do not include a detector ID. *Id.* at 48–49 (citing Pet. 45).

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[12] US 2006/0208864 A1, published Sept. 21, 2006 (Ex. 2007).

We find this argument by Patent Owner persuasive. Petitioner argues that "[t]he Tang universal pressure monitor 16 is for receiving an ID code from a setting tool, as discussed above."[13] Pet. 32. Although not clearly stated, it appears that "as discussed above" may refer to the overview of Tang on pages 19–21 of the Petition, where Petitioner contends that

> Tang describes aftermarket replacement sensors/detectors that receive sensor ID/programming signals from a setting tool. As an aftermarket product, called "universal tire pressure monitor" it is capable of supporting many signal/code formats in order to mimic the original OEM detectors that it will replace. The received ID becomes the new ID for the "universal tire pressure monitor."

Id. at 19. But Petitioner fails to provide a citation to Tang to support this contention. *See id.* Thus, to the extent Petitioner is asserting that Tang expressly discloses receiving, or even using, IDs, we are not persuaded.

Petitioner, however, appears to equate Tang's manufacturers' codes to the claimed detector ID. For example, Petitioner identifies Tang's program signal 36 as a "[c]ode *(ID)* program signal" (emphasis added), and quotes (without further explanation) Tang's disclosure that controller 32 may store a manufacturer's code received via program signal 36. *Id.* at 20–21 (citing Ex. 1002, 3:66–5:5). Petitioner also asserts that Tang's receiver 34 "receives the ID (which Tang calls a program signal) and sends it to the controller 32" and quotes Dr. Tang's testimony that the "program signal" of Tang includes the "external identification" of the '064 patent. *Id.* at 37–38

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[13] Petitioner's arguments for these features refer to its analysis of the corresponding features recited in claim 16. *See generally* Pet. 60–63. Thus, we confine our discussion to the arguments made in connection with claim 16.

(quoting Ex. 1007).[14] Furthermore, Petitioner argues that Dr. Tang
"explains the cloning of codes and relates the use of the term 'ID code' in
Lemense to the 'manufacturers' codes' of the Tang patent." *Id.* at 45
(quoting Ex. 1007).[15]

We are not persuaded that Tang's manufacturers' codes are, include,
or relate to detector IDs. Tang discloses that controller 32 is for storing a
plurality of manufacturers' codes, "which may be used to identify a signal
format including any number of characteristics, such as carrier frequency,
modulation scheme, data format and/or encryption technique, for wireless
signals (18)." Ex. 1002, 4:29–32; *see also id.* at 3:48–53 (similarly
describing manufacturers' codes as identifying a signal format). Tang also
discloses that program signal 36 is used to select one of a plurality of stored
manufacturers' codes or, alternatively, transmit a particular manufacturers'
code for storage by controller 32. *Id.* at 4:44–5:5. As such, Tang's
manufacturers' codes identify the signaling format to be used for
transmitting wireless signal 18, and there is no suggestion in Tang that the
manufacturers' codes identify a particular detector. At best, Tang's
manufacturers' codes identify tire pressure monitoring *systems* but do not
identify particular detectors or sensors within the system. *See* Ex. 1002,
3:46–48 (stating "different manufacturers' codes are used to represent
different TPM systems").

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[14] In referencing Dr. Tang's testimony, Petitioner cites Exhibit 1007 only,
without specifying a paragraph or page number. The quoted language
appears on page 8 of Exhibit 1007.
[15] Petitioner again cites Exhibit 1007 only, without specifying a paragraph or
page number. The quoted language appears on page 6 of Exhibit 1007.

