Exhibit 1009

Taiwan Patent Office Invalidation Proceedings

(Translation Certification)

EXHIBIT 1009

CERTIFICATION OF TRANSLATOR:

The undersigned declares the following :

That I am knowledgeable in both the Chinese and English languages and verify that the above English Translation of the Taiwan Intellectual Property Office proceedings is a true and accurate translation of these proceedings.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001.

August 20, 2024

ER KANG SHAW

Signature

Name ER-KANG SHAW

EXHIBIT 1009

Administrative Judgment of the Intellectual Property and Commercial Court

2023 administrative-patent-litigation-case No.31

Closure of debate on December 28, 2023

Plaintiff	Orange Electronic Co., Ltd.	
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Regarding the invention patent invalidation case involving the parties listed above, the plaintiff filed an administrative litigation against the No.11217302650 appeal decision of the Ministry of Economic Affairs made on May 16, 2023 on that case, and the participant was ordered by this court to independently participate in the lawsuit. The court judgment is as follows:

Main Judgment

I. The plaintiff's action is dismissed

II. The litigation fees shall be borne by the plaintiff.

Facts and Reasons

ONE. Procedural Matters:

According to the provisions of Article 75 (3) of the current Intellectual Property Case Adjudication Act (hereinafter referred to as the Intellectual Trial Act), this case was under the jurisdiction of this court before the implementation of the amendment to the Intellectual Trial Act, so the provisions of the Intellectual Trial Act promulgated and implemented before the amendment (issued on December 10, 2021) shall apply.

TWO. Entity Matters:

I. Summary of facts:

(I) The plaintiff applied to the defendant for the invention patent for "identification rewritable tire pressure detecting apparatus and its setting method" on August 29, 2008, which was examined by the defendant as No.97133154. After that, on September 4, 2012, the plaintiff applied for an invention patent with the same name (with a total of 10 patent claims) divided from that case. After being examined by the defendant as No.101132138, the patent was granted as invention No.I522602 (hereinafter referred to as the disputed patent) with the patent certificate.

(II) The participant first filed an invalidation action (Case N01) on the grounds that all claims of the disputed patent violated the provisions of Article 22 (2) of the Patent Act at the time of approval, Subsequently, the plaintiff filed an amendment to the patent claims of the disputed patent on June 19, 2018, then the participant changed to claim that Claims 1, 4 and 10 of the disputed patent and their corresponding specifications violated the provisions of Article 26 (1) and (2) of the Patent Act at the time of approval, and Claims 1, 4, 5 and 10 of the disputed patent violated the provisions of Article 22 (2) of the same law.

On August 27, 2019, the defendant issued the (2019)intellectual-property-patent 3(3) 05131 No.10820812370 Patent Invalidation Decision, stating that "amendment on June 19, 2018 is approved" and "the invalidation of Claims 1, 4, 5 and 10 is irrevocably sustained and these claims should be revoked" (After the plaintiff filed the appeal and the administrative litigation regarding the case, the court rejected the plaintiff's appeal and confirmed the effectiveness of the judgment in accordance with the 2020 administrative-patent-litigation-case No.11 judgment made by this court on August 20, 2020, as well as the 2020 appeal-case No.1063 judgment made by the Supreme Administrative Court on July 28, 2022, and undoubtedly determined that Claims 1, 4, 5 and 10 of the disputed patent are revoked).

(III) The participant further filed an invalidation action (Case N02) on the grounds that Claims 2-3 and 6-9 of the disputed patent violated the provisions of Article 22 (2) of the Patent Act at the time of approval on December 27, 2019. The plaintiff, in response, filed an amendment to the patent claims of the disputed patent (the date of last amendment was September 13, 2022, the original Claims 2-3 and 6-9 were rewritten, and new Claims 11-14 were added), and the participant then changed to claim that Claims 2-3, 6-9, and 11-14 of the disputed patent violated the provisions of Article 22 (2) and Article 26 (2) of the Patent Act at the time of approval. After the examination by the defendant, it was determined that the amendment of the disputed patent on September 13, 2022 meets the requirement, and based on the results of the amendment review, the (2022)intellectual-property-patent 3(3) 05147 No.11121188950 Patent Invalidation Decision was issued on November 30, 2022, stating "amendment on September 13, 2022 is approved" and "the invalidation of Claims 2-3, 6-9 and 11-14 is irrevocably sustained and the claims should be revoked" (hereinafter referred to as the original decision). The plaintiff disagreed with the original decision with regard to the establishment of the invalidation and filed a lawsuit. After being rejected by the No.11217302650 appeal decision of Ministry of Economic Affairs on May 16, 2023 (hereinafter referred to as the Appeal Decision), the plaintiff filed an administrative lawsuit with this court. This court holds that if the judgment of this lawsuit revokes the appeal decision and the part of the original decision with regard to the establishment of the invalidation, the rights or legal interests of the participant would be

harmed, so the court ordered ex officio the participant to independently participate in the litigation.

II. Plaintiff's claims and statements:

(I) The combination of Exhibits 1 and 12 shown in the annexed table cannot prove that Claims 2 and 3 of the disputed patent lack an inventive step:

1. Claim 2 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and only part of the technical features of Claim 2 are disclosed in Exhibit 12. The main difference between the two is "where the tire pressure detecting host does not reset a new ID during the writing process of the ID". Based on the above-mentioned difference in technical features, it can be seen that the purpose of the disputed patent is to avoid the inconvenience to users caused by the remained need for involving a repair shop during the process of reading and editing the tire pressure monitoring apparatus, while the technical means disclosed in Exhibit 12 still involves reading and editing the tire pressure monitoring apparatus to obtain the ID of the air pressure sensor. In addition, the tire pressure monitoring apparatus in Exhibit 12 is equivalent to the tire pressure detecting host of the disputed patent, while the features specified in Claim 2 of the disputed patent do not involve the tire pressure detecting host in either the process of reading or writing, and referring to Exhibit 3, it can be seen that the way disputed patent obtains the old ID and writes it to the new tire pressure detector is through the old tire pressure detector or manual input, while the way in Exhibit 12 is from the tire pressure detecting host. Therefore, the technical means disclosed in Exhibit 12 are different from those in this case, and paragraph 0058 of Exhibit 12 does not disclose the technical means in Claim 2 in this case. Therefore, compared with Exhibit 12, the disputed patent has the advantage of avoiding the inconvenience to users caused by the remained need for involving a repair shop during the process of reading and editing the tire pressure monitoring apparatus. It is difficult for persons with ordinary skill in the related technical field to simply modify, replace and, in combination with Exhibit 1, to complete what Claim 2 seeks to protect according to the technical features of Exhibit 12. Therefore, Claim 2 of the disputed patent does not lack an inventive step compared with Exhibits 1 and 12.

2. Claim 3 of the disputed patent provides an identification rewritable tire

pressure detecting apparatus, and Claim 3 also has the specific technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. Exhibit 12 only discloses that "the receiving circuit 13a receives a specific frequency-band signal" and does not disclose the "low frequency wireless signal" of Claim 3, and paragraph [0058] of the specification of Exhibit 12 states "the ID of the air pressure sensor at corresponding tire position registered in the tire pressure monitoring apparatus on the vehicle body is read by using the ID registration tool, and transmitted as a setting value to the new air pressure sensor and stored there." In contrast, the technical feature in Claim 3 of the disputed patent is that "the setting apparatus reads the old identification from an old detector", while the "tire pressure monitoring apparatus" of Exhibit 12 is equivalent to the "tire pressure detecting host" of the disputed patent rather than the "detector", and the read object of Exhibit 12 is different from that of Claim 3 of the disputed patent. Therefore, compared with Exhibit 12, Claim 3 of the disputed patent has the advantage of avoiding the inconvenience to users caused by the remained need for involving a repair shop during the process of reading and editing the tire pressure monitoring apparatus. Therefore, if based on Exhibit 12 in combination with Exhibit 1, it is difficult for persons having ordinary skill in the art to easily complete the technical solution of Claim 3 of the disputed patent, so Claim 3 of the disputed patent does not lack an inventive step.

(II) The combination of Exhibits 1, 10, 11 and 12 cannot prove that Claims 6, 7, 11 and 12 of the disputed patent lack an inventive step:

1. Claim 6 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Claim 6 also has the specific technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. In addition, Claim 6 also has the specific technical feature "the setting apparatus reads the old identification from an old detector" in contrast to Exhibit 12. If based on Exhibit 12 in combination with Exhibits 1, 10, and 11, it is difficult for persons having ordinary skill in the art to easily implement the technical solution of Claim 6 of the disputed patent, so Claim 6 of the disputed patent does not lack an inventive step.

2. Claim 7 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Exhibit 12 does not disclose the technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 7 of the disputed patent, and this technical feature is not general knowledge in the related technical field. Therefore, if based on Exhibit 12 in combination with Exhibits 1, 10, and 11, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 7 of the disputed patent, so Claim 7 of the disputed patent does not lack an inventive step.
3. Claim 11 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Claim 11 also has the specific technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. In addition, Claim 11 also has the specific technical feature "the setting apparatus reads the old identification from an old detector" in contrast to Exhibit 12. If based on Exhibit 12 in combination with Exhibits 1, 10 and 11, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 11 of the disputed patent, therefore Claim 11 of the disputed patent does not lack an inventive step.
4. Claim 12 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Claim 12 also has the specific technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. In addition, Claim 12 also has the specific technical feature "the setting apparatus reads the old identification from an old detector" in contrast to Exhibit 12. In addition, Exhibit 12 only discloses that "the receiving circuit 13a receives a specific frequency-band signal" and does not disclose the "low frequency wireless signal" of Claim 12. Therefore, if based on Exhibit 12 in combination with Exhibits 1, 10, and 11, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 12 of the disputed patent, so Claim 12 of the disputed patent does not lack an inventive step.

(III) The combination of Exhibits 1, 10 and 12 cannot prove that Claims 8, 9, 13 and 14 of the disputed patent lack an inventive step:

1. Claim 12 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Claim 12 also has the specific technical

feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. Therefore, if based on Exhibit 12 in combination with Exhibits 1 and 10, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 8 of the disputed patent, so Claim 8 of the disputed patent does not lack an inventive step.

2. Claim 9 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Exhibit 12 does not disclose the technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 9 of the disputed patent, and this technical feature is not general knowledge in the related technical field. Therefore, if based on Exhibit 12 in combination with Exhibits 1 and 10, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 9 of the disputed patent, so Claim 9 of the disputed patent does not lack an inventive step.

3. Claim 13 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Claim 13 also has the specific technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. In addition, Claim 13 also has the specific technical feature "the setting apparatus reads the old identification from an old detector" in contrast to Exhibit 12. In addition, Exhibit 12 only discloses that "the receiving circuit 13a receives a specific frequency-band signal" and does not disclose the "low frequency wireless signal" of Claim 13. In addition, Exhibit 12 does not disclose the technical feature "The frequency of the low frequency radio signal is 125 kHz" of Claim 13 of the disputed patent, and this technical feature is not general knowledge in the related technical field. In addition, Claim 13 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Exhibit 12 does not disclose the technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 13 of the disputed patent, and this technical feature is not general knowledge in the related technical field. Therefore, if based on Exhibit 12 in combination with Exhibits 1 and 10, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 13 of the disputed patent, so Claim 13 of the disputed patent does not lack an inventive step.

4. Claim 14 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Claim 14 also has the specific technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" in contrast to Exhibit 12. In addition, Claim 14 also has the specific technical feature "the setting apparatus reads the old identification from an old detector" in contrast to Exhibit 12. In addition, Claim 14 of the disputed patent provides an identification rewritable tire pressure detecting apparatus, and Exhibit 12 does not disclose the technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 14 of the disputed patent, and this technical feature is not general knowledge in the related technical field. Therefore, if based on Exhibit 12 in combination with Exhibits 1 and 10, it is difficult for persons having ordinary skill in the art to easily arrive at the technical solution of Claim 14 of the disputed patent, so Claim 14 of the disputed patent does not lack an inventive step.

(IV) Statement: the appeal decision and the original decision with regard to "the invalidation of Claims 2-3, 6-9 and 11-14 is irrevocably sustained and these claims should be revoked" should be revoked.

III. Defendant's defense and statements:

(I) The plaintiff claims that Exhibit 12 does not disclose the specific technical feature "The tire pressure detecting host does not reset a new ID during the writing process of the ID" of Claim 2 of the disputed patent, and the combination of Exhibits 1 and 12 cannot prove that Claim 2 lacks an inventive step. However, according to the disclosure in paragraph [0277] of the specification of Exhibit 12 and the Figure 66, it can be seen that in the various embodiments proposed in Exhibit 12, there is also an implementation that overwrites the ID code to the air pressure ID code sensor using an ID registration tool without setting a new ID for the tire pressure monitoring apparatus. Therefore, Exhibit 12 has disclosed the aforementioned technical feature of Claim 2 of the disputed patent.

(II) In addition, according to the disclosure in paragraph [0277] of the specification of Exhibit 12 and the Figure 66, it can be seen that in various embodiments proposed in Exhibit 12, there is also an implementation that overwrites the ID code to the air pressure ID code sensor using the ID registration tool without setting a new ID for the tire pressure monitoring apparatus, therefore Exhibit

12 has indeed disclosed the specific technical features "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" and "the setting apparatus reads the old identification from an old detector" of Claim 3 of the disputed patent, and the paragraph [0297] of the specification of Exhibit 12 has indeed disclosed the technical feature "the receiving circuit 13a receives a specific frequency-band signal". In addition, Claim 3 of the disputed patent does not define the frequency of low frequency wireless signals, so the technical feature "low frequency wireless signal" of Claim 3 of the disputed patent is only a variation with minor change of the technical content regarding "receiving circuit 13a receives a specific frequency-band signal" presented in Exhibit 12. Therefore, there is no basis for the plaintiff to claim that Claim 3 of the disputed patent does not lack an inventive step compared to the combination of Exhibits 1 and 12.

(III) The plaintiff claims that Exhibit 12 does not disclose the technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 7 of the disputed patent, and this technical feature is not general knowledge in the related technical field, thus the combination of Exhibits 1, 10, 11 and 12 cannot prove Claim 7 of the disputed patent lacks an inventive step. However, the use of 315 MHz or 433 MHz radio frequency signal for transmission by tire pressure sensors is a general knowledge in the related technical field, which can be proved by the known technology "the transmission frequency standard of RF is 315 MHz in North America and 433. 92 MHz in Europe" described in Page 15, line 18 to 19 of the Taiwan No.200824930A invention patent "Vehicle Positioning and Tire Condition Monitoring System with Left and Right Wheel Differential Sensing Heading" (Supplementary Exhibit 1) that has been published before the application date of the disputed patent (June16, 2008). Therefore, "the radio frequency signal is 315 MHz or 433 MHz" is the general knowledge in the related technical field before the application date of the disputed patent, and it is easy for persons having ordinary skill in the art to arrive at Claim 7 of the disputed patent based on the combination of Exhibits 1, 10, 11 and 12.

(IV) The plaintiff claims that Claim 13 of the disputed patent also has the specific technical features "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" and "the setting apparatus reads the

old identification from an old detector" in contrast to Exhibit 12, and Exhibit 12 only discloses that the receiving circuit 13a receives a specific frequency-band signal and does not disclose the technical features "low frequency wireless signal", "the radio frequency signal is 315 MHz or 433 MHz" and "the frequency of low frequency wireless signals is 125 kHz" of Claim 13 of the disputed patent, and these technical features are not general knowledge in the related technical field, so the combination of Exhibits 1, 10 and 12 cannot prove Claim 13 of the disputed patent lacks an inventive step. However, as previously stated, Exhibit 12 has disclosed the technical features "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" and "the setting apparatus reads the old identification from an old detector" of Claim 13 of the disputed patent, and "low frequency wireless signal" of Claim 13 of the disputed patent is only a variation with minor change of the technical content regarding "the receiving circuit 13a receives a specific frequency-band signal" presented in Exhibit 12, while the use of 315 MHz or 433 MHz radio frequency signal and 125 kHz low frequency wireless signal for transmission by tire pressure detector is general knowledge in the related technical field, which can be proved by the known technology "When the vehicle starts or begins high-speed driving, there are generally two ways to wake up the TPMS system, one is the self-inspection of TPMS when the car starts, and a pre-programmed software program is used to perform periodic inspections when entering the high-speed driving. For this, the TPMS receiver needs to issue a call signal, and set up of a Wake-up chip on the TPMS transmitter module is needed, and due to the low wake-up frequency of 125 kHz, an additional antenna driver needs to be added to the TPMS receiver to issue a call signal with a certain power" described in Page 12, line 22 to Page 13, line 5 of the Supplementary Exhibit 1 as well as the known technology "the transmission frequency standard of RF is 315 MHz in North America and 433. 92 MHz in Europe" described in Page 15, line 18 to 19 of the Supplementary Exhibit 1. It can be seen that "the frequency of the low frequency wireless signals is 125 kHz" and "the radio frequency signal is 315 MHz or 433 MHz" are the general knowledge in the related technical field before the application date of the disputed patent, and it is easy for those who having the general knowledge in the related technical field to arrive at Claim 13 of the disputed

patent based on the combination of Exhibits 1, 10 and 12.

(V) In addition, Exhibit 12 has disclosed the specific technical features "where the tire pressure detecting host does not reset the new ID during the writing process of the ID" and "the setting apparatus reads the old identification from an old detector", and the "low frequency wireless signal" technical feature of Claim 12 of the disputed patent is only a variation with minor change of the technical content regarding "the receiving circuit 13a receives a specific frequency-band signal" presented in Exhibit 12. In addition, the use of 315 MHz or 433 MHz radio frequency signal by the tire pressure detector for transmission is general knowledge in the related technical field, as previously stated. Therefore, the claim of the plaintiff that Claims 6, 8, 9, 11, 12 and 14 of the disputed patent do not lack an inventive step is unfounded.

