

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FCA US LLC,
Petitioner,

v.

SIGNAL IP, INC.,
Patent Owner.

Case IPR2015-01118
Patent 5,463,374

Before JUSTIN T. ARBES, BRIAN P. MURPHY, and
JOHN A. HUDALLA, *Administrative Patent Judges*.

HUDALLA, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

Petitioner, FCA US LLC (“FCA”), filed a Petition requesting an *inter partes* review of claims 1–3 of U.S. Patent No. 5,463,374 (Ex. 1001, “the ’374 patent”). Paper 2 (“Pet.”). Patent Owner, Signal IP, Inc. (“Signal”), filed a Preliminary Response. Paper 5 (“Prelim. Resp.”). Taking into account the arguments presented in Signal’s Preliminary Response, we determined that the information presented in the Petition established that there was a reasonable likelihood that FCA would prevail in challenging claims 1–3 of the ’374 patent under 35 U.S.C. § 103(a). Pursuant to 35 U.S.C. § 314, we instituted this proceeding on October 21, 2015, as to these claims of the ’374 patent. Paper 7 (“Dec. on Inst.”).

During the course of trial, Signal filed a Patent Owner Response (Paper 10, “PO Resp.”), and FCA filed a Reply to the Patent Owner Response (Paper 11, “Pet. Reply”). An oral hearing was held on June 1, 2016, and a transcript of the hearing is included in the record. Paper 21 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–3 of the ’374 patent. For the reasons discussed below, FCA has demonstrated by a preponderance of the evidence that claim 3 is unpatentable under § 103(a). FCA has not demonstrated by a preponderance of the evidence that claims 1 and 2 are unpatentable under § 103(a).

I. BACKGROUND

A. *Related Proceedings*

FCA identifies the following as related proceedings regarding the ’374 patent (Pet. 1–2):

Signal IP, Inc. v. Fiat U.S.A., Inc., Case No. 2-14-cv-13864 (E.D. Mich.), filed on Oct. 7, 2014, currently pending against FCA only;¹

Signal IP, Inc. v. Ford Motor Co., Case No. 2-14-cv-13729 (E.D. Mich.), filed on Sept. 26, 2014, terminated;

Signal IP, Inc. v. Ford Motor Co., Case No. 2-14-cv-03106 (C.D. Cal.), filed on Apr. 23, 2014, transferred to E.D. Mich.;

Signal IP, Inc. v. Fiat USA, Inc., Case No. 2-14-cv-03105 (C.D. Cal.), filed on Apr. 23, 2014, transferred to E.D. Mich.;

Signal IP, Inc. v. Volvo Cars of N. Am., LLC, Case No. 2-14-cv-03107 (C.D. Cal.), filed on Apr. 23, 2014, terminated;

Signal IP, Inc. v. Nissan N. Am., Inc., Case No. 2-14-cv-02962 (C.D. Cal.), filed on Apr. 17, 2014, terminated;

Signal IP, Inc. v. Subaru of Am., Inc., Case No. 2-14-cv-02963 (C.D. Cal.), filed on Apr. 17, 2014, terminated;

Signal IP, Inc. v. Mazda Motor of Am., Inc., Case No. 8-14-cv-00491 (C.D. Cal.), filed on Apr. 1, 2014, terminated;

Signal IP, Inc. v. Mitsubishi Motors N. Am., Inc., Case No. 2-14-cv-02462 (C.D. Cal.), filed on Apr. 1, 2014, intradistrict transfer;

Signal IP, Inc. v. Mazda Motor of Am., Inc., Case No. 2-14-cv-02459 (C.D. Cal.), filed on Apr. 1, 2014, intradistrict transfer; and

Signal IP, Inc. v. Mitsubishi Motors N. Am., Inc., Case No. 8-14-cv-00497 (C.D. Cal.), filed on Apr. 1, 2014, terminated.

¹ The district court in this case issued an order on September 20, 2016, that construed limitations in claim 3 of the '374 patent. See Ex. 2006. We have reviewed the order and considered it in rendering this Final Written Decision.

We additionally identify the following case related to the '374 patent:

Signal IP, Inc. v. Suzuki Motor of Am., Inc., Case No. 8-14-cv-00607 (C.D. Cal.), filed Apr. 17, 2014, terminated.

On April 17, 2015, the U.S. District Court for the Central District of California issued a claim construction order in several of the above actions that were pending in that district. *See* Ex. 1011. Among other things, the order construed certain terms of the '374 patent. *See id.* at 105–17. We refer to the California district court's claim construction order in the Claim Interpretation section below.