Tang's description of the wireless signals sent to control module 20 further indicates that the manufacturers' codes do not identify particular detectors. Namely, Tang discloses that wireless signals 18 "include data representing the sensed tire pressure" and "may also include data representative of information concerning any of a number of other tire parameters such as temperature, status and/or speed as sensed, measured and/or determined by an appropriately equipped tire monitor (16)." Ex. 1002, 4:12–20; *see also id.* at 3:19–23 ("Wireless signals (18) transmitted from tire monitors (16) typically comprise a radio frequency (RF) carrier signal modulated with a digital data word that represents at least a sensed, monitored or determined tire pressure, but which may also represent other tire parameters and/or information."). Petitioner does not present sufficient reasoning or evidence suggesting that the other tire parameter information would include a manufacturer's code. *See generally,* Pet. Tang does not teach or suggest that wireless signals 18 include a manufacturer's code and, thus, does not teach or suggest that the manufacturer's code is sent to control module 20. This is a notable absence because, if the manufacturer's code actually identified a detector, common sense would dictate that it would be sent to control module 20 to associate the pressure data to the corresponding tire.

As noted above, Petitioner cites to the testimony of its expert, Dr. Tang, to support its assertion that Tang's manufacturers' codes are detector IDs. Pet. 37–38, 45 (quoting Ex. 1007). Dr. Tang testifies:

> [The Tang patent's] "program signal" that is written into the universal monitor memory includes the "external identification" of the ['064] patent. This is because the monitor is designed to "clone" the OEM sensor that it being replaced. In the TPMS system in the vehicle, the sensor ID ("manufacturer

code["]) is required for the vehicle to identify which tire is sending which pressure number. Without a sensor ID, the TPMS system cannot display the tire pressure for each tire.

Ex. 1007, 8. Dr. Tang's reasoning in support of the opinion, however, is flawed in that it relies on a mischaracterization of Tang's disclosure. We are not directed to any disclosure in Tang regarding "cloning" a sensor to be replaced or displaying tire pressure associated with a particular tire. Instead, Tang pertains to a universal tire monitor that can be used as a replacement for multiple tire pressure monitoring systems. Ex. 1002, 1:35–43, 3:54–63.

Dr. Tang also testifies:

> We designed [the Tang patent's] tire pressure monitor to be programmed with the ID from an existing sensor. . . . Note that the Tang patent uses the term "manufacturers' codes" while the Lemense patent uses the term "ID code." Both terms relate to the identical sensor identification code (which includes both the specific sensor number as well as other numbers relating to signal formats and parity checks used by individual manufacturers); as the two patents were written by two different patent attorneys at two different law firms there are some minor discrepancies between the terminology of the two patents.

Ex. 1007, 6. This testimony, however, is entitled to little weight because Dr. Tang fails to provide a sufficient underlying basis for his opinion. *See* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."); *see also Nobel Biocare Services AG v. Instradent USA, Inc.*, 903 F.3d 1365, 1382 (Fed. Cir. 2018) (explaining that the Board can reject arguments based on expert testimony that lacks specificity or detail).

For instance, we not directed to any disclosure in Tang in support of the opinion that Tang's tire pressure monitor is programmed with the ID from an existing sensor. As such, this testimony fails to provide evidentiary

support for the opinion. Furthermore, the assertion that Tang's manufacturers' codes and Lemense's ID codes both "relate to the identical sensor identification code" contradicts the respective disclosures of Tang and Lemense. Indeed, based on the respective disclosures, the differences between Tang's manufacturers' codes and Lemense's ID codes are significant and not merely "minor discrepancies." *Compare* Ex. 1002, 3:48–53, 4:29–32, *with* Ex. 1004, 1:36–39. Dr. Tang's assertion that Tang and Lemense were drafted by two different patent attorneys[16] is an insufficient reason to explain the differences in the disclosures of Tang's manufacturers' codes and Lemense's ID codes, and does not support adequately Dr. Tang's opinion.

For the above reasons, we determine Petitioner has not met its burden to show a reasonable likelihood it would prevail with respect to the contention that claims 26 and 27 are unpatentable over the combination of Tang and Lemense.

4.   Independent Claim 28

Like claims 26 and 27, independent claim 28 recites obtaining an update identification from an old tire pressure detector "wherein the old tire pressure detector stores only the old identification." Ex. 1001, 18, 7:25–8:4.