(VI) Statement: Plaintiff's case should be dismissed.

IV. Respondent's defense and statements:

(I) Claim 2 of the disputed patent lacks an inventive step:

According to the content taught in paragraphs [0277] and [0278] of Exhibit 12, it can be seen that in the various embodiments proposed in Exhibit 12, there is also an implementation that overwrites the ID code to the air pressure sensor using the ID registration tool without setting a new ID code for the tire pressure monitoring apparatus. Therefore, Exhibit 12 has indeed disclosed the technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" of Claim 2 of the disputed patent, so Exhibit 12 is sufficient to prove that Claim 2 of the disputed patent lacks an inventive step.

(II) Claim 3 of the disputed patent lacks an inventive step:

The technical feature "low frequency wireless signal" of Claim 3 of the disputed patent can be easily arrived at by persons having ordinary skill in the art based on Exhibit 12 and the general knowledge in the related technical field. To say the least, Exhibit 8 provided by the participant has already disclosed the technical feature "low frequency wireless signal". However, based on the content taught in paragraph [0277] of Exhibit 12, a person who has the general knowledge in the related technical field is able to learn that the "ID of the sensor while associated with the position of the tire at the time of initial registration" is just the "old ID" referred to in the disputed patent, and during the replacement of tires, the purpose of "no need to perform re-registration"

can be achieved by simply overwriting the old ID on the new sensor using the ID registration tool. As for the way to obtain the old ID, one has to choose between "from the old detector" and "from the tire pressure monitoring apparatus", so Exhibit 12 has disclosed the technical feature "the setting apparatus reads the old identification from an old detector", which can be easily learned and arrived at by persons having ordinary skill in the art. The technical differences in Claim 3 of the disputed patent as claimed by the plaintiff are indeed disclosed or taught in Exhibit 12 and can be easily arrived at by persons having ordinary skill in the art; Moreover, just by combining Exhibit 12 and Exhibit 8, it is already sufficient to prove that Claim 3 of the disputed patent lacks an inventive step.

(III) Claim 6 of the disputed patent lacks an inventive step:

The technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" of Claim 6 of the disputed patent is identical to that of Claim 2 of the disputed patent, and the technical feature "the setting apparatus reads the old identification from an old detector" of Claim 6 of the disputed patent is identical to that of Claim 3 of the disputed patent. Therefore, as previously mentioned, Exhibit 12 has indeed disclosed the technical features "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" and "the setting apparatus reads the old identification from an old detector" of Claim 6 of the disputed patent, so Exhibit 12 is sufficient to prove that Claim 6 of the disputed patent lacks an inventive step.

(IV) Claim 7 of the disputed patent lacks an inventive step:

The use of 315 MHz or 433 MHz radio frequency signal for transmission by tire pressure detector is a general knowledge, as stated in Page 15, line 18 to 19 of the Supplementary Exhibit 1, which has clearly disclosed that "the transmission frequency standard of RF is 315 MHz in North America and 433.92 MHz in Europe", and persons having ordinary skill in the art can certainly learn that the European standard 433. 92 MHz can be referred to as 433 MHz for short or generally, and even 434 MHz in the industry. And since 315 MHz frequency is banned in Europe, only 433 MHz is allowed in Europe. Therefore, "the radio frequency signal is 315 MHz or 433 MHz" is indeed general knowledge in the related field, and Exhibit 12 is sufficient to prove

that Claim 7 of the disputed patent lacks an inventive step.

(V) Claim 8 of the disputed patent lacks an inventive step:

The technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" of Claim 8 of the disputed patent is identical to that of Claim 2 of the disputed patent. From the foregoing, it can be seen that Exhibit 12 has indeed disclosed the technical feature "where the tire pressure detecting host does not reset a new ID during the writing process of the ID" of Claim 8 of the disputed patent. Therefore, Exhibit 12 is sufficient to prove that Claim 8 of the disputed patent lacks an inventive step.

(VI) Claim 9 of the disputed patent lacks an inventive step:

The technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 9 of the disputed patent is identical to that of Claim 7 of the disputed patent. From the foregoing, it can be seen that the technical feature "the radio frequency signal is 315 MHz or 433 MHz" is general knowledge in the related technical field, and the Supplementary Exhibit 1 also provides sound support for the fact that "the use of 315 MHz or 433 MHz radio frequency signal by the tire pressure detector" is a standard for communication in United States and Europe. Therefore, the technical feature "the radio frequency signal is 315 MHz or 433 MHz" of Claim 9 of the disputed patent is indeed general knowledge in the related technical field. Therefore, Exhibit 12 is sufficient to prove that Claim 9 of the disputed patent lacks an inventive step.

(VII) The disputed patent Claim 11 lacks an inventive step:

The technical feature of the disputed patent Claim 11 "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" is identical to that of the disputed patent Claim 2. Additionally, another technical feature of the disputed patent Claim 11 "the setting apparatus reads an old identification from an old detector" is identical to that of the disputed patent Claim 3. Therefore, as mentioned above, Exhibit 12 has disclosed the technical features of the disputed patent Claim 11, "the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector." So Exhibit 12 is sufficient to prove that the disputed patent claim 11 lacks an inventive step.

(VIII) The disputed patent Claim 12 lacks an inventive step:

The technical feature of the disputed patent Claim 12 "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" is identical to that of the disputed patent Claim 2. Moreover, technical features of the disputed patent Claim 12 "the setting apparatus reads an old identification from an old detector" and "low frequency wireless signal" are identical to those of the disputed patent Claim 3. As mentioned above, Exhibit 12 has disclosed the technical features of the disputed patent Claim 12, i.e. "the tire pressure detecting host does not reset a new identification during the identification writing process", "low frequency wireless signal" and "the setting apparatus reads an old identification from an old detector". Alternatively, it is also sufficient to prove that the disputed patent Claim 12 lacks an inventive step by combining Exhibit 12 with Exhibit 8.

(IX) The disputed patent Claim 13 lacks an inventive step:

The technical feature of the disputed patent Claim 13 "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" is identical to that of the disputed patent Claim 2. Moreover, technical features of the disputed patent claim 13 "the setting apparatus reads an old identification from an old detector" and "low frequency wireless signal" are identical to those of the disputed patent Claim 3. Furthermore, the technical feature of the disputed patent Claim 13 "the RF signal is 315MHz or 433MHz" is identical to that of the disputed patent Claim 7. Based on the aforementioned, Exhibit 12 has disclosed the technical features of the disputed patent Claim 13, i.e. "the tire pressure detecting host does not reset a new identification during the identification writing process", "low frequency wireless signal" and "the setting apparatus reads an old identification from an old detector". Additionally, the technical feature "the RF signal is 315MHz or 433MHz" is ordinary skill in the art. The specification of the Supplementary Exhibit 1 has respectively disclosed that "the standard transmission frequency of RF is 315MhzMHz in the North American and 433.92MHz in the European standard" and "the wake-up frequency is a low frequency of 125kHz". This has corroborates that the tire pressure detecting host not only uses the RF frequency range for signal transmission, but can also employ a low-frequency (such as 125kHz) signal as an alternative transmission signal. Persons having ordinary skill in the art can naturally distinguish the signals transmitted by RF frequency and low-

frequency frequency by using different frequency bands. To say the least, Exhibit 8 has also clearly disclosed the technical feature "the frequency of the low frequency wireless signal is 125kHz", and when combined with Exhibit 12, it proves that the disputed patent Claim 13 lacks an inventive step.

(X) The disputed patent Claim 14 lacks an inventive step:

The technical feature of the disputed patent Claim 14 "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" is identical to that of the disputed patent Claim 2. The technical feature of the disputed patent Claim 14 "the setting apparatus reads an old identification from an old detector" is identical to that of the disputed patent Claim 3. Furthermore, the technical feature of the disputed patent Claim 14 "the RF signal is 315MHz or 433MHz" is identical to that of the disputed patent Claim 7. Based on the aforementioned, Exhibit 12 has disclosed the technical features of the disputed patent Claim 14, i.e. "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector." Additionally, the technical feature "the RF signal is 315MHz or 433MHz" is ordinary skill in the art. Therefore, the reasons for the plaintiff's assertion that the disputed patent Claim 14 involves an inventive step are inadmissible.

(XI) Statement: The plaintiff's lawsuit is dismissed.

V. The Court's Judgment:

(I) Applicable legal provisions:

1. The invalidation of invention patent right in accordance with the regulations at the time of its approval and examination is expressly stated in Article 71 (3) of the Patent Act. The application date of the disputed patent in this case is August 29, 2008, and the approval date is December 24, 2015. The determination of whether the disputed patent shall be revoked should be based on the Patent Act amended on January 22, 2014, and enforced on March 24 of the same year (hereinafter referred to as the "Patent Act at the time of approval").

2. Even if the invention does not involve the circumstances listed in the preceding paragraphs, a patent shall not be granted if persons having ordinary skill in the art could easily accomplish it based on the prior art before the application,

which is expressly stipulated in Article 22 (2) of the Patent Act at the time of approval.

(II) Analysis of the disputed patent technology:

1. Content of the disputed patent technology: The disputed patent relates to an identification rewritable tire pressure detecting apparatus and its input method. This apparatus is comprised of an identification rewritable tire state detector and a setting apparatus. When used, the setting apparatus first reads the identification of the old tire state detector to be replaced, transmits the identification to the identification rewritable tire state detector, and sets the identification as the identification of the identification rewritable tire state detector. Users only need to directly use the identification rewritable tire state detector which has completed the identification writing process, and there is no need to take complex resetting actions (see Abstract of the disputed patent).
2. Main drawings of the disputed patent: as shown in the drawings attached.
3. Analysis of the patent claims of the disputed patent application:

   The disputed patent application comprises a total of 11 claims after the amendment of the patent claims, among which claims 2, 6, 7, 8, 9, 11, 12, 13 and 14 are independent claims and the rest are dependent claims. The patent claims are as follows (for easy comparison, technical feature numbers are marked within parentheses, named with Arabic numerals representing claim numbers and English letters indicating sequential serial numbers. Further subdivisions of technical features are indicated by appending an Arabic numeral after a decimal point):

   Claim 2: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector for mounting on one of the multiple tires of a vehicle body, (2A) a tire pressure detecting host mounted on the vehicle body, (2B) and a setting apparatus used to set an identification to be written into the identification rewritable tire state detector (the identification is used by the tire pressure detecting host to identify an external tire pressure detector and the identification rewritable tire state detector). Wherein, (2C) the setting apparatus comprises: an input interface on which users operate to receive or set the identification; (2D) the input interface includes a human-machine input interface or a bar-

code reader; (2E) a controller, which connects to the input interface to read the identification received or set on the input interface, and then generates an identification setting signal based on the identification; (2F) a setting transmission module that can be controlled by the controller to output the identification setting signal. (2G) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (2H) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value; (2I) a transmitting module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal; (2J) a receiving interface, which is connected to the micro-processing control module to be controlled by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (2K) a power module providing the power required for operating the identification rewritable tire state detector. (2L) Wherein the setting apparatus includes a wireless receiving module. After the identification rewritable tire state detector completes writing the identification to the memory unit, the wireless receiving module receives the written identification transmitted by the transmitting module of the identification rewritable tire state detector, and sends it to the controller of the setting apparatus. (2M.1) The controller then determines whether the written identification transmitted is the same as the identification received by the input interface. (2M.2) If the result is not, the identification is re-read into the setting apparatus via the input interface; (2N) wherein the tire pressure detecting host does not reset a new identification during the identification writing process. (2O)

Claim 3: The identification rewritable tire pressure detecting apparatus as

claimed in claim 2, wherein the human-machine input interface is an input keyboard or a dip switch. (3A) The receiving interface is a low-frequency wireless receiver that is controlled by the micro-processing control module and receives an external low-frequency wireless signal. (3B) The identification is an old identification, and the setting apparatus reads the old identification from an old detector or reads the old identification of a tire pressure detector with a known identification into the setting apparatus through the input interface. (3C) The setting apparatus transmits the read old identification through the setting transmission module to the receiving interface, so that the micro-processing control module record the old identification in the memory unit after the receiving interface receives the signal. (3D) If the memory unit of the identification rewritable tire state detector originally already has a built-in identification, the setting apparatus overwrites and deletes the built-in identification, in this case the corresponding identification of the identification rewritable tire state detector is the old identification. (3E.1) After the setting apparatus completes the setting of the old identification of the identification rewritable tire state detector, the transmission module of the identification rewritable tire state detector transmits the old identification that has completed writing to the setting apparatus wirelessly. (3E.2)

Claim 6: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector for mounting on one of the multiple tires of a vehicle body, (6A) a tire pressure detecting host mounted on the vehicle body, (6B) and a setting apparatus used to set an identification to be written into the identification rewritable tire state detector (the identification is used by the tire pressure detecting host to identify an external tire pressure detector and the identification rewritable tire state detector. (6C) The setting apparatus comprises: an input interface on which users operate to receive or set the identification; (6D) a controller, which connects to the input interface to read the identification received or set on the input interface, and then generates an

identification setting signal based on the identification; (6E) a setting transmission module that can be controlled by the controller to output the identification setting signal. (6F) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (6G) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value; (6H) the sensing module consists of an air pressure sensor, more than one acceleration sensor, a temperature sensor, or a magnetic field sensor; (6I) a transmitting module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal; (6J) a receiving interface, which is connected to the micro-processing control module to be controlled by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (6K) a power module providing the power required for operating the identification rewritable tire state detector. (6L) Wherein the setting apparatus includes a wireless receiving module. After the identification rewritable tire state detector completes writing the identification to the memory unit, the wireless receiving module receives the written identification transmitted by the transmitting module of the identification rewritable tire state detector, and sends it to the controller of the setting apparatus. (6M.1) The controller then determines whether the transmitted written identification is the same as the identification received by the input interface. (6M.2) If the result is not, the identification is re-read into the setting apparatus via the input interface. (6N) The tire pressure detecting host does not reset a new identification during the identification writing process. (6O.1) The identification is an old identification, and the setting apparatus reads the old identification from an old detector or

reads the old identification of a tire pressure detector with a known identification into the setting apparatus through the input interface. (6O.2) The setting apparatus transmits the old identification that is read through the setting output module to the receiving interface, so that the micro-processing control module record the old identification in the memory unit after the receiving interface receives the signal. (6O.3) If the memory unit of the identification rewritable tire state detector originally already has a built-in identification, the setting apparatus overwrites and deletes the built-in identification, in this case the corresponding identification of the identification rewritable tire state detector is the old identification. (6O.4) After the setting apparatus completes the setting of the old identification of the identification rewritable tire state detector, the transmitting module of the identification rewritable tire state detector transmits the written old identification to the setting apparatus wirelessly. (6O.5)

Claim 7: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector and a setting apparatus, wherein the identification rewritable tire state detector is used to be mounted on one of the multiple tires of a vehicle body. (7A) The setting apparatus comprises: a human-machine input interface on which users operate to receive or set an identification; (7B) a controller, which connects to the human-machine input interface to read the identification received or set on the interface, and then generates an identification setting signal based on the identification; (7C) a setting transmission module that can be controlled by the controller to output the identification setting signal. (7D) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (7E) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value; (7F) the sensing module consists of an air pressure sensor, more than one acceleration sensor, a temperature sensor or a magnetic field sensor; (7G) a transmitting

module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal, (7H.1) wherein the RF is 315MHz or 433MHz; (7H.2) a receiving interface, which is connected to the micro-processing control module to be controlled by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (7I) a power module providing the power required for operating the identification rewritable tire state detector. (7J) The setting transmission module transmits the identification setting signal wirelessly; the receiving interface is a wireless receiving interface, which receives the identification setting signal transmitted wirelessly by the setting transmission module. The setting apparatus obtains the identification either by: (1) receiving a RF wireless signal through a wireless receiving module, and then reading the identification contained in the RF wireless signal with the controller; or (2) triggering or setting manually via the human-machine input interface, and then reading the identification triggered or set with the controller. The micro-processing control module stores the identification in the memory unit or overwrites the old identification stored in the memory unit based on the received identification setting signal. (7K)

Claim 8: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector for mounting on one of the multiple tires of a vehicle body, (8A) a tire pressure detecting host mounted on the vehicle body, (8B) and a setting apparatus used to set an identification to be written into the identification rewritable tire state detector (the identification is used by the tire pressure detecting host to identify an external tire state detector and the identification rewritable tire state detector. (8C) The setting apparatus comprises: an input interface on which users

operate to receive or set the identification; (8D) a controller, which connects to the input interface to read the identification received or set on the input interface, and then generates an identification setting signal based on the identification; (8E) a setting transmission module that can be controlled by the controller to output the identification setting signal. (8F) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (8G) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value; (8H) the sensing module consists of an air pressure sensor, more than one acceleration sensor and a temperature sensor; (8I) a transmitting module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal; (8J) a receiving interface, which is connected to the micro-processing control module to be controlled by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (8K) a power module providing the power required for operating the identification rewritable tire state detector. (8L) Wherein the setting apparatus includes a wireless receiving module. After the identification rewritable tire state detector completes writing the identification to the memory unit, the wireless receiving module receives the written identification transmitted by the transmitting module of the identification rewritable tire state detector, and sends it to the controller of the setting apparatus. (8M) Wherein the tire pressure detecting host does not reset a new identification during the identification writing process. (8N)