B. The '374 Patent

The '374 patent is directed to “detecting vehicle tire pressure using facilities shared with another vehicle function,” such as keyless entry in an automobile. Ex. 1001, 1:7–11. Figure 1 of the '374 patent is reproduced below.

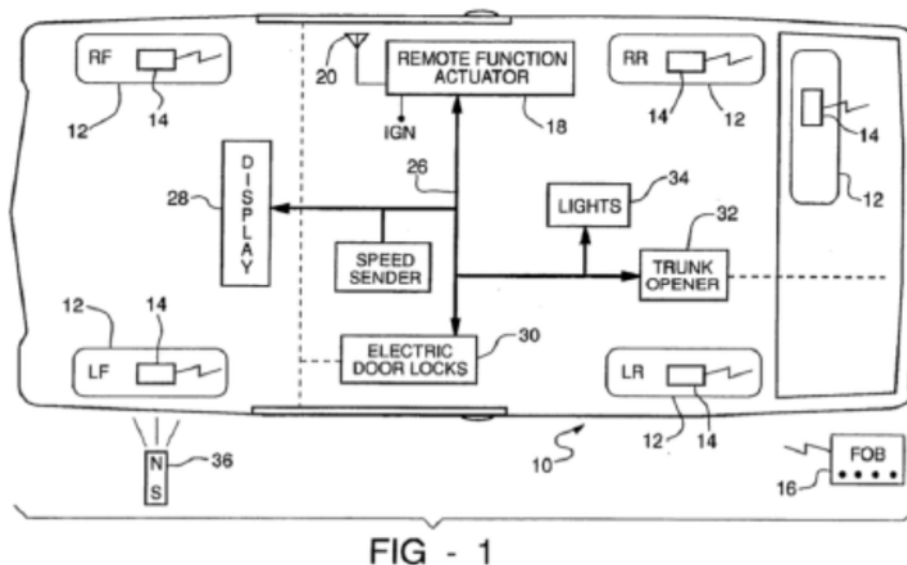


Figure 1 depicts tire pressure senders 14 at each tire 12 of a vehicle that send “radio signals carrying pressure related information” to remote function

actuator 18 with receiving antenna 20. *Id.* at 3:26–42. Similarly, “portable remote keyless entry control or fob 16” sends signals to actuator 18 “containing commands for unlocking doors, opening the trunk or turning on the vehicle lights.” *Id.* Accordingly, the ’374 patent describes sharing a receiver and “using a common communication format [so] the receiving microprocessor can readily process the incoming data from either source.” *Id.* at 6:20–24; *see also id.* at Fig. 4 (depicting common communication format).

The application that led to the ’374 patent was filed on March 10, 1994. Ex. 1001, [22]. The ’374 patent has expired. *See* Pet. 11.

C. Illustrative Claim

Claims 1 and 3 of the ’374 patent are independent, and claim 2 depends from claim 1. Independent claim 1 is illustrative of the challenged claims and is reproduced below:

1. A vehicle remote function actuator system having a single on-board radio receiver, comprising
 - at least one remote tire transmitter for transmitting radio frequency tire condition data;
 - at least one remote vehicle function transmitter for transmitting radio frequency vehicle function data;
 - a radio receiver mounted on the vehicle for receiving data from said remote tire transmitter and said remote vehicle function transmitter;
 - a controller having a pressure detector for providing pressure condition data to said remote tire transmitter and causing said remote tire transmitter to transmit the pressure condition data to said receiver;

the remote transmitters all having the same data format but distinctive codes for tire transmitters and vehicle function transmitters;

a processor connected to the receiver and coupled to a display device and to a vehicle function device for responding to the transmitted data; and

the processor being programmed to effect display of pressure condition data on said display device when a transmitted data contains a distinctive code for tire transmitters, and to activate said vehicle function device when a transmitted data contains a distinctive code for the vehicle function transmitters.

Ex. 1001, 6:34–60.

D. The Prior Art

FCA relies on the following prior art:

U.S. Patent No. 5,552,789, filed on Feb. 14, 1994, issued Sept. 3, 1996 (Ex. 1003, “Schuermann”);

U.S. Patent No. 5,053,774, issued Oct. 1, 1991 (Ex. 1004, “Schuermann II”);²

U.S. Patent No. 5,602,524, filed on Feb. 26, 1993, issued Feb. 11, 1997 (Ex. 1005, “Mock”);

U.S. Patent No. 5,635,923, which is a continuation of application 08/134,074 filed on Oct. 8, 1993, issued June 3, 1997 (Ex. 1006, “Steele”); and

U.S. Patent No. 5,109,213, issued Apr. 28, 1992 (Ex. 1007, “Williams”).