For this claim 28 limitation, Petitioner argues that:

> This is substantially element 12 of claim 16 with the additional requirements that the setting apparatus receive the old ID manual. Lemense states that when the sensor unit is damaged, the code can be read from the printed label. . . . Lemense FIG. 2 shows setting tool 24 includes a control keypad 26. Thus, a

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[16] Although we do not necessarily question the accuracy of this assertion, we note that neither Petitioner nor Dr. Tang directs us to any objective evidence supporting this assertion.

service technician is capable of keying in the ID number from a printed label on the sensor unit, as suggested by Lemense.

Pet. 72.

We do not find this argument persuasive.

Lemense discloses cloning the ID code of a non-working sensor "over a LF communication link between the service tool and the replacement sensor unit." Ex. 1004, 3:57–60. Lemense also discloses that, if sensor damage prevents wireless communication, "then the corresponding ID code may be determined by other means (e.g., reading from a printed label on the sensor unit or obtaining the stored ID code from the control unit) and may then be programmed into the replacement sensor by the service tool." *Id.* at 3:63–4:1.

Petitioner, however, fails to explain sufficiently how Lemense's disclosure of reading an ID code from a printed label on a non-working sensor (i.e., "the old tire pressure detector") would have suggested to one of ordinary skill in the art that the old tire pressure detector Lemense stores only a single, old identification. *See* Pet. 72. To the extent Lemense's printed label represents the detector "storing" an ID code (which Petitioner does not assert expressly), Petitioner fails to provide adequate reasoning suggesting that the label contains only a single ID code. *See id.*

In addition, Petitioner does not explain adequately how or why one of ordinary skill in the art would have combined the relied-on teaching of Lemense with the teachings of Tang. *See id.* at 29–31, 72.

For the above reasons, we determine Petitioner has not met its burden to show a reasonable likelihood it would prevail with respect to the contention that claim 28 is unpatentable over the combination of Tang and Lemense.

    D. Asserted Obviousness Based on Tang, Lemense, and Matsui

Petitioner challenges claims 16, 18, 21, 23, 24, and 29 as unpatentable under 35 U.S.C. § 103(a) based on the combination of Tang, Lemense, and Matsui. Pet. 18; *see also id.* at 29–31 (discussing alleged reasons to combine the references), 31–75 (providing claim analysis for all asserted grounds). Patent Owner provides arguments addressing these asserted grounds of unpatentability. Prelim. Resp. 50–59.

    1. Matsui (Ex. 1005)

Matsui relates to setting an ID for a transmitter used in a tire pressure monitoring system. Ex. 1005 ¶ 1. In Matsui, a "transmitter" in a tire pressure monitoring system refers to the combination of a pressure sensor that measures air pressure and a transmitter that wirelessly transmits air pressure data measured by the pressure sensor. *Id.* ¶ 2. Each sensor is attached to a wheel or tire and has a unique ID code that is transmitted with the air pressure data. *Id.*

A setting device is used to set the ID for the transmitter, and setting the ID for each transmitter can be a difficult process. *Id.* ¶ 6. Because of the difficulties, Matsui discloses "a system in which the setting device can automatically generate a transmitter ID as needed, set it to the transmitter and register it with the receiver, and the set transmitter ID does not overlap with the transmitter ID set by a different setting device." *Id.* ¶ 7.

    2. Independent Claim 16

Petitioner contends that the proposed combination of Tang, Lemense, and Matsui discloses the limitations of independent claim 16. Pet. 32–55. Petitioner also articulates reasons to combine the relied-upon aspects of Tang, Lemense, and Matsui. *Id.* at 29–31. Patent Owner argues that the combination of Tang, Lemense, and Matsui does not disclose "judging by

the setting apparatus, consistency of the update identification newly recorded in the rewritable memory unit and the old identification of the old tire pressure detector" in order to verify a newly-recorded update identification, as required by claim 16. Prelim. Resp. 50–59.