Claim 9: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector and a setting apparatus, wherein the identification rewritable tire state

detector is used to be mounted on one of the multiple tires of a vehicle body. (9A) The setting apparatus comprises: a human-machine input interface on which users operate to receive or set an identification; (9B) a controller, which connects to the human-machine input interface to read the identification received or set on the interface, and then generates an identification setting signal based on the identification; (9C) a setting transmission module that can be controlled by the controller to output the identification setting signal. (9D) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (9E) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value; (9F) the sensing module consists of an air pressure sensor, more than one acceleration sensor and a temperature sensor; (9G) a transmitting module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal, (9H.1) wherein, the RF signal is 315 MHz or 433 MHz; (9H.2) a receiving interface, which is connected to the micro-processing control module to be controlled by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (9I) a power module providing the power required for operating the identification rewritable tire state detector. (9J) The setting transmission module transmits the identification setting signal wirelessly; the receiving interface is a wireless receiving interface, which receives the identification setting signal transmitted wirelessly by the setting transmission module. The setting apparatus obtains the identification either by: (1) receiving a RF wireless signal through a wireless receiving module, and then reading the identification contained in the RF wireless signal with the controller; or (2)

triggering or setting manually via the human-machine input interface, and then reading the identification triggered or set with the controller. The micro-processing control module stores the identification in the memory unit or overwrites the old identification stored in the memory unit based on the received identification setting signal. (9K)

Claim 11: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector for mounting on one of the multiple tires of a vehicle body, (11A) a tire pressure detecting host mounted on the vehicle body, (11B) and a setting apparatus used to set an identification to be written into the identification rewritable tire state detector (the identification is used by the tire pressure detecting host to identify an external tire state detector and the identification rewritable tire state detector). Wherein, (11C) he setting apparatus comprises: an input interface on which users operate to receive or set the identification; (11D) the input interface includes a human-machine input interface or a bar-code reader; (11E) a controller, which connects to the input interface to read the identification received or set on the input interface, and then generates an identification setting signal based on the identification; (11F) a setting transmission module that can be controlled by the controller to output the identification setting signal. (11G) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (11H) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value, wherein (11I.1) the sensing module consists of an air pressure sensor, more than one acceleration sensor, a temperature sensor, or a magnetic field sensor; (11I.2) a transmitting module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal; (11J) a receiving interface, which is connected to the micro-processing control module to be controlled

by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (11K) a power module providing the power required for operating the identification rewritable tire state detector. (11L) Wherein the setting apparatus includes a wireless receiving module. After the identification rewritable tire state detector completes writing the identification to the memory unit, the wireless receiving module receives the written identification transmitted by the transmitting module of the identification rewritable tire state detector, and sends it to the controller of the setting apparatus. Wherein:(11M) the tire pressure detecting host does not reset a new identification during the identification writing process; (11N) the identification is an old identification, and the setting apparatus reads the old identification from an old detector or reads the old identification of a tire state detector with a known identification into the setting apparatus through the input interface; (11O.1) the setting apparatus transmits the read old identification through the setting transmission module to the receiving interface, so that the micro-processing control module record the old identification in the memory unit after the receiving interface receives the signal; (11O.2) if the memory unit of the identification rewritable tire state detector originally already has a built-in identification, the setting apparatus overwrites and deletes the built-in identification, in this case the corresponding identification of the identification rewritable tire state detector is the old identification. (11O.3) After the setting apparatus completes the setting of the old identification of the identification rewritable tire state detector, the transmission module of the identification rewritable tire state detector transmits the old identification completed written to the setting apparatus wirelessly. (11O.4)

Claim 12: An identification rewritable tire pressure detecting apparatus, which comprises an identification rewritable tire state detector for mounting on one of the multiple tires of a vehicle body, (12A) a tire

pressure detecting host mounted on the vehicle body, (12B) and a setting apparatus used to set an identification to be written into the identification rewritable tire state detector (the identification is used by the tire pressure detecting host to identify an external tire state detector and the identification rewritable tire state detector). Wherein, (12C) the setting apparatus comprises: an input interface on which users operate to receive or set the identification; (12D) the input interface includes a human-machine input interface or a bar-code reader; (12E.1) the human-machine input interface is an input keyboard or a dip switch; (12E.2) a controller, which connects to the input interface to read the identification received or set on the input interface, and then generates an identification setting signal based on the identification; (12F) a setting transmission module that can be controlled by the controller to output the identification setting signal. (12G) The identification rewritable tire state detector comprises: a micro-processing control module containing a readable and writable memory unit; (12H) a sensing module, which is connected to the micro-processing control module to be controlled by it and sense a tire pressure value; (12I) the sensing module consists of an air pressure sensor, more than one acceleration sensor, a temperature sensor or a magnetic field sensor; (12J) a transmitting module, which is connected to the micro-processing control module to be controlled by it, and then transmits the sensing module's sensing results to the tire pressure detecting host mounted in the vehicle body via a RF signal; (12K) a receiving interface, which is connected to the micro-processing control module to be controlled by it and receive the identification setting signal, then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to write the identification into the identification rewritable tire state detector; (12L) a power module providing the power required for operating the identification rewritable tire state detector. (12M) Wherein the setting apparatus includes a wireless receiving module. After the identification rewritable tire state detector completes writing the

identification to the memory unit, the wireless receiving module receives the written identification transmitted by the transmitting module of the identification rewritable tire state detector, and sends it to the controller of the setting apparatus. (12N) The tire pressure detecting host does not reset a new identification during the identification writing process. (12O) The identification is an old identification, and the setting apparatus reads the old identification from an old detector or reads the old identification of a tire state detector with a known identification into the setting apparatus through the input interface. (12P.1) The setting apparatus transmits the read old identification through the setting transmission module to the receiving interface, so that the micro-processing control module record the old identification in the memory unit after the receiving interface receives the signal. (12P.2) If the memory unit of the identification rewritable tire state detector originally already has a built-in identification, the setting apparatus overwrites and deletes the built-in identification, in this case the corresponding identification of the identification rewritable tire state detector is the old identification. (12P.3) After the setting apparatus completes the setting of the old identification of the identification rewritable tire state detector, the transmitting module of the identification rewritable tire state detector transmits the old identification that has completed writing to the setting apparatus wirelessly. (12P.4) Wherein the receiving interface is a low-frequency wireless receiver that is controlled by the micro-processing control module and receives an external low-frequency wireless signal. (12Q)

Claim 13: A identification writable tire pressure detecting device, which comprises a identification writable tire state detector for one of the tires mounted on a vehicle body, (13A) a tire pressure detecting host, mounted in the vehicle body, (13B) and a setting apparatus for setting a identification to be written to the identification writable tire state detector for the tire pressure detecting host to identify an external tire pressure detector and the identification writable tire state detector, wherein: (13C) the setting apparatus comprises: an

input interface for users to operate to receive or set the identification, (13D) which comprises a human-machine input interface or a bar-code reader; (13E.1) the human-machine input interface is an input keypad or a dip switch, (13E.2) through optical signals, the bar-code reader determines and reads the bar-code formed or affixed to the external tire pressure detector or another identification writable tire state detector, and the bar-code corresponds to the identification of the external tire pressure detector or another identification writable tire state detector; (13E.3) a controller that is coupled to the input interface to read the identification received or set by the input interface and then form an identification setting signal based on that identification; (13F) a setting transmitting module, which can be controlled by the controller to output the identification setting signal; (13G) the identification writable tire state detector comprises: a microprocessor control module including a rewritable memory unit; (13H) a sensing module, which is coupled to the microprocessor control module to accept its control and sense a tire pressure value, (13I) the sensing module includes an air pressure sensor, multiple acceleration sensors and a temperature sensor; (13J) a transmitting module, which is coupled to the microprocessor control module to accept its control and transmits the sensing results of the sensing module to the tire pressure detecting host mounted in the vehicle body as a radio frequency signal, (13K.1) wherein the radio frequency signal is 315MHz or 433MHz; (13K.2) a receiving interface, which is a wireless receiving interface, receives the identification setting signal transmitted wirelessly by the setting transmitting module, connects with the microprocessor control module to accept its control to receive the identification setting signal, and the microprocessor control module then stores the identification in the memory unit according to the received identification setting signal, so as to enable the identification to be written to the identification writable tire state detector; (13L) a power module that provides the power needed to operate the identification writable tire state detector, (13M) wherein, the setting

apparatus comprises a wireless receiver module electrically coupled to the controller, the wireless receiver module receives the radio frequency signal and then the controller reads the identification contained in the radio frequency signal, wherein the wireless receiver module receives the already written identification transmitted by the transmitting module of the identification writable tire state detector, and transmits the already written identification to the controller; (13N) wherein, the tire pressure detecting host does not reset a new identification during the writing process of the identification, (13O) wherein, the identification is an old identification and the setting apparatus reads the old identification from an old detector or reads the old identification of a tire pressure detector with a known identification into the setting apparatus through the input interface; (13P) the setting apparatus transmits the read old identification to the receiving interface through the setting transmitting module, so that the microprocessor control module records the old identification in the memory unit after receiving the signal from the receiving interface; (13Q.1) If a built-in identification already exists in the memory unit of the identification writable tire state detector, the setting apparatus rewrites the old identification and deletes the built-in identification, and at this time, the corresponding identification of the identification writable tire state detector is the old identification. (13Q.2) After the setting apparatus completes the setting of the old identification of the identification writable tire state detector, the transmitting module of the identification writable tire state detector transmits the already written old identification to the setting apparatus through wireless transmission. (13R.1) The controller then determines whether the already written identification transmitted is the same as the identification received by reading the input interface, (13R.2) and if not, the identification is read into the setting apparatus through the input interface again; (13S) wherein, the identification is read into the setting apparatus from the input interface through the human-machine input interface or the bar-code reader, (13T) wherein, the

receiving interface is a low-frequency wireless receiver, which is controlled by the microprocessor control module and receives an external low-frequency wireless signal. (13U.1) The wireless receiver module receives the wireless signal transmitted by the external tire pressure detector and the wireless signal transmitted by the transmitting module of the identification writable tire state detector, and transmits the received signal to the controller. The setting transmitting module accepts the control of the controller and transmits the low-frequency wireless signal to the receiving interface, (13U.2) wherein the frequency of the low-frequency wireless signal is 125 kHz. (13V) Wherein, when the old detector needs to be replaced, the vehicle manufacturer with the setting apparatus copies the old identification of the old detector to the identification writable tire state detector, without having to read the identification of the identification writable tire state detector and then reset the tire pressure detecting host in the vehicle body. (13W)

Claim 14: A identification writable tire pressure detecting device, which comprises a identification writable tire state detector for one of the tires mounted on a vehicle body, (14A) a tire pressure detecting host, mounted in the vehicle body, (14B) and a setting apparatus for setting a identification to be written to the identification writable tire state detector for the tire pressure detecting host to identify an external tire pressure detector and the identification writable tire state detector, wherein: (14C) the setting apparatus comprises: an input interface for users to operate to receive or set the identification, (14D) which comprises a human-machine input interface or a bar-code reader, (14E.1) the human-machine input interface is an input keypad or a dip switch; (14E.2) a controller that is coupled to the input interface to read the identification received or set by the input interface and then form an identification setting signal base on that identification; (14F) a setting transmitting module, which can be controlled by the controller and output the identification setting signal; (14G) the identification writable tire state detector comprises: a microprocessor control module, including a rewritable memory

unit; (14H) a sensing module, which is coupled to the microprocessor control module to accept its control and sense a tire pressure value, (14I) the sensing module includes an air pressure sensor, multiple acceleration sensors and a temperature sensor; (14J) a transmitting module, which is coupled to the microprocessor control module to accept its control and transmits the sensing results of the sensing module to the tire pressure detecting host mounted in the vehicle body as a radio frequency signal, (14K) wherein the radio frequency signal is 315MHz or 433MHz; (14L) a receiving interface, which is a wireless receiving interface, receives the identification setting signal transmitted wirelessly by the setting transmitting module, connects with the microprocessor control module to accept its control to receive the identification setting signal, and the microprocessor control module then stores the identification in the memory unit according to the received identification setting signal, so as to enable the identification to be written to the identification writable tire state detector; (14M) a power module that provides the power needed to operate the identification writable tire state detector, (14N) wherein, the setting apparatus comprises a wireless receiver module electrically coupled to the controller, the wireless receiver module receives the radio frequency signal and then the controller reads the identification contained in the radio frequency signal, wherein the wireless receiver module receives the already written identification transmitted by the transmitting module of the identification writable tire state detector, and transmits the already written identification to the controller; (14O) wherein, the tire pressure detecting host does not reset a new identification during the writing process of the identification, (14P) wherein, the identification is an old identification and the setting apparatus reads the old identification from an old detector or reads the old identification of a tire pressure detector with a known identification into the setting apparatus through the input interface; (14Q) the setting apparatus transmits the read old identification to the receiving interface through the setting

transmitting module, so that the microprocessor control module records the old identification in the memory unit after receiving the signal from the receiving interface; (14R) If a built-in identification already exists in the memory unit of the identification writable tire state detector, the setting apparatus rewrites the old identification and deletes the built-in identification, and at this time, the corresponding identification of the identification writable tire state detector is the old identification. (14S.1) After the setting apparatus completes the setting of the old identification of the identification writable tire state detector, the transmitting module of the identification writable tire state detector transmits the already written old identification to the setting apparatus through wireless transmission. (14S.2)

(III) Analysis of Invalidation Exhibits:

The publication dates of Exhibits 10, 11, and 12 and the Supplementary Exhibit 1 (which is not an independent new exhibit based on the same basic facts of the invalidation action, but only a supplemental exhibit to supplement the original invalidation exhibits, and is not a "new exhibit" referred to in Article 33 of the pre-amendment Intellectual Property Case Adjudication Act) and Exhibit 8 shown in the appendix are all earlier than the application date of the disputed patent (August 29, 2008), and can all be the prior art references of the disputed patent.

1. Technical Content and Main Figures of Exhibit 10:

(1) Exhibit 10 discloses a tire air pressure monitoring system comprising a tire pressure detecting device (10, 110) mounted to each tire (1, 2, 3, 4) of a vehicle (V), which has a transmitting section (10e and 10f, 110e and 110f) configured to wirelessly transmit the necessary data including the tire air pressure data measured by a pressure detecting section(10a and 110a) at a prescribed interval, and an tire air pressure alarm control device (5 and 11) that are mounted in the vehicle (V) for receiving the wireless signals transmitted from the tire air pressure detecting devices (10, 110). A transmission control section (10d, 110d) of the tire air pressure detecting device is configured to initiate a generally continuous transmission at a continuous transmission interval that is shorter than the prescribed interval

when the tire air pressure decreases by the above amount. It transmits a specified amount for a specified period of time and terminates the generally continuous transmission when the tire air pressure alarm control device is capable of reception of the wireless signal. In a traditional tire air pressure monitoring system, a rapid drop in tire air pressure can be detected, causing the tire air pressure monitoring system (or the transmitter of the tire air pressure monitoring system) to start up. However, if there is a rapid change in tire air pressure while the vehicle's ignition switch is off and the receiver in the receiving system is not operating, the receiver will not operate even if the transmitter is activated. This creates a dangerous situation where the receiver temporarily fails to recognize that the transmitter has been activated. In this case, the receiver determines that the transmitter is in a sleep state and the warning light dims. As a result, users who see the warning light dim may mistakenly believe that there is an abnormal tire air pressure state or a malfunctioning transmitter. The present invention is designed in view of the above problems. It is an object of the present invention to provide a tire air pressure monitoring system that is configured and arranged to reliably avoid a situation in which the receiver erroneously determines that the system is not functioning properly and issues a warning when the transmitter is activated in the transmission suspension mode. In order to achieve the above and other objects, the present invention provides a tire air pressure monitoring system, which includes the tire air pressure detecting device and the tire air pressure alarm control device. The tire air pressure detecting device is coupled to each tire of a vehicle and includes a pressure detecting section, a transmission section and a transmission control section. The pressure detecting section is configured and arranged to detect a tire air pressure. The transmission section is configured and arranged to transmit a wireless signal indicative of at least the tire air pressure detected by the pressure detecting section. The transmission control section is operatively coupled to the pressure detecting section and the transmission section, and is configured to selectively control transmission of wireless signal from the transmission section to selectively run a rest mode, a normal mode and a generally continuous

transmission mode. In the normal mode, the wireless signal is transmitted in at least at a first prescribed interval, and in the generally continuous transmission mode, the wireless signal is transmitted in a continuous transmission interval that is shorter than the first prescribed interval. A tire air pressure alarm control device is coupled to the vehicle and includes a receiving section and an alarm control section. The receiving section is configured and arranged to receive the wireless signal from the transmission section of the tire air pressure detecting device. The alarm control section is configured to signal an alarm when the tire air pressure is equal to or less than a prescribed pressure. The transmission control section of the tire air pressure detecting device is further configured to switch from the rest mode to the generally continuous transmission mode upon determination of decrease in the tire air pressure by an amount equal to or greater than a prescribed amount within a prescribed period of time, and to shift from the generally continuous transmission mode to the normal mode upon determination of a continuous transmission termination condition that indicates the receiving section of the tire air pressure alarm control device can receive the wireless signal (see Exhibit 10 [Content of the Invention]).

(2) In the tire air pressure monitoring system in first embodiment, the following effects can be obtained: ① The tire air pressure monitoring system of the present invention comprises a plurality of tire air pressure sensors 10 coupled to the tires 1, 2, 3 and 4, respectively. Each of the tire air pressure sensors 10 includes the transmitter or the transmitting section (i.e., the high frequency transmission circuit 10e and the antenna 10f) that is configured and arranged to wirelessly transmit the necessary data, including the tire air pressure data measured by the pressure sensor 10a at prescribed time intervals. The tire air pressure monitoring controller 5 is mounted in the vehicle V that is coupled to the antenna-equipped tuners 11 for receiving the wireless signals transmitted from the corresponding tire air pressure sensors 10. The tire air pressure monitoring controller 5 is configured to send out a tire air pressure decrease warning when at least one of the wirelessly inputted pieces of tire air pressure data indicates that

the tire air pressure is equal to or lower than the prescribed pressure. The ASIC 10d of the tire air pressure sensor 10 is configured to perform the generally continuous transmission from the transmitter of the tire air pressure sensor 10 to transmit necessary data through the wireless signal at the generally continuous transmission interval set to be shorter than the prescribed time intervals used in the normal mode when the tire air pressure is determined by the pressure sensor 10a to have decreased by an amount equal to or greater than a prescribed amount within a prescribed time. The ASIC 10d is also configured and arranged to terminate the generally continuous transmission when the antenna-equipped tuners 11 are confirmed to be capable of reception of the wireless signals. Therefore, it is possible to reliably avoid the situation in which the receiver erroneously determines the transmitter is in a sleep state and sends out a warning after the transmitter is activated from the transmission suspension mode. ② Each of the tire air pressure sensors 10 is provided with the traveling state detecting section (e.g., the acceleration sensor 10b and/or the roll switch 10c) that is configured and arranged to determine whether the vehicle V is traveling at a speed equal to or greater than the prescribed speed. The ASIC 10d is configured to terminate the generally continuous transmission when the traveling state detecting section determines that the vehicle V is traveling at a speed equal to or greater than the prescribed speed. It is therefore possible to accurately determine whether the receivers (e.g., the antenna-equipped tuners 11 and the tire air pressure alarm controller 5) are in the reception-enabled state merely by setting up the traveling state detecting section to each of the tire air pressure sensors 10 where the traveling state detecting section is merely a transmitter in the first embodiment of the present invention. ③ Since the traveling state detecting section comprises the acceleration sensor 10b and the roll switch 10c that are used to determine the transmission intervals in the normal mode with regular transmission cycle based on the magnitude of centrifugal force, it is possible to accurately determine whether the receiver is in the reception-enabled state without increasing costs by using existing detection devices provided in the tire air pressure sensor 10.

(3) Accordingly, in the tire pressure monitoring system according to the present invention, the generally continuous transmission of the required data is activated in the pressure sensor 10, when the tire pressure detected by the pressure sensor 10a has decreased by an amount equal to or greater than a prescribed amount within a prescribed time. The generally continuous transmission is terminate when the receiver is confirmed to be capable of reception of the wireless signals. Consequently, when the transmitter is activated as a result of a rapid decrease in tire pressure, the generally continuous transmission of subsequent tire pressure data continues thereafter. It is therefore possible to avoid the situation where a receiver in OFF state cannot temporarily detect that the transmitter has been activated. Therefore, it is possible to reliably avoid the situation in which the receiver incorrectly identifies and warns of a system malfunction when the transmitter is started up from the transmission suspension mode (refer to Exhibit 10 "Specific Implementation").

(4) The main figures of Exhibit 10: as shown in the attached drawings.

2. Technical Content and Main Figure of Exhibit 11:

(1) Exhibit 11 discloses a circuit and method for coupling a signal to a tire pressure monitoring system assembled inside a tire without a receiver. The circuit comprises a coupling circuit, which provides capacitive or electromagnetic coupling to transmit externally derived pulse streams to the microprocessor therein. In the case of capacitive coupling, this is achieved by connecting the external device generating the externally derived pulse streams to the valve stem of the tire and electrically ground. In the case of electromagnetic coupling, this is achieved by placing suitable external devices near the coupling circuit. The pulse stream carries information that can be used by the microprocessor to perform corresponding operational functions (see Exhibit 11 Abstract).

(2) The pressure sensor is an essential component of the direct tire pressure monitoring system (TPMS), as mandated by government regulations. For example, refer to 49 CFR Part 571, titled "Federal Motor Vehicle Safety Standards: Tire Pressure Monitoring Systems; Controls and Displays". A basic configuration of a direct TPMS typically includes various components, such as a transmitter (not necessarily a transceiver to reduce

system costs) and a microprocessor that can be assembled inside the tire. Most direct TPMS are powered by built-in battery. To reduce power consumption, TPMS is usually configured to run during relatively long silent intervals between transmissions. Operations with longer silent intervals between transmissions may lead to the following issues. Firstly, the sensor test time may be unacceptably long due to the long silent intervals between transmissions. Secondly, communication from external sources to the TPMS may encounter issues, because transmitters are usually not designed to receive signals, but only to transmit them. Communication from external sources or devices can be used to provide various types of information to the TPMS. For instance, training system to know the positions of sensors in the vehicle, such as the right front, left front, right rear, left rear and spare tire positions, or performing calibration of pressure sensing devices if necessary. Given the aforementioned issues, it would be desirable to provide reliable and low-cost circuits and technologies that allow communicating information, for example, to the microprocessor of the TPMS, to perform various operational functions, such as testing, calibration (if optional), TPMS training, without the need for incrementally costlier device, such as transceivers (see Exhibit 11 prior art).

(3) Generally, the present invention fulfills the foregoing needs by providing in one aspect thereof, a tire pressure monitoring system that can connect to a valve stem for supplying air to a respective tire. The system comprises a pressure sensing device. The system further includes a printed circuit board. A microprocessor is mounted on the printed circuit board and is electrically connected to the pressure sensing device. A connector is provided to electrically connect the printed circuit board to a respective valve stem end disposed within the wheel. A circuit may be connected to the valve stem to pass an externally-derived stream of pulses to the microprocessor upon connecting, for example, respective leads from an external device that generates the stream of externally-derived pulses to the valve stem and an electrical ground. The circuit is completed by capacitive coupling between the printed circuit board ground plane and the metal wheel rim. The stream of pulses carries information usable by

the microprocessor to perform a respective operational function. The present invention further fulfills the foregoing needs by providing in another aspect thereof, a tire pressure monitoring system assembled within the interior of a tire and including a pressure sensing device. The system further includes a microprocessor electrically coupled to the pressure sensing device. A circuit is configured to provide electromagnetic coupling to pass an externally-derived stream of pulses to the processor upon an external device that generates the stream of externally-derived of pulses being placed proximate the circuit providing the electro-magnetic coupling. The stream of pulses carries information usable by the microprocessor to perform a respective operational function. In yet another aspect of the present invention, a circuit for coupling signals to a tire pressure monitoring system assembled within the interior of a tire in the absence of a receiver is provided. The circuit comprises a coupling circuit that provides capacitive coupling to pass an externally derived stream of pulses to a microprocessor therein upon connecting respective leads from an external device that generates the stream of externally-derived pulses to a valve stem of the wheel and the metal wheel rim. The stream of pulses carries information usable by the microprocessor to perform a respective operational function. In yet another aspect of the present invention, a circuit for coupling signals to a tire pressure monitoring system assembled within the interior of a tire in the absence of a receiver is provided. A coupling circuit is configured to provide electromagnetic coupling to pass an externally derived stream of pulses to a processor therein upon an external device that generates the stream of externally derived pulses being placed proximate the coupling circuit, the stream of pulses carrying information usable by the microprocessor to perform a respective operational function. (see Exhibit 11 Content of the Invention).

(4) The main figures of Exhibit 11: as shown in the attached drawings.

3. Technical Content and Main Figure of Exhibit 12:

(1) Exhibit 12 discloses a tire pressure monitoring system capable of preventing incorrect registration of IDs due to radio interference. In this system, the tire pressure monitoring device is switched to ID registration

mode, and IDs are read out from bar-codes etc. and sent to the tire pressure monitoring device. The tire pressure monitoring device registers the received ID in its memory. After the necessary number of IDs have been registered, the tire pressure monitoring device is switched to normal mode before the ID registration operation is finished. On the other hand, when replacing tires, the ID is read from the bar-code affixed to the removed tire by using an ID registration tool and sent to the tire pressure monitoring device. The tire pressure monitoring device extracts the ID corresponding to the one from its memory, reads the ID from the bar-code affixed to the newly installed tire by using the ID registration tool, and sends it to the tire pressure monitoring device. The monitoring device is required to be registered therein (see Exhibit 12 Abstract).

(2) When the received signal level satisfies the predetermined conditions (judgement level), the control unit 154 will register the sensor ID contained in the received signal in the memory 155 (P7140, P7150). In this way, for traditional systems, the IDs of the tire pressure sensors installed on each tire of the vehicle are registered on the monitoring device side, and it is determined whether the signals received via the receiving device contain these IDs. The antenna 152 matches the ID registered in memory 155. In this case, the tire pressure status is determined based on the pressure signal received with that ID and the indicator device on indicator device 160 of antenna 152. This serves as the basis for decision-making. In this case, ID registration is used to avoid incorrect indications based on signals from tire pressure sensors of tires of vehicles traveling nearby. However, during the vehicle assembly process, as the ID registration of tire pressure sensors is carried out in the situations where many vehicles are moving on the road, there is a radio interference problem, that is, one vehicle may receive ID signals from the tire pressure sensors of other vehicles, leading to mistaken registrations. This problem also exists in situations where sensor ID is re-registered at repair shops, etc. (see Exhibit 12 Prior Art).

(3) It is therefore an object of the present invention to prevent mistaken ID registration in a tire pressure monitoring System. For this purpose, in accordance with an aspect of the present invention, there is provided a tire

pressure sensor ID registration method, which reads ID information readable through some device or through human eyes to write the ID information in an ID storage unit of each of air pressure sensors and in the ID storage unit of tire pressure sensor and tire pressure monitoring device. Specifically, in this invention, for example, this method reads IDs represented by bar-codes and writes them into each ID storage unit of each tire pressure sensor and tire pressure monitoring system. In this specific way, the ID of the tire pressure sensor is stored in the tire pressure monitoring device on the basis of the bar-code, which eliminates the conventional problem in that mistaken registration occurs due to the radio interference. As employable optically-readable information other than the bar-code, there are QR codes, maxi codes, CP codes, PDF417, Code 49, Code 16K, encoder blocks and others. In the case of the employment of optically readable information (information holding means) such as a bar code, an optical information reader such as a bar-code reader may be used for the readout of the ID (see Exhibit 12 Content of the Invention).

(4) The main figures of Exhibit 12: as shown in the attached drawings.

4. Technical Content and Main Figure of the Supplementary Exhibit 1:

(1) Supplementary Exhibit 1 discloses a vehicle positioning and tire condition monitoring system with differential speed sensing of the left and right wheels. It primarily integrates a wireless tire pressure detecting system with an inertial positioning system and makes use of the shared micro-controller, display terminal, and acceleration sensor to reduce the cost and save vehicle interior space. It detects the rotation speeds of the left and right wheels via the acceleration sensor, to calculate the speed difference between them, thus obtaining the vehicle's motion speed and steering direction, and achieving the purpose of vehicle positioning (see the Supplementary Exhibit 1 Abstract).

(2) Currently, TPMS systems can be divided into active and passive types. RFID is used in passive systems, while active systems involve mounting sensors on the wheel rims and receivers on the vehicle computer at the driver's side. Active TPMS uses the 433.92MHz frequency band and is compatible with tires of all brands. However, because the sensors require power, they are subject to the life of the battery which is around 5 years

under normal use. Passive TPMS systems do not require external power supply, and install RFID tags inside the tire or fix them to the wheel rim instead. TI, Philips, Freescale and other vendors have launched tire pressure detection systems, which require the integration of temperature sensors, pressure sensors, accelerometers, microcomponents, antennas, and so on. The power management at the transmitter end is improved to reduce the battery energy consumption of the system and extend the system's lifespan. Four low-frequency triggers will be installed separately outside each of the four tires as a mechanism to control the battery energy consumption of the wireless sensors, so that the sensor circuit system will completely enter into sleep mode to reduce energy consumption when the vehicle stops. Additionally, due to the common practice of swapping front and rear tires during vehicle maintenance to achieve even wear, determining the position of the swapped tires becomes an important challenge for this system. In this study, an automatic tire location mechanism (Auto - location) has been successfully designed to address issues such as the complicated operation procedures caused by the inability of similar foreign products to automatically change tire ID codes during tire swapping and maintenance procedures (see the Supplementary Exhibit 1 Prior Art).

(3) The first objective of this invention is to automatically monitor the tire pressure in real time while the vehicle is in motion and alert for tire leaks and low pressure to ensure driving safety. It serves as a safety alert system for safeguarding the lives of drivers and passengers. In the Tire Pressure Monitoring System (TPMS) of vehicles, it mainly comprises a pressure sensor (a), a temperature sensor (b), and a signal processing unit (c) installed inside the tires; a TPMS transmission module composed of an RF transmitter (d), and components installed on the dashboard, including an RF receiver (e), a digital signal processing unit (f), and a liquid crystal display (LCD) (g). It is a chip system module integrating semiconductor pressure sensors, semiconductor temperature sensors, digital signal processing units, and power managers. To save power for the system, the TPMS transmission module is designed to operate on a single battery for 3 to 5 years. Most of the time, the system enters into sleep mode to save

power and extend the battery life. The second objective of this invention is to detect the rotational speed of the left and right wheels, calculate the speed difference between them, thereby obtaining the vehicle's speed and direction, achieving the functionality of WSS positioning, and increasing the positioning speed to over ten times per second, thereby achieving the goal of vehicle positioning, by utilizing dual-axis acceleration sensors installed on the left and right wheels of the vehicle, together with the TPMS mentioned above (see the Supplementary Exhibit 1 Content of the Invention).

(4) Main schematic figures of the Supplementary Exhibit 1: as shown in the attached drawings.

5. Technical content and main schematic figures of Exhibit 8:

(1) Exhibit 8 provides a method for replacing at least one tire of a vehicle on the first wheel in the first wheel position. The vehicle is equipped with a tire pressure monitoring system that has a first sensor unit having a first ID code mounted to the first wheel. The first sensor unit is interrogated. Either a nominal result or a faulted result of the interrogation is detected. At least one tire is removed from the first wheel. If the nominal result is detected during the interrogating step, then the first sensor unit is re-interrogated. Either a nominal result or a faulted result of the re-interrogation is detected. If either of the interrogation or the re-interrogation provides a faulted result then the first ID code is cloned into a replacement sensor unit and then the replacement sensor unit is swapped for the first sensor unit on the first wheel. A new tire is installed onto the first wheel. The first wheel is installed onto the vehicle in the first wheel position. (See Exhibit 8 Abstract).

(2) The present invention 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. Real-time tire pressure monitoring systems (TPMS) can be used for the tires of transportation vehicles such as motor vehicles to alert a driver when proper tire inflation is not being maintained. Proper tire inflation is important to increase tire life, maximize fuel economy, and optimize tire performance in terms of handling, braking distance, and tire integrity. A

self-contained pressure/temperature sensor unit is typically mounted to a wheel in communication with the interior of the tire. Since the wheel and the pressurized interior of a tire are not stationary, the sensor unit usually utilizes a radio transmitter to provide sensor data to a control module in the vehicle. Since each wheel typically has its own respective sensor unit which communicates with a single control module and since nearby vehicles may use the same transmission frequencies and protocols, the sensor transmissions are differentiated by providing a unique ID code within each sensor which is included in the transmissions. The control module must be configured to associate certain ID codes with respective wheel positions on the vehicle (e.g., left-front, right-front, left-rear, and right-rear for a 4-wheel passenger vehicle). Thus, when a particular pressure sensor indicates that an inadequate pressure is being sensed in its respective tire, the control module can alert the driver as to which tire is affected. The presence of sensor units of tire pressure monitoring systems in or on the wheels of vehicles gives rise to certain difficulties when tires or wheels are repaired or replaced. The act of removing a tire from a wheel may result in inadvertent damage to the sensor unit. If it is noticed that a sensor unit is inoperative after tire or wheel servicing, then it may be difficult or impossible to determine whether the unit was faulty prior to or during servicing. Yet responsibility for assuming the cost of replacing the sensor unit may depend on a determination of when the unit was damaged. When a sensor unit is replaced, the control module of the prior art has been reconfigured with a new ID code embedded in the replacement sensor so that its transmissions can be associated with the correct wheel position on the vehicle. The control module is typically placed into a "learning mode" and the respective sensor units are made to transmit their ID codes in sequence to the control module. However, this process adds time, complexity, and expense when servicing the TPMS system. (see background of the invention in Exhibit 8).

(3) The present invention has the advantage of providing a simple and efficient process for servicing tires in a tire pressure monitoring system so that the time at which a pressure sensing unit was damaged can be determined and reconfiguring of the control module can be avoided. In

one aspect of the invention, a method is provided for replacing at least one tire of a vehicle on the first wheel in the first wheel position, the vehicle is equipped with a tire pressure monitoring system that has a first sensor unit having a first ID code mounted to the first wheel. The first sensor unit is interrogated. Either a nominal result or a faulted result of the interrogation is detected. At least one tire is removed from the first wheel. If the nominal result is detected during the interrogating step, then the first sensor unit is re-interrogated. Either a nominal result or a faulted result of the re-interrogation is detected. If either of the interrogation or the re-interrogation provide a faulted result then the first ID code is cloned into a replacement sensor unit and then the replacement sensor unit is swapped for the first sensor unit on the first wheel. A new tire is installed onto the first wheel. The first wheel is installed onto the vehicle in the first wheel position. (see contents of the invention in Exhibit 8).

(4) Main schematic figure of Exhibit 8: as shown in the attached drawings.

(IV) The combination of Exhibits 1 and 12 is sufficient to prove that Claims 2 and 3 of the disputed patent lack an inventive step:

1. The combination of Exhibits 1 and 12 is sufficient to prove that Claim 2 of the disputed patent lacks an inventive step:

(1) Paragraph [0157] of the specification and figure 1 in Exhibit 12 disclose that the air pressure sensors 10, 20, 30 and 40 are mounted on tires and a tire pressure monitoring apparatus 50 is mounted on the body of a vehicle, which corresponds to the technical feature 2A "an identification rewritable tire pressure detecting apparatus comprising an identification rewritable tire state detector mounted on one of the multiple tires of a vehicle body" and technical feature 2B "a tire pressure detecting host is mounted on the body of a vehicle" in Claim 2 of the disputed patent. In addition, paragraphs [0173], [0175] and [0180] of the specification and figures 1, 2 and 9 in Exhibit 12 disclose that the ID registration tool 60 writes an ID to air pressure sensors 10, 20, 30, 40 and tire pressure monitoring apparatus 50, and the ID is used by the tire pressure monitoring apparatus 50 to identify the air pressure sensor, which corresponds to the technical feature 2C "and a setting apparatus used to set an identification to be written into the identification rewritable tire state detector, where the

identification is used by the tire pressure detecting host to identify an external tire pressure detector and the identification rewritable tire state detector, wherein:" in Claim 2 of the disputed patent.