Regarding the "judging" limitation, Petitioner asserts that Lemense discloses testing a tire pressure sensor with service tool 24 after programming the tire pressure sensor with the ID from the old tire pressure sensor. Pet. 46–47 (citing Ex. 1004, 4:10–13). Petitioner further asserts that steps 40–43 in Figure 4 of Lemense show a sensor testing process comprising: (1) establishing a high pressure in the tire associated with the sensor (step 40); (2) interrogating the sensor by using service tool 24 to send a wake-up command to the sensor and receive a data signal and ID code from the sensor, and comparing the pressure data signal to the high pressure established in the tire (step 41); (3) establishing a low pressure in the tire (step 42); and (4) re-interrogating the sensor with service tool 24. *Id.* at 47–49 (citing Ex.1044, 3:14–37). According to Petitioner, because "the sensor being interrogated transmits its sensor ID and the service tool re-interrogates the sensor, it is deemed that the service tool of Lemense 'judges the consistency' of the IDs since the service tool itself sent the ID that was programmed into the sensor." *Id.* at 49–50. Petitioner also quotes Dr. Tang's testimony regarding what a service technician does during sensor programming. *Id.* at 50 (quoting Ex. 1007).[17]

Alternatively, Petitioner argues that "Matsui teaches that, when a new ID (TID) is programmed into a tire pressure monitor by a setting tool, the

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[17] Petitioner again cites Exhibit 1007 only, without specifying a paragraph or page number. The quoted language appears on page 11 of Exhibit 1007.

setting tool checks the sensor and if there is not a response based on that ID, the setting process terminates and a new setting process is initiated." *Id.* at 50–51 (citing Ex.1005 ¶ 34). Petitioner then contends that it would have been obvious to one of ordinary skill in the art to use Matsui's ID programming process in the combination of Tang and Lemense because "checking to see that the ID has been correctly programmed is an important final step to ensure correct operation of the overall system, otherwise, the controller . . . will not be able to recognize the new sensor (since it will not receive the correct ID from the new sensor)." *Id.* at 51.

In response, Patent Owner argues that Petitioner provides no explanation or objective evidence regarding why Lemense's sensor testing process would also verify consistency with an old ID simply because the service tool previously programmed the sensor's ID. Prelim. Resp. 52. Instead, Patent Owner argues, Lemense's sensor testing process only verifies the sensor's pressure measurement functionality, not the sensor's ID. *Id.* at 52–53 (citing Ex. 1004, 3:17–36). Patent Owner further argues that "[w]hile Lemense's service tool judges consistency of a measured pressure of a tire in a known pressure state (i.e., 'full' and 'low') with an expected pressure for that state, consistency or any verification of the ID is not contemplated," and "[t]he ID, instead, is used only for recording the results of the pressure measurement interrogation ('nominal' or 'faulted')." *Id.* at 53 (citing Ex. 1004, code (57), 3:17–36).

Patent Owner's argument is persuasive. Lemense discloses that "[i]t may desirable to retest each sensor after mounting *to ensure that each is still functioning* using the same test procedure shown in steps 40 through 43." Ex. 1004, 4:10–13 (emphasis added). Accordingly, Lemense discloses using the procedure of steps 40–43 to determine if replacement sensors are

functioning properly but does not suggest judging the consistency or accuracy of a newly-recorded ID. Furthermore, for the procedure of steps 40–43, Lemense discloses that the service tool uses the received ID codes only to record nominal or faulted results of the testing procedure. *See id.* at 3:33–35 ("[T]he nominal or faulted results are recorded in memory by the service tool along with the respective ID codes and wheel locations.").

As for Petitioner's argument that Lemense's service tool judges the consistency of an ID because "the service tool itself sent the ID that was programmed into the sensor" (Pet. 49–50), this argument relies on circular reasoning and fails to explain adequately why the service tool judges the consistency of the update and old IDs. Without more explanation or evidence, we are not persuaded that Lemense's service tool judges the consistency of the new and old IDs just because the service tool sent the new ID to the sensor.