(2) Paragraph [0160] of the specification and figure 2 in Exhibit 12 disclose that the ID registration is composed of a bar-code reading unit 61 that is operated by users to receive or set the ID, which corresponds to the technical feature 2D "the setting apparatus comprises: an input interface for users to operate to receive or set the identification" and technical feature 2E "the input interface comprises a human-machine input interface or a bar-code reader" of Claim 2 of the disputed patent. In addition, paragraphs [0173], [0175] and [0180] of the specification and figures 1, 2 and 9 in Exhibit 12 disclose that the control unit 65 is connected to the bar-code reading unit 61 to read the ID received or set by the bar-code reading unit, and then the ID is formed into an ID setting signal, which is output by the ID transmitting unit 62 under the control of the control unit, corresponding to the technical feature 2F "a controller, which connects to the input interface to read the identification received or set by the input interface, and then forms an identification setting signal" and technical feature 2G "a setting transmission module which can be controlled by the controller to output the identification setting signal" in Claim 2 of the disputed patent.

(3) Paragraphs [0157] and [0173] of the specification and figure 1 in Exhibit 12 disclose that the air pressure sensor is composed of a control unit 15, a rewritable ID memory 12 and a pressure sensor 11, and the latter two are connected to the control unit 15 to be controlled by the control unit for sensing a tire pressure value, which corresponds to the technical feature 2H "the identification rewritable tire state detector comprising: a micro-processing control module having a readable and rewritable memory unit" and technical feature 2I "a sensing module, which is connected to the micro-processing control module. It is controlled by the micro-processing control module to sense a tire pressure value" in Claim 2 of the disputed patent. In addition, paragraphs [0157], [0173], [0175] and [0180] of the specification and figures 1, 2 and 9 in Exhibit 12 disclose that the transmitting circuit 13 is connected to the control unit 15, and it is

controlled by the control unit to transmit the sensing result from the pressure sensor 11 to the tire pressure monitoring apparatus 50 mounted on the vehicle body through the transmitting antenna 16 as a RF signal, which corresponds to the technical feature 2J "a transmitting module, which is connected to the micro-processing control module. It is controlled by the micro-processing control module to transmit the sensing result from the sensing module to the tire pressure detecting host mounted on the vehicle body as a RF signal" in Claim 2 of the disputed patent.

(4) Paragraphs [0157], [0173], [0175] and [0180] of the specification and figure 9 in Exhibit 12 disclose that "the transmitting/receiving circuit 13a is connected to the control unit 15. It is controlled by the control unit to receive an ID setting signal, and the control unit stores the ID in the ID memory 12 based on the received ID setting signal to write the ID into the air pressure sensor 10", which corresponds to the technical feature 2K "a receiving interface, which is connected to the micro-processing control module. It is controlled by the micro-processing control module to receive the identification setting signal, and then the micro-processing control module stores the identification in the memory unit based on the received identification setting signal, so as to enable the identification to be written into the identification rewritable tire state detector" in Claim 2 of the disputed patent. In addition, paragraphs [0157], [0173], [0175] and [018 0] of the specification and figures 1, 2 and 9 in Exhibit 12 disclose that the power supply battery 14 provides the power required for the operation of the air pressure sensor 10, which corresponds to the technical feature 2L "a power module, which provides the power required for the operation of the identification rewritable tire state detector" in Claim 2 of the disputed patent.

(5) Paragraphs [0058] and [0217] of the specification and figure 34 in Exhibit 12 disclose that, assuming a transmitting unit of an air pressure sensor of any tires is broken, the new air pressure sensor can read the air pressure sensor ID at the corresponding tire position registered in the tire pressure monitoring apparatus in the vehicle body side by using the ID registration tool, and transmit it as a set value to the newly replaced air pressure sensor to be stored therein. The ID registration tool determines whether the air

pressure sensor ID has been written. In case of no completion of the ID registration (P60: NO), the step P40 and subsequent processing are implemented repeatedly. This corresponds to the part that doesn't cover the wireless receiving module in technical feature 2M, "after the identification rewritable tire state detector completes writing the identification to the memory unit, the receiving module receives the completed written identification transmitted by the transmitting module of the identification rewritable tire state detector, and transmits the completed written identification to the controller of the setting apparatus. The controller then determines whether the transmitted written identification matches the identification received by the input interface" and technical feature 2N "if the result is no, the identification is re-read into the setting apparatus via the input interface" in Claim 2 of the disputed patent. In addition, paragraph [0277] of the specification and figure 66 in Exhibit 12 have disclosed that in step P4860, if an ID has already registered in the air pressure sensor's memory, the ID registration is conducted by overwriting. Since the sensor ID has been registered in the tire pressure monitoring apparatus 50 in a state associated with the tire position at the initial registration, there is no need to carry out the re-registration. According to paragraph [0278] of the specification in Exhibit 12, "according to the tenth embodiment, the re-registration due to the tire replacement can be carried out with respect to only the sensor of the tire to be newly mounted and, hence, a minimum ID registration operation is needed", it can be seen that the ID re-registration operation can be performed only for a single sensor to be mounted, and among the various embodiments presented in Exhibit 12, there is also implementation where the ID registration tool 60 is only used to overwrite the ID code for the air pressure sensor 10 without setting a new ID code for the tire pressure monitoring apparatus 50, which corresponds to the technical feature 2O "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" in Claim 2 of the disputed patent.

(6) Although Exhibit 12 does not disclose the content regarding "the wireless receiving module" in technical feature 2M "wherein the setting apparatus

comprises a wireless receiving module" in Claim 2 of the disputed patent, paragraph [0057] of the specification in Exhibit 12 stated that "the ID registration method can also be changed from wired transmission to radio transmission, and the ID registration is sufficiently achievable by means of a design, such as enhancing the radio directivity in registering an ID in an air pressure sensor of each tire". According to the teachings or suggestions in the preceding paragraph, changing the ID registration tool to a wireless receiving module to receive the written ID is just a minor change from wired receiving to wireless receiving, which does not produce unexpected effects. So persons having ordinary skill in the art can achieve the technical feature simply by changing the wired transmission that connects the tire pressure monitoring apparatus 50 to sensors 10, 20, 30 and 40 via the signal line 63a disclosed in Exhibit 12 to a connection from the tire pressure monitoring apparatus to sensors established through the wireless transmitting/receiving module to complete the ID registration.

(7) In summary, Exhibit 12 has disclosed most technical features in Claim 2 of the disputed patent, except for the content regarding the wireless receiving module in technical feature 2M, while the part can be easily arrived at by persons having ordinary skill in the art through minor changes according to the teachings or suggestions in Exhibit 12, so Exhibit 12 is sufficient to prove that Claim 2 of the disputed patent lacks an inventive step. In addition, both Exhibit 1 (the patent publication) and Exhibit 12 belong to the technical field of tire pressure detecting, and both of which have commonality in function and effect as they have the same function of transferring tire pressure sensing signals. There is a motivation to combine Exhibits 1 and 12. So the combination of Exhibits 1 and 12 is sufficient to prove that Claim 2 of the disputed patent lacks an inventive step.

(8) The plaintiff claims that the technical means disclosed in paragraph [0058] of the specification in Exhibit 12 still involves reading and editing the tire pressure monitoring apparatus 50 to obtain the air pressure sensor ID. In addition, the tire pressure monitoring apparatus 50 in Exhibit 12 can be likened to the tire pressure detecting host in this case. However, the limited contents in Claim 2 of the disputed patent do not involve the tire pressure

detecting host in the reading and writing processes, the technical means disclosed in Exhibit 12 is different from that in this case, and the technical means of Claim 2 has not been disclosed. In addition, the technical feature "the tire pressure detecting host does not reset a new identification during the identification writing process" that distinguishes this case from Exhibit 12 has the beneficial effects such as avoiding the inconvenience caused to the user due to maintenance during the process of reading and editing the tire pressure monitoring apparatus 50. Upon investigation, paragraph [0277] of the specification and figure 66 in Exhibit 12 have disclosed the technical content "in step P4860, if an ID has already registered in the air pressure sensor's memory, the ID registration is conducted by overwriting. Since the sensor ID has been registered in the tire pressure monitoring apparatus 50 in a state associated with the tire position at the initial registration, there is no need to carry out the re-registration. The ID re-registration operation can be performed only for a single sensor to be mounted", which shows that among the various embodiments presented in Exhibit 12, there is also implementation where the ID registration tool 60 is only used to overwrite the ID code for the air pressure sensor 10 without setting a new ID code for the tire pressure monitoring apparatus 50 in paragraph [0277] of the specification and figure 66. Therefore, Exhibit 12 has indeed disclosed the distinguishing technical feature "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" in Claim 2 of the disputed patent, and the plaintiff's claim is inadmissible.

(9) The plaintiff also claims that the technical feature "the tire pressure detecting host does not reset a new identification during the identification writing process" stated in Claim 2 of the disputed patent must simultaneously meet the following requirements. Requirement 1: the setting apparatus 20 must perform an identification writing action on the identification rewritable tire state detector 10. Requirement 2: the tire pressure detecting host does not reset a new identification. Requirement 3: no signal connection is established between the setting apparatus 20 and the tire pressure detecting host. According to paragraphs [0058], [0277] and [0278] of the specification of Exhibit 12, there is a communication

connection between the ID registration tool 60 and the tire pressure monitoring apparatus 50, therefore the requirement 3 has not been met (File 1 of the Court, pages 535 and 537). Upon investigation, the aforementioned requirements 1 and 2 correspond to the technical features 2C and 2O in Claim 2 of the disputed patent respectively. However, the requirement 3 "no signal connection is established between the setting apparatus 20 and the tire pressure detecting host" is not recorded in the specification of the disputed patent. And according to the figure 1 of the disputed patent, only the setting apparatus 20 is wirelessly connected to the identification rewritable tire state detector 10, which does not indicate the tire pressure detecting host. So the plaintiff's use of requirement 3 to interpret the Claim 2 of the disputed patent obviously improperly increases the restrictions of the Claim and is inadmissible.

(10) Although the plaintiff claims that only when no signal connection is established between the setting apparatus 20 and the tire pressure detecting host, can the tire pressure detecting host not reset a new number during the identification writing process, in fact, our setting apparatus does not communicate with the tire pressure detecting host when setting an identification for the tire state detector 10. The plaintiff's claim that "not resetting a new identification" would be equivalent to "not establishing a signal connection" is a conclusion drawn based on the communication connection status of its own products during the identification setting process. But in fact, even if there is a communication connection between tire pressure detecting host and setting apparatus 2 of the tire pressure detecting host, a new identification will not be set for the tire pressure detecting host as long as the setting apparatus does not give any "set an identification" instruction or command to the tire pressure detecting host. According to figure 33 in Exhibit 12, the ID registration tool 60 is connected to the tire pressure monitoring apparatus 50 via signal lines 57 and 63. The plaintiff deduces that Exhibit 12 does not disclose requirement 3 based on the fact that the telecommunication connection status of figure 33 in Exhibit 12 is different from that of its own products, and then determines that Exhibit 12 does not disclose the technical feature 2O "the tire pressure detecting host does not reset a new identification

during the identification writing process" in Claim 2 of the disputed patent, which is, therefore, not credible.

2. The combination of Exhibits 1 and 12 is sufficient to prove that Claim 3 of the disputed patent lacks an inventive step:

(1) Paragraph [0054] of the specification in Exhibit 12 discloses that the ID setting unit can be achieved through such a key-manipulated manner that a field operator inputs and sets an ID according to an operating instruction each time, which corresponds to the technical feature 3A "the human-machine input interface of the identification rewritable tire pressure detecting apparatus as described in Claim 2 is an input keyboard or a dip switch" in Claim 3 of the disputed patent. Paragraphs [0157] and [0173] of the specification in Exhibit 12 have disclosed that the air pressure sensor 10 is composed of a pressure sensor 11 for detecting an air pressure of a tire, an ID memory 12 for storing a sensor ID in advance, a transmitting circuit 13, a power supply battery 14, a control unit 15 and an antenna 16, and the air pressure sensor 10 has a transmitting/receiving circuit 13a. Paragraph [0297] of the specification in Exhibit 12 discloses that the receiving circuit in the air pressure sensor 10 and the tire pressure monitoring apparatus 50 is capable of receiving only a specific frequency-band signal different from a common pressure detection signal when receiving a trigger signal for setting an ID registration mode, and an ID set value is transmitted as this specific frequency-band from the tool 60. The transmitting/receiving circuit 13a and the control unit 15 in Exhibit 12 is equivalent to the receiving interface and the micro-processing control module in 3B of Claim 3 of the disputed patent. Although the receiving circuit 13a in Exhibit 12 is not limited to a low frequency wireless receiver, Exhibit 12 has disclosed that the receiving circuit can only receive a specific frequency-band signal, so the "low frequency wireless receiver" is only a variation with minor change of the content regarding "the receiving circuit 13a receives a specific frequency-band" in Exhibit 12. The minor change of the content regarding "the receiving circuit 13a receives a specific frequency-band" in Exhibit 12 is equivalent to the technical feature 3B "the receiving interface is a low frequency wireless receiver that is controlled by the micro-processing control

module to receive an external low frequency wireless signal" in Claim 3 of the disputed patent.

(2) Paragraph [0058] of the specification of Exhibit 12 discloses that under the assumption that the transmitting unit of an air pressure sensor at any one of tires is broken, for the new air pressure sensor, the ID of that air pressure sensor at the corresponding tire position registered in the tire pressure monitoring apparatus in the vehicle body side can be read out through the use of the ID registration tool and is transmitted as a set value to the new air pressure sensor to be stored there; paragraphs [0157], [0160], [0173], [0175] and [0180] of the specification and Figures 1, 2 and 9 of the drawings of Exhibit 12 have disclosed that the ID registration tool 60 comprises: a barcode reading unit 61 for users to receive or set the ID, and an air pressure sensor 10, including a transmitting/receiving circuit 13a, which corresponds to the technical feature 3C "where, the ID is an old ID and the setting apparatus reads the old ID from an old detector or reads the old ID of a tire pressure detector with a known ID into the setting apparatus through the input interface" and the technical feature 3D "the setting apparatus transmits the old ID read to the receiving interface through the setting transmission module, so that the micro-processing control module records the old ID in the memory unit after receiving it from the receiving interface" of Claim 3 of the disputed patent.

(3) Paragraph [0074] of the specification of Exhibit 12 has stated that the ID re-registration unit re-registers the air pressure sensor ID into the memory to replace the previously registered ID effectively, which is an available registration method for effective replacement, for example, (1) overwrites the previously registered ID with the newly received registration ID; paragraph [0058] of the specification of Exhibit 12 has disclosed that under the assumption that the transmitting unit of an air pressure sensor at any one of tires is broken, for the new air pressure sensor, the ID of that air pressure sensor at the corresponding tire position registered in the tire pressure monitoring apparatus in the vehicle body side can be read out through the use of the ID registration tool and is transmitted as a set value to the new air pressure sensor to be stored there; paragraph [0057] of the specification of Exhibit 12 has disclosed that the ID registration can also

be enabled through radio transmission instead of wired transmission, which corresponds to the technical feature 3E "If a built-in identification already exists in the memory unit of the identification rewritable tire state detector, the setting apparatus will rewrite the old identification and deletes the built-in identification, and at this time, the corresponding identification of the identification rewritable tire state detector is the old identification. After the setting apparatus completes the setting of the old identification of the identification rewritable tire state detector, the transmitting module of the identification rewritable tire state detector transmits the completely written old identification to the setting apparatus through wireless transmission." of Claim 3 of the disputed patent.

(4) In summary, the technical features 3A, 3C, 3D, 3E and 3B defined in Claim 3 of the disputed patent have been disclosed by Exhibit 12, and the difference demonstrated in technical feature 3B can be easily arrived at by persons having ordinary skill in the art in accordance with Exhibit 12 with simple changes. Therefore, Exhibit 12 is sufficient to prove that Claim 3 of the disputed patent lacks an inventive step. In addition, persons having ordinary skill in the art would be motivated to combine Exhibits 1 and 12, as mentioned previously, so the combination of Exhibits 1 and 12 is sufficient to prove that Claim 3 of the disputed patent lacks an inventive step.

(5) The plaintiff claims that Exhibit 12 only discloses that "the receiving circuit 13a receives a specific frequency-band signal" and does not disclose the "low-frequency wireless signal" of Claim 3, however, paragraph [0058] of the specification of Exhibit 12 states that "the ID of the air pressure sensor at the corresponding tire position registered in the tire pressure monitoring apparatus in the vehicle body side can be read out through the use of the ID registration tool and is transmitted as a set value to the new air pressure sensor to be stored there", in contrast, the technical feature of Claim 3 is "the setting apparatus (20) reads the old identification from an old detector", and the "tire air pressure monitoring apparatus 50" in Exhibit 12 is equivalent to the "tire pressure detecting host" in this case and not the "detector", therefore, the read object of Exhibit 12 is different from the read object of Claim 3 of the disputed patent, and compared with

Exhibit 12, Claim 3 of the disputed patent has the advantage of avoiding the inconvenience to users caused by the remained need for involving a repair shop during the process of reading and editing the tire pressure monitoring apparatus. However, paragraph [0277] of the specification in combination of Figure 66 of the drawings of Exhibit 12 has disclosed "In the step P4860, if an ID has already registered in the air pressure sensor ID memory, the ID registration can be conducted by overwriting. Since the sensor ID has been registered in the tire pressure monitoring apparatus 50 in a state associated with the tire position at the initial registration, there is no need to carry out the re-registration. ID re-registration can be performed only for a single sensor to be mounted", and it can be seen that among the various embodiments proposed in Exhibit 12, there is also implementation where the ID registration tool 60 is used to overwrite the ID code of the air pressure sensor 10 without setting a new ID code to the tire pressure monitoring apparatus 50. Therefore, Exhibit 12 has indeed disclosed the technical features "where, the tire pressure detecting host does not reset a new identification during the writing process of the identification" and "the setting apparatus reads the old identification from an old detector" of Claim 3 of the disputed patent. In addition, paragraph [0297] of the specification of Exhibit 12 has disclosed that the receiving circuit 13a is capable of receiving only a specific frequency band different from a common pressure detection signal when receiving a trigger signal for setting an ID registration mode, and paragraph [0297] of the specification of Exhibit 12 has disclosed that "…is capable of receiving only a specific frequency band signal different from a common pressure detection signal when receiving a trigger signal for setting an ID registration mode, and an ID set value is transmitted as this specific frequency-band from the tool 60, that the electric wave directivity from the tool 60 is enhanced to prevent the radio interference, or that an information transmission medium (for example, ultrasonic wave) with a high directivity is employed for the ID registration", where the ultrasound covers frequencies above the upper threshold (20kHz) of frequencies that humans can hear, and compared with the ultrasonic frequency range, 315MHzor 433MHz radio frequency signals are indeed low-frequency

wireless signals, and the disclosure is sufficient to reflect the technical feature "low frequency wireless signal" of Claim 3 of the disputed patent. In addition, Claim 3 of the disputed patent does not define the frequency of the low frequency wireless signal, so the technical feature "low frequency wireless signal" in Claim 3 of the disputed patent is only a variation with minor change of "the receiving circuit 13a receives a specific frequency band signal" in Exhibit 12. Therefore, the plaintiff's claims are unfounded.

(V) The combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claims 6, 7, 11 and 12 of the disputed patent lack an inventive step:

1. The combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 6 of the disputed patent lacks an inventive step:

(1) Most of the technical description of Claim 6 are the same with that of Claim 3 of the disputed patent, and the only difference is that Claim 6 further defines the technical feature 6I "the sensing module includes an air pressure sensor, multiple acceleration sensors, a temperature sensor or a magnetic sensor". In addition, the technical content in Claim 3 can be easily arrived at by persons with ordinary skill in the relevant technical field based on the combination of Exhibits 1 and 12, as mentioned previously.

(2) The column 5, line 60 to column 6, line 1 of the specification and Figure 4 of the drawings of Exhibit 10 have disclosed that the tire air pressure sensor 10 comprises a pressure sensor 10a, an acceleration sensor 10b and a temperature sensor 10g, and the pressure sensor 10a is configured and arranged to detect the tire air pressure, and the column 4, line 58 to column 5, line 14 of the specification and Figure 5 of the drawings of Exhibit 11 have disclosed that the tire pressure monitoring system 10 contains the circuit 500, in which a magnetic sensor 202 is used. In addition, according to paragraphs [0157], [0173], [0175] and [0180] of the specification and figures 1, 2 and 9 of the drawings of Exhibit 12, the air pressure sensor 10 comprises: a pressure sensor 11 for detecting an air pressure, which corresponds to the technical feature 6I "the sensing module includes an air pressure sensor, multiple acceleration sensors, a temperature sensor or a magnetic sensor" of Claim 6.

(3) Since Exhibits 1, 10, 11 and 12 all belong to the field of tire pressure detection technology and are relevant in the field, and Exhibits 1, 10, 11 and 12 all cover the function of transmitting tire pressure sensing signals and have commonality in function and effect, therefore, persons having ordinary skill in the art would be motivated to combine Exhibits 1, 10, 11 and 12. Furthermore, except for technical feature 6I, the other technical features in Claim 6 are the same with those in Claim 3 of the disputed patent, and the combination of Exhibits 1 and 12 is sufficient to prove that Claim 3 of the disputed patent lacks an inventive step, as mentioned previously, and the combination of Exhibits 10, 11 and 12 has indeed disclosed the technical feature 6I of Claim 6 of the disputed patent, therefore, the combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 6 of the disputed patent lacks an inventive step.

(4) The plaintiff claimed that Claim 6 of the disputed patent additionally covers the specific technical features "wherein, the tire pressure detecting host does not reset a new identification during the writing process of the identification" and "the setting apparatus reads the old identification from an old detector" in contrast to Exhibit 12, so the combination of Exhibits 1, 10, 11, and 12 cannot prove that Claim 6 of the disputed patent lacks an inventive step. However, as mentioned in 2 of (IV), Exhibit 12 has indeed disclosed the technical features "wherein, the tire pressure detecting host does not reset a new identification during the writing process of the identification" and "the setting apparatus reads the old identification from an old detector" of Claim 6 of the disputed patent, so the plaintiff's claim is unfounded.

2. The combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 7 of the disputed patent lacks an inventive step:

(1) Most of the technical description in Claim 7 is equivalent to that in Claim 6 of the disputed patent. The only difference is that Claim 7 additionally defines the technical feature 7H.2 "wherein the radio frequency signal is 315MHz or 433MHz" and the technical feature 7K "the receiving interface is a wireless receiving interface, which receives the identification setting signal transmitted wirelessly by the setting transmission module, and the setting apparatus obtains the identification in one of two ways: 1)

receiving the radio frequency wireless signal through a wireless receiving module, and then the controller reads the identification contained in the radio frequency wireless signal; 2) accepting human triggering or setting through the human-machine input interface, and then the controller reads the identification triggered or set by the human; and the micro-processing control module records the identification in the memory unit or overwrites an old identification stored in the memory unit according to the received identification setting signal." In addition, the technical description of Claim 6 can be easily arrived at by persons with ordinary skill in the relevant technical field based on the combination of Exhibits 1, 10, 11 and 12, as mentioned previously.

(2) In addition, Exhibit 12 has disclosed that the transmission circuit 13 is connected to the control unit 15 and controlled by it to transmit the sensing data from the pressure sensor 11 to the tire pressure monitoring apparatus 50 installed in the vehicle body via radio frequency signal, and "the frequency for RF signal transmission for tire pressure detectors is 315MHz or 433MHz" is general knowledge in the technical field related to tire pressure detector. This is demonstrated in the Supplementary Exhibit 1 submitted by the defendant, in which Lines 18 and 19 on Page 15 of the specification have disclosed that "the standard transmission frequency of RF is 315MHz in North America and 433. 92MHz in Europe". Therefore, the difference in technical features for this part can be easily arrived at by persons with ordinary skill in the technical field based on Exhibit 12 together with general knowledge, that is, it is equivalent to the technical feature 7H.2 "wherein the radio frequency signal is 315MHz or 433MHz" of Claim 7 of the disputed patent; Furthermore, paragraphs [0054], [0057], [007 4], [0157], [0173], [0180] and [0297] of the specification and Figures 1, 2, and 9 of the drawings of Exhibit 12 have disclosed that the air pressure sensor 10 includes a transmitting/receiving circuit 13a, the receiving circuit in the sensor 10 and the tire pressure monitoring apparatus 50 is capable of receiving only a specific frequency-band signal different from a common pressure detection signal when receiving a trigger signal for setting an ID registration mode, and an ID setting value is transmitted via this specific

frequency-band from the tool 60. Moreover, the ID registration method can also be changed from wired transmission to wireless transmission, the ID transmitting unit 62 can to output the ID setting signal under the control of the control unit 65, and the operation for the ID setting unit can be implemented by on-site operator by inputting and setting the ID according to operating instructions each time through keying, the ID re-registration unit re-registers the air pressure sensor ID into the memory to effectively replace the previously registered ID, as the employable registration methods for the effective replacement, for example, 1) the subject already registered ID being overwritten by a registration ID newly received, and this corresponds to technical feature 7K "wherein: the setting transmission module transmits the identification setting signal wirelessly; and the receiving interface is a wireless receiving interface, which receives the identification setting signal transmitted wirelessly by the setting transmitting module, and the setting apparatus obtains the identification in one of two ways: 1) receiving a radio frequency signal through a wireless receiving module, and then the controller reads the identification in the radio frequency signal; 2) accepting human triggering or setting through the human-machine input interface, and then the controller reads the identification triggered or set by the human; and the micro-processing control module records the identification in the memory unit or overwrites an old identification stored in the memory unit according to the received identification setting signal" of claim 7 of the disputed patent.

(3) Except for the previously disclosed technical features 7H.2 and 7K, the technical features in Claim 7 are the same as those in Claim 6 of the disputed patent, and the combination of Exhibits 1 and 12 is sufficient to prove that Claim 6 of the disputed patent lacks an inventive step, as mentioned above. In addition, the technical feature 7H.2 can be easily arrived at by persons with ordinary skill in the technical field of the invention based on Exhibit 12 and general knowledge in that field, and Exhibit 12 has disclosed the technical feature 7K of Claim 7 of the disputed patent. Furthermore, persons having ordinary skill in the art would be motivated to combine Exhibits 1, 10, 11, and 12, as mentioned

above. Therefore, the combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 7 of the disputed patent lacks an inventive step.

(4) The plaintiff claimed that Exhibit 12 did not disclose the technical feature "the radio frequency signal is 315MHzor 433MHz" of Claim 7 of the disputed patent, and this technical feature is not general knowledge in the related technical field. However, according to the Supplementary Exhibit 1, "the RF signal transmission frequency of the tire pressure detector is 315MHz or 433MHz" is general knowledge in the field of tire pressure detecting technology, as mentioned above, so the plaintiff's claim is unfounded.

3. The combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 11 of the disputed patent lacks an inventive step:

(1) Upon examination, most of the technical content in Claim 11 is the same as that in Claim 6 of the disputed patent, and the only difference is that Claim 11 additionally discloses the technical feature 11E "the input interface comprises a human-machine input interface or a barcode reader". The technical feature 11E is the same as the technical feature 2E. Since Exhibit 12 discloses that the input interface comprises a human-machine input interface or barcode reader, the technical content in Claim 6 can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10, 11 and 12, and there is a motivation to combine Exhibits 1, 10, 11 and 12, as described in paragraph (V), 1. aforementioned. Therefore, the combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 11 of the disputed patent lacks an inventive step.

(2) Although the plaintiff claims that Claim 11 of the disputed patent, as compared with Exhibit 12, also has the special technical features, "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", the combination of Exhibits 1, 10, 11, and 12 can not prove that Claim 11 of the disputed patent lacks an inventive step. However, as described in paragraph (IV), 2. above, Exhibit 12 has already disclosed the technical features in Claim 11 of the disputed patent, "wherein the tire pressure

detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", and the plaintiff's claim is groundless.

4. The combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 12 of the disputed patent lacks an inventive step:

(1) Upon examination, most of the technical content in Claim 12 is the same as in Claim 11 of the disputed patent, and the only difference is that Claim 12 additionally discloses the technical feature 12E.2 "the human-machine input interface is an input keyboard or a dip switch", and the technical feature 12Q "the receiving interface is a low frequency wireless receiver, which is controlled by the micro-processing control module and receives external low frequency wireless signals". Moreover, the technical feature 12E.2 in Claim 12 of the disputed patent is the same as technical feature 3A, and the technical feature 12Q in Claim 12 of the disputed patent is the same as technical feature 3B. The technical features 3A and 3B cited above are disclosed by Exhibit 12, and there is a motivation to combine Exhibits 1, 10, 11, and 12, as described in paragraph (IV), 2. aforementioned. All technical features in Claim 12 of the disputed patent can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10, 11 and 12. Therefore, the combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claim 12 of the disputed patent lacks an inventive step.

(2) The plaintiff claims that Claim 12 of the disputed patent, as compared with Exhibit 12, also has the special technical features, "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", but Exhibit 12 only discloses that the receiving circuit 13a receives a specific frequency-band signal and does not disclose the technical feature "low frequency wireless signal" in Claim 12 of the disputed patent. Therefore, the combination of Exhibits 1, 10, 11, and 12 can not prove that Claim 12 of the disputed patent lacks an inventive step. However, as mentioned in paragraph (IV), 2. aforementioned, Exhibit 12 has already disclosed the technical features in Claim 12 of the disputed patent, "wherein the tire pressure detecting host

does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", and the technical feature "low frequency wireless signal" in Claim 12 of the disputed patent is just a simple change of the technical content "the receiving circuit 13a receives a specific frequency-band signal" in Exhibit 12. Therefore, the plaintiff's claim is groundless.

(VI) The combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 8, 9, 13 and 14 of the disputed patent lack an inventive step:

1. The combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 8 of the disputed patent lacks an inventive step:

(1) Upon examination, most of the technical content in Claim 8 is the same as in Claim 6 of the disputed patent, and the only difference is that Claim 8 additionally discloses the technical feature 8I "the sensing module comprises an air pressure sensor, more than one acceleration sensor, and a temperature sensor". Exhibit 10 has disclosed that the sensing module comprises the air pressure sensor, acceleration sensor, and temperature sensor, and Exhibit 12 has disclosed that the pressure sensor senses a tire pressure value. Moreover, the technical content in Claim 6, except that "the sensing module is a magnetic sensor", can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10 and 12, and the rest is as described in the comparison of technical feature 6I (see paragraph (V), 1. aforementioned). Therefore, Exhibits 1, 10 and 12 have disclosed all the technical features in Claim 8 of the disputed patent. In addition, Exhibits 1, 10 and 12 belong to the technical field of tire pressure detecting, and Exhibits 1, 10 and 12 have commonality in function and effect as they have the same function of transmitting tire pressure sensing signals. There is a motivation to combine Exhibits 1, 10 and 12, and Claim 8 of the disputed patent. So Claim 8 of the disputed patent can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10 and 12. Therefore, the combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 8 of the disputed patent lacks an inventive step.

(2) Although the plaintiff claims that Claim 8 of the disputed patent, as compared with Exhibit 12, also has the special technical feature "wherein

the tire pressure detecting host does not reset a new identification during the identification writing process", the combination of Exhibits 1, 10 and 12 can not prove that Claim 8 of the disputed patent lacks an inventive step. However, as described in paragraph (IV), 2. above, Exhibit 12 has already disclosed the technical features in Claim 8 of the disputed patent, "wherein the tire pressure detecting host does not reset a new identification during the identification writing process". Therefore, the plaintiff's claim is groundless.

2. The combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 9 of the disputed patent lacks an inventive step:

(1) Upon examination, most of the technical content in Claim 9 is the same as in Claim7 of the disputed patent, and the only difference is that Claim 9 defines the technical feature 9G "the sensing module comprises an air pressure sensor, more than one acceleration sensor, and a temperature sensor". Exhibit 10 has disclosed that the sensing module comprises the air pressure sensor, acceleration sensor, and temperature sensor, and Exhibit 12 has also disclosed that the pressure sensor a tire pressure value. Moreover, the technical content in Claim 7, except that "the sensing module is a magnetic sensor", can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10 and 12, and the rest is as described in the comparison of technical feature 7G (see paragraph (V), 2. aforementioned). Therefore, the combination of Exhibits 1, 10 and 12 has disclosed all the technical features in Claim 9 of the disputed patent. Additionally, there is a motivation to combine Exhibits 1, 10 and 12 as described above, and Claim 9 of the disputed patent can be easily accomplished by persons having ordinary skill in the art of the invention based on the combination of Exhibits 1, 10 and 12. Therefore, the combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 9 of the disputed patent lacks an inventive step.

(2) Although the plaintiff claims that Claim 9 of the disputed patent, as compared with Exhibit 12, also has the technical feature "the radio-frequency signal is 315MHz or 433MHz", and this technical feature is not commonly known in the art, the combination of Exhibits 1, 10, 11 and 12 can not prove that Claim 12 of the disputed patent lacks an inventive step.

However, as described above (see paragraph (V), 2. aforementioned), the use of radio-frequency signals of 315MHz or 433MHz for transmission by a tire pressure detector is only commonly known in the art, so Claim 9 of the disputed patent can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10 and 12. Therefore, the plaintiff's claim is groundless.

3. The combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 13 of the disputed patent lacks an inventive step:

(1) Upon examination, most of the technical content in Claim 13 is the same as that in Claims 2, 3, 8 and 9 of the disputed patent, and Claims 2, 3, 8 and 9 can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1 and 12 or the combination of Exhibits 1, 10 and 12, as described above. The technical features in Claim 13 not covered by Claims 2, 3, 8, and 9 of the disputed patent are as follows: the technical feature 13E.3 "the bar-code reader uses optical signal to determine and read the bar-code formed or attached on the external tire pressure detector or another identification rewritable tire state detector, which corresponds to the identification of the external tire pressure detector or another identification rewritable tire state detector"; the technical feature 13T "wherein the identification is read from the input interface into the setting apparatus by the human-machine input interface or bar-code reader"; the technical feature 13U.2 "the wireless receiving module receives the wireless signals transmitted by the external tire pressure detector and from the transmitting module of the identification rewritable tire state detector, and transmits the received signal to the controller. The setting transmission module is controlled by the controller and transmits the low frequency wireless signal to the receiving interface"; the technical feature 13V "wherein the frequency of the low frequency wireless signal is 125kHz"; the technical feature 13W "wherein, when the old detector needs to be replaced, the vehicle manufacturer with the setting apparatus copies the old identification of the old detector to the identification rewritable tire state detector without reading the identification of the identification rewritable tire state detector before resetting the tire pressure detecting host of the vehicle body."