We also agree with Patent Owner that the testimony of Dr. Tang cited by Petitioner for this limitation does not overcome the deficiencies of Lemense. *See* Prelim. Resp. 53–56 (citing Ex. 1007, 11). This testimony is entitled to little weight because Dr. Tang fails to provide a sufficient underlying basis for his opinion. *See* 37 C.F.R. § 42.65(a); *Nobel Biocare*, 903 F.3d at 1382. In particular, Dr. Tang does not provide sufficient support for the assertions that "the service tool of Lemense sees the ID and whether it is the same as the code that was programmed into the sensor," and "the service technician will also check the vehicle TPMS controller to ensure that the newly-programmed sensor is being read by the vehicle controller." *See* Ex. 1007, 11.

Regarding Petitioner's reliance on Matsui, Patent Owner argues that Matsui's disclosure of determining whether a response has been returned

from the transmitter "plainly does not teach that the response includes an ID, let alone that the ID is checked for consistency against an old ID." Prelim. Resp. 56–57 (quoting Ex. 1005 ¶ 34).

We again agree with Patent Owner. The disclosure of Matsui relied on by Petitioner states that "in step 80, the generated transmitter identifier TID is transmitted and set to the transmitter 4. Then, in the determination step 82, it is determined whether or not *a response has been returned* from the transmitter 4." Ex. 1005 ¶ 34 (emphasis added). As Patent Owner correctly contends, this disclosure describes only determining whether a response has been returned—it does not teach checking a new ID for consistency with an old ID, or even including the new ID in the response.

Although the Petition does not appear to cite to Dr. Tang's testimony regarding the alleged obviousness of using Matsui's process with the system of Tang and Lemense, Patent Owner argues that this testimony is unsupported. Prelim. Resp. 57–58 (quoting Ex. 1007, 13). We agree. This testimony is entitled to little weight because Dr. Tang fails to provide a sufficient underlying basis for his opinion. *See* 37 C.F.R. § 42.65(a); *Nobel Biocare*, 903 F.3d at 1382. In particular, Dr. Tang does not provide sufficient support for the assertion that "in the programming/sensor replacement process, checking the wirelessly-programmed ID to determine that the sensor has received the correct ID code and is transmitting this ID, followed by reprogramming if the correct ID is not returned is a standard industry practice." *See* Ex. 1007, 13.

For the above reasons, Petitioner fails to persuade us that the combination of Tang, Lemense, and Matsui discloses the "judging" limitation of claim 16.

We also note that, like claim 26 discussed above, claim 16 claims a detector identification or ID. We discussed Petitioner's arguments regarding this claimed feature in connection with our analysis of claim 26 above, and for the reasons discussed above, we find these arguments unpersuasive. *See supra* § III.C.3. Specifically, we are not persuaded by Petitioner's assertion that Tang's manufacturers' codes are equivalent to ID codes. *See id.* Accordingly, Petitioner fails to persuade us that the combination of Tang, Lemense, and Matsui discloses the claimed detector ID.

In view of the above, we determine Petitioner has not met its burden to show a reasonable likelihood it would prevail with respect to the contention that claim 16 is unpatentable over the combination of Tang, Lemense, and Matsui.

3. *Independent Claims 18 and 23*

Similarly to claim 16, claims 18 and 23 both recite "judging, by the setting apparatus, consistency of the update identification newly recorded in the rewritable memory unit and the old identification of the old tire pressure detector" to verify a newly-recorded update identification. Ex. 1001, 16, 3:46–56, 16, 4:48–60.

For these limitations of claims 18 and 23, Petitioner relies on essentially the same arguments made in connection with the corresponding limitations of claim 16. Pet. 59–60, 69–70. Thus, Petitioner's challenge to claims 18 and 23 is based on the same deficient assertions regarding the combination of Tang, Lemense, and Matsui as discussed above in the analysis of the challenge to independent claim 16. For these same reasons, we find that Petitioner has not met its burden to show a reasonable likelihood that claims 18 and 23 are unpatentable over the combination of Tang, Lemense, and Matsui.

4. *Dependent Claims 21, 24, and 29*

Claims 21, 24, and 29 depend from claim 23 and, thus, contain all the limitations of claim 23. Petitioner's challenges to dependent claims 21, 24, and 29 do not overcome the deficiencies discussed above with respect to the challenge to independent claim 23. *See* Pet. 70–71, 74–75. Accordingly, for the same reasons discussed above in connection with claim 23, we find Petitioner has not met its burden to show a reasonable likelihood that claims 21, 24, and 29 are unpatentable over the combination of Tang, Lemense, and Matsui.