(2) Paragraphs [0054], [0157], [0160], [0173], [0175] and [0180] of the specification and figures 1, 2 and 9 in Exhibit 12 disclose that the ID setting unit can be achieved through such a key-manipulated manner that an operator inputs and sets an ID according to an operating instruction each time. The ID registration tool 60 is composed of a bar-code reading unit 61 that is operated by users to receive or set the ID, which corresponds to the technical feature 13E.3 "the bar-code reader uses optical signal to determine and read the bar-code formed or attached on the external tire pressure detector or another identification rewritable tire state detector, which corresponds to the identification of the external tire pressure detector or another identification rewritable tire state detector" and the technical feature 13T "wherein the identification is read from the input interface into the setting apparatus by the human-machine input interface or bar-code reader" in Claim 13 of the disputed patent. In addition, paragraphs [0058], [0157], [0173] and [0297] of the specification and figures 1, 2 and 9 in Exhibit 12 disclose that the air pressure sensor 10 includes a transmitting/receiving circuit 13a, and that the receiving circuit in the air pressure sensor 10 and the tire pressure monitoring apparatus 50 is capable of receiving only a specific frequency-band signal different from a common pressure detection signal when receiving a trigger signal for setting an ID registration mode, and an ID set value is transmitted as this specific frequency-band from the tool 60. When a transmitting unit of an air pressure sensor of any tires is broken, the air pressure sensor of that tire can be replaced with new one. The new air pressure sensor can read the air pressure sensor ID at the corresponding tire position registered in the tire pressure monitoring apparatus in the vehicle body side by using the ID registration tool and transmit it as a set value to the newly replaced air pressure sensor to be stored therein, which corresponds to the technical feature 13U.2 "the wireless receiving module receives the wireless signals transmitted by the external tire pressure detector and from the transmitting module of the identification rewritable tire state detector, and transmits the received signal to the controller. The setting transmission module is controlled by the controller and transmits the low frequency wireless signal to the receiving interface" and the technical feature 13W "wherein,

when the old detector needs to be replaced, the vehicle manufacturer with the setting apparatus copies the old identification of the old detector to the identification rewritable tire state detector without reading the identification of the identification rewritable tire state detector before resetting the tire pressure detecting host of the vehicle body" in Claim 13 of the disputed patent.

(3) The technical feature 13V "the frequency of the low frequency wireless signal is 125 kHz" disclosed in Claim 13 of the disputed patent is commonly known in the technical field of tire pressure detector, which can be supported by the content cited in line 22 of page 12 to line 5 of page 13 in the specification of the Supplementary Exhibit 1 that "there are generally two ways to wake up the TPMS system when the vehicle starts and enters high speed driving: TPMS self-check when the vehicle starts, and regular patrol inspection using pre-set software programs when driving at high speed. To do so, the TPMS receiver needs to give a call signal, and a wake-up chip should be installed on the TPMS transmitting module. Since the wake-up frequency is a low frequency of 125kHz, it is required to add an antenna driver on the TPMS receiver to send a call signal with a certain power". Therefore, the technical features in this part can only be easily accomplished by persons having ordinary skill in the art based on the Exhibit 12 with reference to common knowledge.

(4) Based on the above statements, the combination of Exhibits 1 and 2 is sufficient to prove that Claims 2 and 3 of the disputed patent lack an inventive step, and the combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 8 of the disputed patent lacks an inventive step. The technical features of Claim 13 that are not covered by Claims 2, 3 and 8 of the disputed patent, such as 3E.3, 13K.2, 13T, 13U.2, 13V and 13W, have already been disclosed by Exhibit 12 or can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10 and 12 and the common knowledge. Therefore, the combination of Exhibits 1, 10 and 12 has already disclosed all the technical features of Claim 13 of the disputed patent. Additionally, there is a motivation to combine Exhibits 1, 10 and 12 as described above, and Claim 13 of the disputed patent can be easily accomplished by persons

having ordinary skill in the art of the invention based on the combination of Exhibits 1, 10 and 12. Therefore, the combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 13 of the disputed patent lacks an inventive step.

(5) The plaintiff claims that Claim 13 of the disputed patent, as compared with Exhibit 12, also has the special technical features "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", but Exhibit 12 only discloses that the receiving circuit 13a receives a specific frequency-band signal and does not disclose "the frequency of the low frequency wireless signal is 125kHz" and "the radio-frequency signal is 315MHz or 433MHz" in Claim 13 of the disputed patent. Therefore, the combination of Exhibits 1, 10, 11, and 12 can not prove that Claim 13 of the disputed patent lacks an inventive step. However, upon examination, Exhibit 12 has disclosed the technical features "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector" in Claim 13 of the disputed patent as described in paragraph (V), 2. aforementioned. Moreover, "the frequency of the low frequency wireless signal is 125kHz" and "the radio-frequency signal is 315MHz or 433MHz" are commonly known in the art of the invention before the date of filing the disputed patent, and can be easily accomplished by persons having ordinary skill in the art of the invention based on the combination of Exhibits 1, 10 and 12. Therefore, the plaintiff's claim is groundless.

4. The combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 14 of the disputed patent lacks an inventive step:

(1) Upon examination, all technical features from 14A to 14S in Claim 14 of the disputed patent have been found in Claim 13, and the combination of Exhibits 1, 10 and 12 is sufficient to prove that Claim 13 of the disputed patent lacks an inventive step, as described above. Therefore, the combination of Exhibits 1, 10 and 12 is also sufficient to prove that Claim 14 of the disputed patent lacks an inventive step.

(2) The plaintiff claims that Claim 14 of the disputed patent, as compared with

Exhibit 12, also has the special technical features, "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", but Exhibit 12 does not disclose the technical feature "the radio-frequency signal is 315MHz or 433MHz" in Claim 14 of the disputed patent, and this technical feature is not commonly known in the art. Therefore, the combination of Exhibits 1, 10, 11, and 12 can not prove that Claim 14 of the disputed patent lacks an inventive step. However, Exhibit 12 has disclosed the technical features of Claim 14 of the disputed patent, "wherein the tire pressure detecting host does not reset a new identification during the identification writing process" and "the setting apparatus reads an old identification from an old detector", are as described in paragraph (V), 2. aforementioned. Moreover, the use of radio-frequency signals of 315MHz or 433MHz for transmission by a tire pressure detector is only commonly known in the art, so Claim 14 of the disputed patent can be easily accomplished by persons having ordinary skill in the art based on the combination of Exhibits 1, 10 and 12. Therefore, the plaintiff's claim is groundless.

VI. In conclusion, the combination of Exhibits 1 and 12 in this case is sufficient to prove that Claims 2 and 3 of the disputed patent lack an inventive step; the combination of Exhibits 1, 10, 11 and 12 is sufficient to prove that Claims 6, 7, 11 and 12 of the disputed patent lack an inventive step; the combination of Exhibits 1, 10 and 12 is sufficient to prove that Claims 8, 9, 13 and 14 of the disputed patent lack an inventive step. Thus, there is no error in the defendant's original decision that the invalidation is irrevocably sustained, and it is reasonable to uphold the appeal decision. The plaintiff's request to revoke the original decision with regard to "the invalidation of Claims 2 to 3, 6 to 9, and 11 to 14 is irrevocably sustained and should be revoked" and the appeal decision, is groundless and should be rejected.

VII. The basis of the judgment for this case is clear. The parties' other attack and defense methods, exhibits, or litigation materials, after consideration by the court, are considered to have no impact on the result of the judgment, and there is no need to discuss each of them.

VIII. Conclusion: The plaintiff's claim in this case is groundless, and the judgment

is as stated in the main text in accordance with Article 1 of the pre-amended Intellectual Property Case Adjudication Act, and the preceding paragraphs of item 1 in Article 98 of the Administrative Litigation Act.

Jan 25, 2024

First Court, Intellectual Property and Commercial Court

Chief Judge Cai Huirui

Judge Chen Duanyi

Judge Wu Junlong

The above text is based on the original.

I. If a party disagrees with this judgment, they shall file a written appeal petition with the Court and indicate the reasons for appeal within 20 days calculated from the date of service of the judgment; if they have not indicated the reasons, they shall submit the reasons to the Court within 20 days from the date on which the appeal is filed; if the appeal is filed prior to the declaration of the judgment or the delivery of the notice, the reasons shall be submitted within 20 days calculated from the date of service of the judgment (the number of the written copies thereof to be attached shall all be the same as the number of opposing parties).

II. If the reasons are not indicated when filing the appeal and are not submitted within 20 days aforementioned, the appeal shall be dismissed.

III. When filing an appeal, an attorney shall be appointed as the litigation agent and the letter of appointment shall be filed (Article 49-1, item 1, paragraph 3 of the Administrative Litigation Act). However, no attorney shall be appointed as the litigation agent under the following circumstances (items 3 and 4 of the same article).

Circumstances in which an attorney is not appointed as litigation agent	Requirements

(I) In any of the circumstances listed on the right, an attorney may not be appointed as the litigation agent	1. The appellant or its representative, administrator, or legal agent is qualified as a judge, a procurator, or an attorney, or is a professor or associate professor of public law at a university or independent college approved by the Ministry of Education. 2. For tax administrative cases, the appellant or its representative, administrator, or legal agent is qualified as an accountant. 3. For patent administrative cases, the appellant or its representative, administrator, or legal agent is qualified as a patent attorney or is legally qualified as a patent agent.
(II) A non-lawyer may also act as a litigation agent on appeal if the Supreme Administrative Court deems it appropriate to do so in any of the circumstances listed on the right	1. The spouse, relatives by blood up to the third degree of kinship, or in-laws up to the second degree of kinship of the appellant are qualified lawyers. 2. For tax administrative cases, they are qualified as accountants. 3. For patent administrative cases, they are qualified patent attorneys or are legally qualified as patent agents. 4. When the appellant is a legal person of public law, a central or local government agency, or an unincorporated body under public law, their full-time staff handle legal system, legal affairs, administrative appeals, or the business related to litigation matters.
The appellant shall, at the time of filing the appeal or making an appointment, clarify if it complies with circumstances (I) and (II), and if it is an exception to the mandatory appointment of attorney as an agent, and shall file a copy of the explanation for the relationship shown in (II) as well as the letter of appointment.	

Jan 25, 2024

Clerk Jiang Shujun

Annexed table:

EXHIBIT 1009

Disputed patent and citation	Page number	Remark
2016.2.21 Patent Publication	Invalidation file 1 (Exhibit 1 of Party B), pages 160-151	(Exhibit 1)
2022.9.13 Amendment to the patent claims	Invalidation file 6 (Exhibit 6 of Party B), pages 130-105	
U.S. No. 65055 07B1 "TIRE AIR PRESSURE MONITORING APPARATUS AND EXTERNAL COMMUNICATION APPARATUS" Patent Publication dated January 14, 2003	Party B's Exhibit 1, pages 150-146	(Exhibit 2)
U.S. No. 6737965B2 "TIRE CONDITION MONITORING APPARATUS" Patent Publication dated May 18, 2004	Party B's Exhibit 1, pages 145-141	(Exhibit 3)
Comparison of Figure 4 of Exhibit 2, Figure 4 of Exhibit 3 and Figure 1 of the disputed patent	Party B's Exhibit 1, page 140	(Exhibit 4)
Amendment to the claims for the Taiwan No. 1381155 patent "Identification Rewritable Tire Pressure Detecting Device and Setting Method"	Party B's Exhibit 1, pages 139-136	(Exhibit 5)
No. 97133154N01 Invalidation Decision for the Patent	Party B's Exhibit 1, pages 135-121	(Exhibit 6)
U.S. No. 2006/0136782A1 "METHOD AND DEVICE FOR TREATING A SET OF COMPONENTS FOR THE WHEEL OF A VEHICLE" Patent Publication dated June 22, 2006	Party B's Exhibit 1, pages 120-114	(Exhibit 7)

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U.S. No. 6941801B2 "TIRE PRESSURE MONITORING SYSTEM" Patent Publication dated September 13, 2005	Party B's Exhibit 1, pages 113-111	(Exhibit 8)
U.S. No. 6920785B2 "TIRE PRESSURE SENSOR UNIT, TIRE PRESSURE MONITORING SYSTEM, AND METHOD OF REGISTERING IDENTIFICATION CODE OF TIRE PRESSURE SENSOR UNIT" Patent Publication dated July 26, 2005	Party B's Exhibit 1, pages 110-106	(Exhibit 9)
U.S. No. 7137296B2 "TIRE AIR PRESSURE M ONITORING SYSTEM" Patent Publication dated November 21, 2006	Party B's Exhibit 1, pages 105-97	(Exhibit 10)
U.S. No. 6888449B2 "CIRCUITS FOR COUPLING SIGNALS ARRYING INFORMATION TO A TIRE PRESSURE MONITORING SYSTEM IN THE ABSENCE OF A RECEIVER" Patent Publication dated May 3, 2005	Party B's Exhibit 1, pages 96-92	(Exhibit 11)
U.S. No. 2003/0227379A1 "ID REGISTRATION METHOD FOR TIRE PRESSURE SENSOR, ID REGISTRATION APPARATUS, ID REGISTRATION TOOL FOR TIRE PRESSURE MONITORING SYSTEM, AND TIRE WITH AIR PRESSURE SENSOR" Patent Publication dated December 11, 2003	Party B's Exhibit 1, pages 91-34	(Exhibit 12)
FREESCALE SEMICONDUCTOR's MPXY802GA and PXY8040A Product	Party B's Exhibit 1, pages 33-25	(Exhibit 13)

Technical Information Copy dated February 2006		
No. 101132138N01 Invalidation Decision for the Disputed Patent	Party B's Exhibit 1, pages 24-1	(Exhibit 14)
Taiwan No. 200824930A "Vehicle Positioning and Tire State Monitoring System with Left and Right Wheel Differential Sensing Heading" Invention Patent Publication dated June 16, 2008	File 1 of the Court, pages 391-425	(Supplementary Exhibit 1)

EXHIBIT 1009

Main Diagrams of Disputed Patent

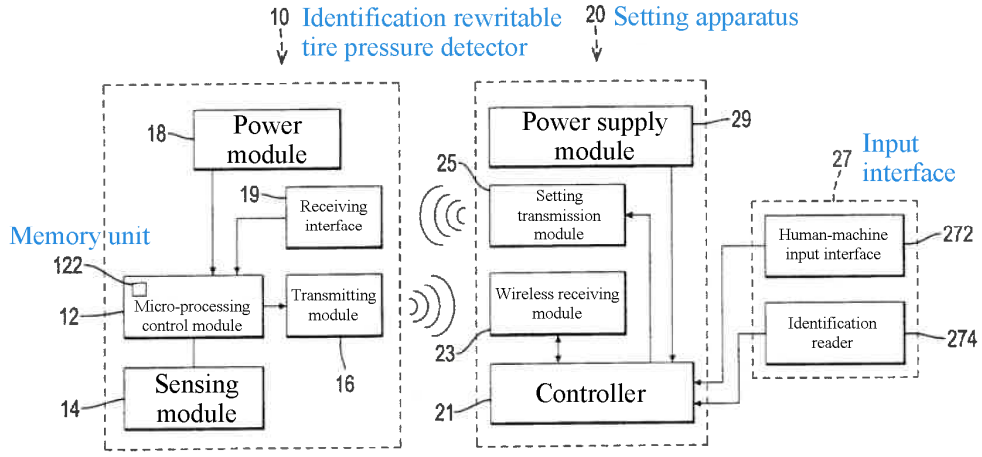


Figure 1

Figure 1 (Figure 1 of the disputed patent):
A block diagram of the system for a better embodiment

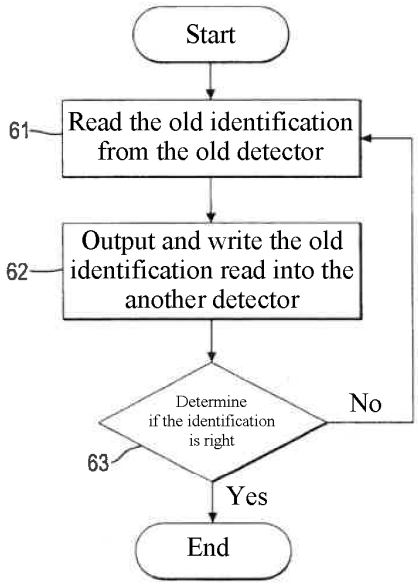


Figure 3

Figure 2 (Figure 3 of the disputed patent):
A flow chart for a better embodiment

EXHIBIT 1009

Main figures of Exhibit 10

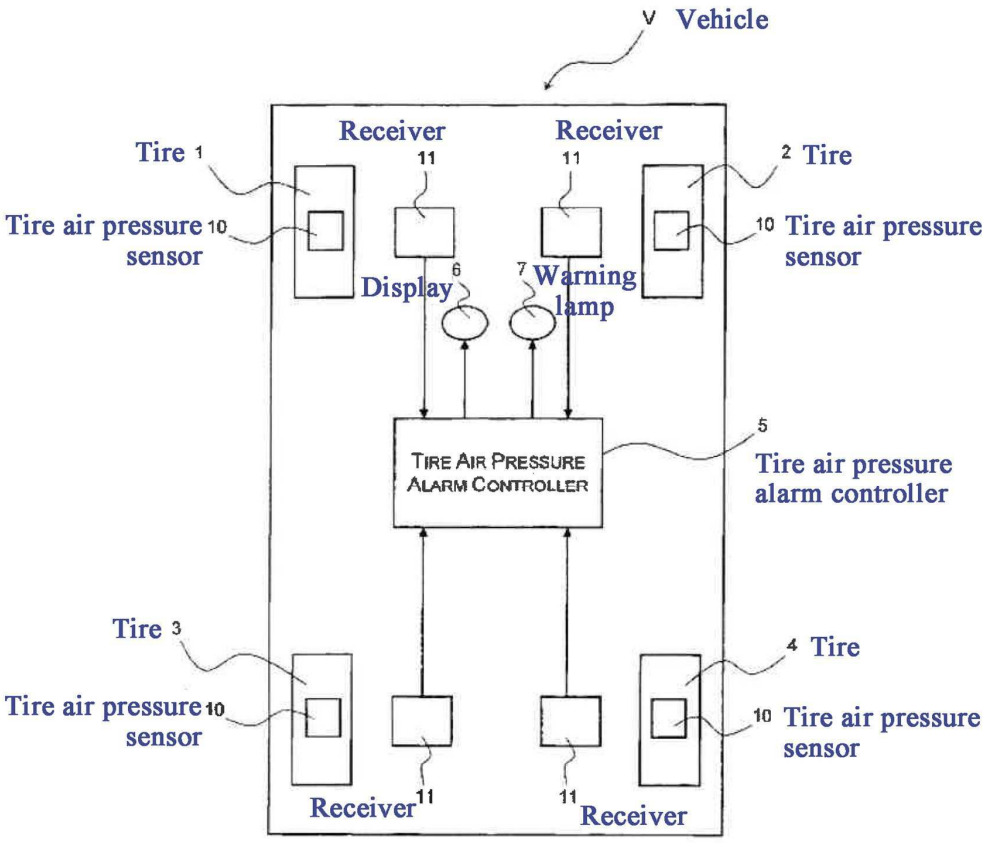


Fig. 1

Figure 3 (Figure 1 of Exhibit 10): Overall schematic diagram of a vehicle with tire pressure monitoring system

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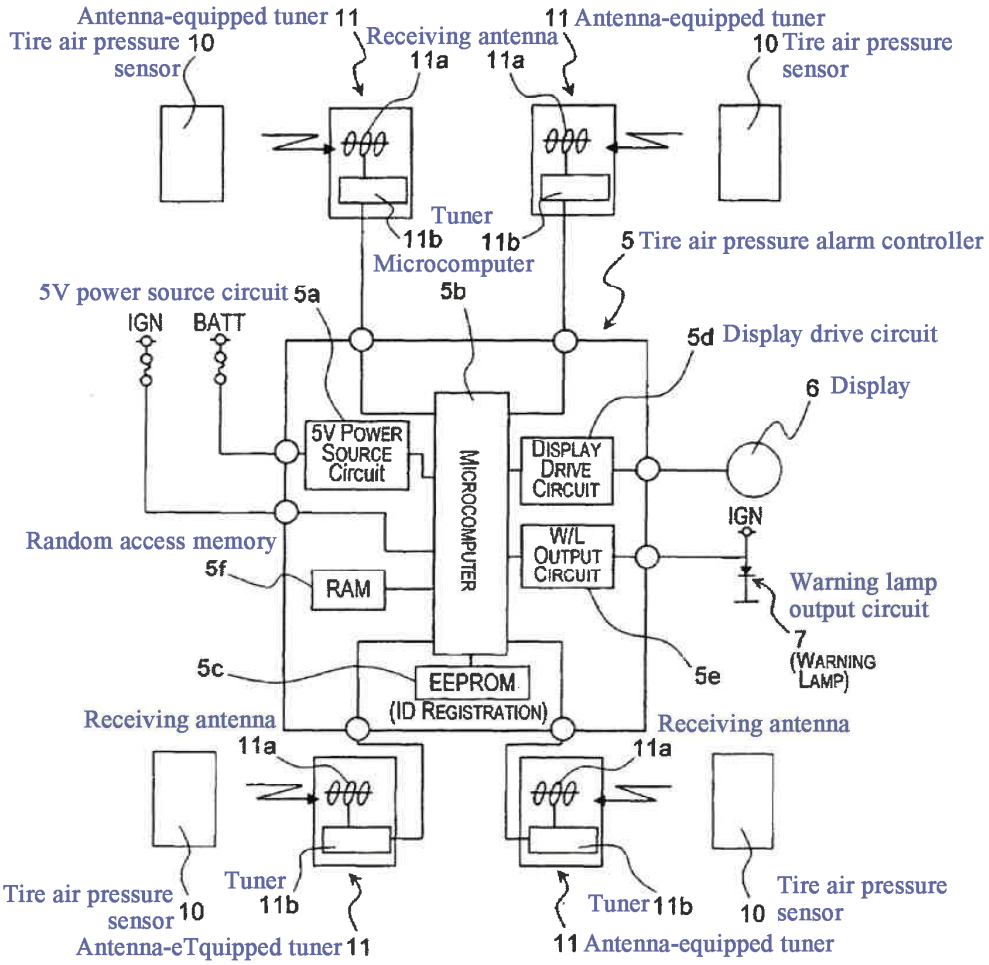


Fig. 2

Figure 4 (Figure 2 of Exhibit 10): A block diagram of the circuit for the first embodiment of Exhibit 2

EXHIBIT 1009

Main figures of Exhibit 11

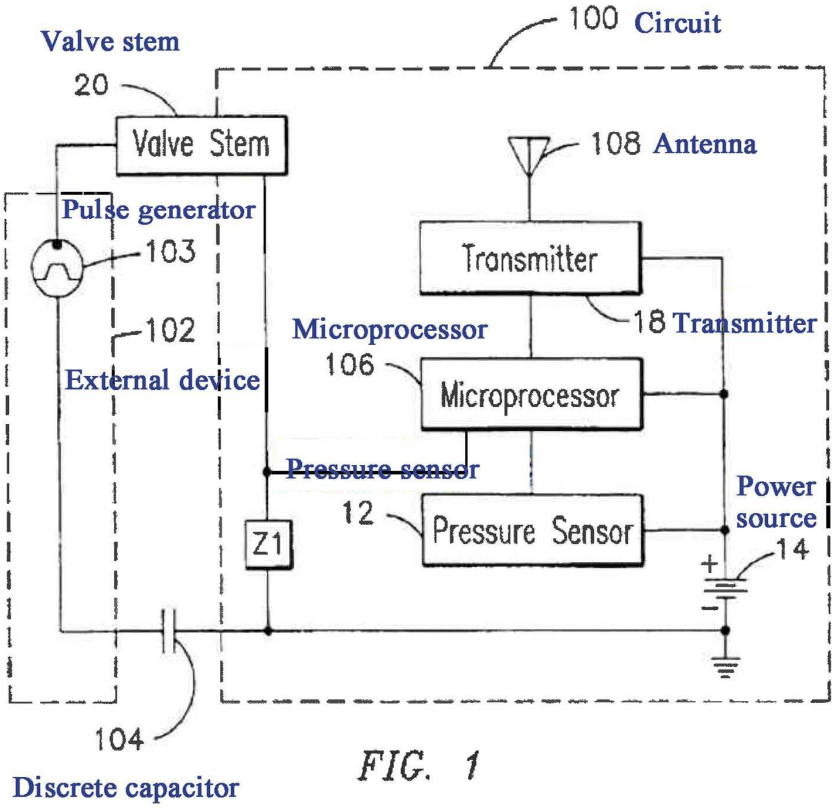


FIG. 1

Figure 5 (Figure 1 of Exhibit 11): The schematic diagram of the circuits of various aspects of the present invention

EXHIBIT 1009

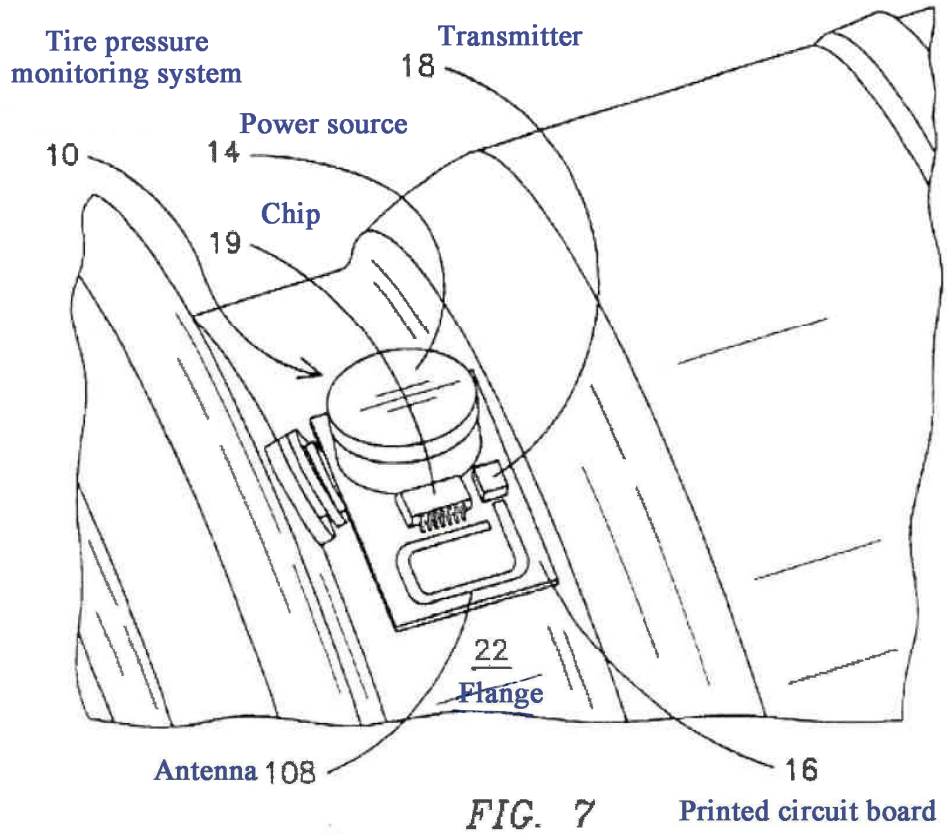


Figure 6 (Figure 7 of Exhibit 11): An exemplary configuration of a direct tire pressure monitoring system (TPMS)

EXHIBIT 1009

Main figures of Exhibit 12

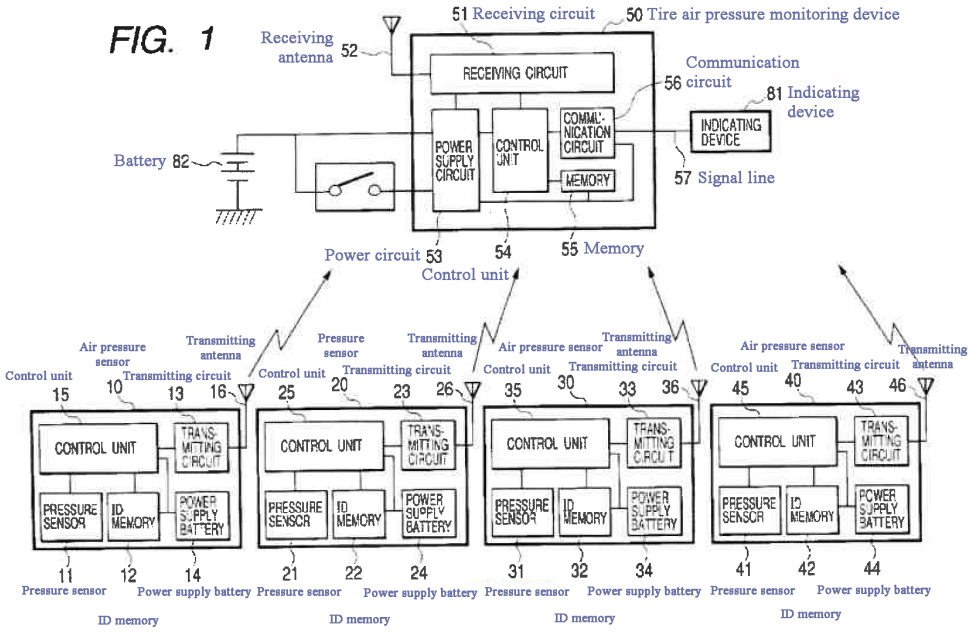


Figure 7 (Figure 1 of Exhibit 12): A block diagram showing the structure of a tire air pressure monitoring system of the first embodiment.

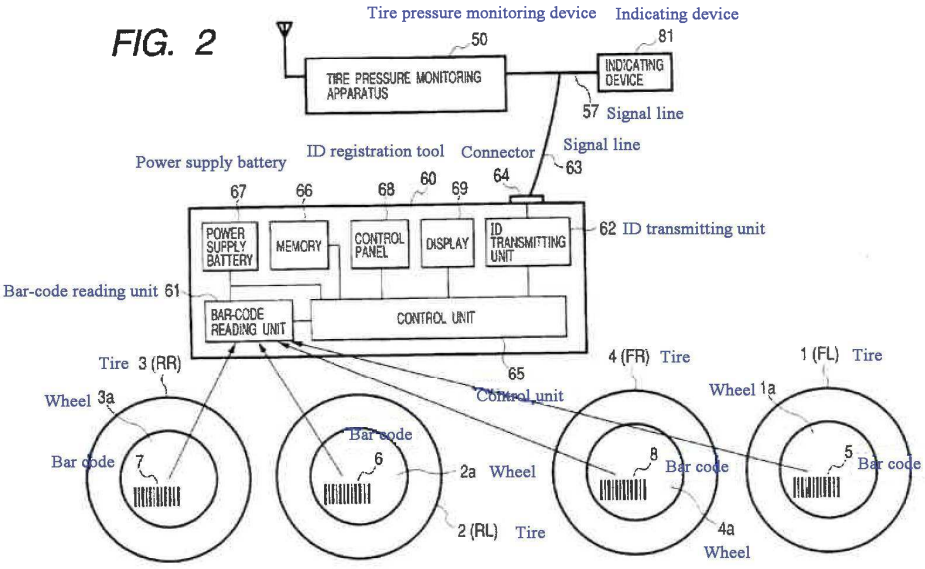


Figure 8 (Figure 2 of Exhibit 12): An illustrative view showing the structure of an ID registration device of the first embodiment;

EXHIBIT 1009

Main figures of Corroborative Exhibit 1

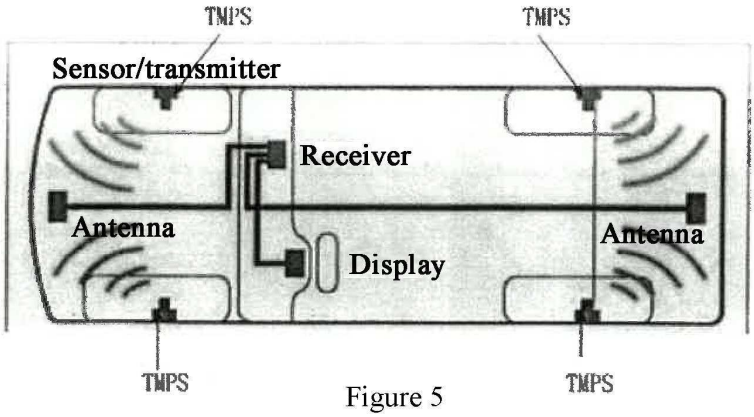


Figure 5

Figure 9 (Figure 5 of Corroborative Exhibit 1): A schematic diagram showing the structure of TPMS mounted to a car according to the present invention

Main figures of Exhibit 8

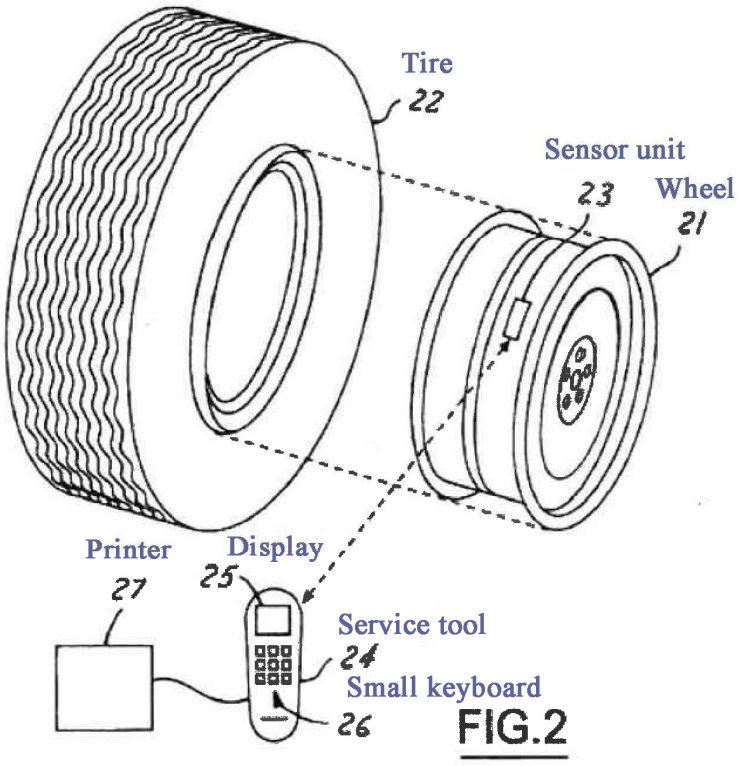


Figure 10 (Figure 2 of Exhibit 8): Tire pressure sensing unit mounted to a wheel and being interrogated by a service tool

EXHIBIT 1009

Main figures of Party C's Exhibit 1

Figure 3-6. Application

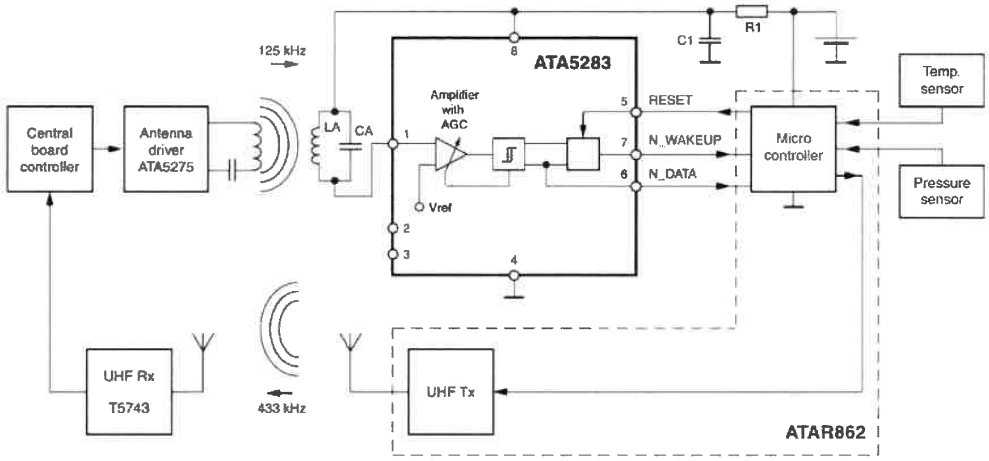


Figure 11 (Page 7 of Party C's Exhibit 1): ATA5283 System application diagram