E. *Asserted Obviousness Based on Tang, Lemense, Matsui, and Corniot*

Petitioner challenges claims 17, 19, and 25 as obvious under 35 U.S.C. § 103(a) over Tang, Lemense, Matsui, and Corniot. Pet. 18, 55–56, 60, 71. Claims 17, 19, and 25 depend from independent claims 16, 18, and 23, respectively, and, thus, contain all the limitations the corresponding independent claim. Thus, Petitioner relies in part on the same assertions presented in the challenge of independent claims 16, 18, and 23 based on Tang, Lemense, and Matsui, discussed above, in support of its contentions that claims 17, 19, and 25 would have been obvious over Tang, Lemense, Matsui, and Corniot.

Accordingly, this ground suffers from the same deficiencies noted above (*see supra* § III.D) with respect to the proposed combination of Tang, Lemense, and Matsui. Therefore, for the same reasons discussed above, we determine that the information presented in the Petition fails to establish a reasonable likelihood that Petitioner would prevail in showing that claims 17, 19 and 25 are unpatentable.

F. Taiwan Proceedings

According to Petitioner, the '064 patent has a "counterpart" Taiwan patent, TW 1522602, "that has been the subject of several invalidation proceedings involving the petitioner" and "[a]ll granted claims in that patent have been finally invalidated as of January 24, 2024 when [Patent Owner's] appeal was denied."[18] Pet. 7, 76. Although conceding that "priority is not claimed from this patent" (*id.* at 7), Petitioner asserts, without directing us to evidence, that Patent Owner has "repeatedly characterized" the '064 patent as the U.S. counterpart to the Taiwan patent (*id.* at 76).[19] Petitioner also asserts, without directing us to evidence, that, as a result of amendments made during the invalidation proceedings, "the final invalidated claims correspond to the claims of its US patent: the combination of a setting tool and a tire pressure sensor." *Id.* Petitioner then states that "it is respectfully submitted that the invalidation by the [Taiwan Patent Office] should be considered in this IPR request." *Id.*

Petitioner does not indicate, however, how the Taiwan invalidation should be considered here. To the extent Petitioner is suggesting that the Taiwan invalidation should be considered in connection with the asserted grounds of unpatentability, we disagree. By statute, challenges to claims in an *inter partes* review are limited to "prior art consisting of patents or

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[18] We note that Patent Owner disputes that the assertion that the Taiwan patent has been finally invalidated. *See* Prelim. Resp. 43 (arguing the Taiwan patent claims are not finally invalidated because "Patent Owner's appeal to the Supreme Administrative Court was accepted on April 24, 2024 and is pending") (citing Ex. 2010, 5).

[19] Although Petitioner states that "[t]he translated [Taiwan Patent Office] final appeal invalidation opinion from January 25, 2024 is found in Exhibit 1009" (Pet. 77), there is no indication of how Exhibit 1009 supports Petitioner's assertion.

printed publications." 35 U.S.C. § 311(b). Petitioner does not provide any reasoning to support that a determination by a foreign patent office would impact our analysis of the asserted grounds. Nor has Petitioner established adequately that the claims invalidated in the Taiwan Patent Office are analogous to the claims challenged in this proceeding.

G. Discretion Under 35 U.S.C. § 325(d)

Patent Owner argues that we should exercise our discretion to deny institution under § 325(d). Prelim. Resp. 26–44; Paper 10. Petitioner argues that discretionary denial is not appropriate in this case. Pet. 75; Paper 9. Because we are not persuaded the Petition demonstrates sufficiently a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim (*see supra* §§ III.C., III.D., III.E.), we need not reach Patent Owner's arguments regarding discretionary denial under § 325(d).

IV. CONCLUSION

For the foregoing reasons, we do not institute *inter partes* review.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied* as to all challenged claims of the '064 patent; and

FURTHER ORDERED that no *inter partes* review is instituted.

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