² In the Decision on Institution, we determined that the entirety of Schuermann II is incorporated by reference in Schuermann. *See* Dec. on Inst. 10–11. Neither party disputed this during the course of trial. Assessing the full record from trial, we discern no evidence to the contrary, and adopt our previous analysis for purposes of this Decision.

E. Instituted Grounds of Unpatentability

We instituted this proceeding on the following grounds of unpatentability (Dec. on Inst. 19–20):

References	Basis	Claim(s) Challenged
Schuermann and Mock	35 U.S.C. § 103(a)	3
Schuermann, Mock, and Williams	35 U.S.C. § 103(a)	3
Mock and Steele	35 U.S.C. § 103(a)	1 and 2
Mock, Steele, and Williams	35 U.S.C. § 103(a)	3

F. Claim Interpretation

The Board interprets claims of unexpired patents using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). For claims of an expired patent, however, the Board’s claim interpretation analysis is similar to that of a district court. *See* 37 C.F.R. § 42.100(b); *In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Under the standard applied by district courts, claim terms are generally given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony*

Computer Entm't Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012). We apply the district court standard to the claims of the expired '374 patent.

1. “each tire” (*Claim 3*)

We construed “each tire” for purposes of the Decision on Institution to mean “each tire inclusive of any spare tire.” Dec. on Inst. 8–9. Neither Signal, in its Patent Owner Response, nor FCA, in its Reply, proposes an alternative construction. Based on the complete record before us, we do not perceive any reason or evidence that compels any deviation from this interpretation. Accordingly, we adopt our previous construction of “each tire” for purposes of this Decision.

2. “all having the same data format but distinctive codes for tire transmitters and vehicle function transmitters” (*Claim 1*)

In its Petition, FCA contended that we should construe this limitation to mean “all having the same number and arrangement of data bits or elements but including distinct coded data for tire transmitters and vehicle function transmitters,” which was the construction adopted by the California district court.³ Pet. 11–12 (citing Ex. 1011, 108). In its Preliminary Response, Signal contended that no construction of this limitation was necessary because the plain and ordinary meaning of this term is apparent. Prelim. Resp. 21. In the Decision on Institution, we agreed with FCA and

³ It appears that the primary dispute between the parties in the California district court case was the meaning of “same data format.” See Ex. 1011, 108–10. By contrast, the parties in this proceeding disagree regarding the phrase “distinctive codes for tire transmitters and vehicle function transmitters.”

adopted the California district court’s construction. Dec. on Inst. 7–8. In construing the limitation, we also preliminarily determined that “distinctive codes for tire transmitters and vehicle function transmitters” does not “require[] category identification of transmitters by code.” *Id.* at 17. The parties addressed this aspect of our construction during trial.

Signal continues to maintain that “distinctive codes for tire transmitters and vehicle function transmitters” should be accorded its plain and ordinarily meaning. Tr. 42:17–24. Nevertheless, Signal argues in its Response that, giving the phrase its plain and ordinary meaning, our additional conclusion regarding category identification was wrong. PO Resp. 20–23. Specifically, Signal argues “[c]odes are distinctive when they distinguish tire transmitters from vehicle function transmitters.” *Id.* at 22. As such, Signal maintains the prior art would have to teach category identification of transmitters by code in order to teach the “distinctive codes” limitation. *Id.*; Tr. 39:12–40:19, 42:11–44:24.

FCA argues “the plain language of the term requires only ‘distinct coded data’ for the ‘at least one remote tire transmitter’ and ‘at least one remote vehicle function transmitter.’” Pet. Reply 15. Therefore, FCA contends that a system having unique codes for *all* transmitters, regardless of category, is within the scope of the “distinctive codes” limitation. *Id.* at 16 n.4. According to FCA, “[t]he fact that [a prior art system’s] signals [might] provide an additional benefit of distinguishing one tire transmitter from another, for example, does not mean that [it] fail[s] to meet this limitation.” *Id.*

Given the parties’ arguments during trial, we must determine whether the phrase “all having the same data format but distinctive codes for tire

transmitters and vehicle function transmitters” in claim 1 requires category identification (i.e., whether the codes must distinguish tire transmitters from vehicle function transmitters). We conclude that it does.

The ’374 patent describes a data format for radio communication with reference to Figure 4, which is reproduced below.

FIG - 4

PREAMBLE	HEADER	ID	SECURITY / PRESSURE DATA	FUNCTION CODE	CHECK SUM
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Figure 4 depicts a message format having, *inter alia*, “a header one byte long for message byte forming and identifying the source as a tire sender or a keyless entry fob; [and a] unique transmitter identification code which is four bytes long,” the latter of which corresponds to the “ID” block in Figure 4. Ex. 1001, 4:52–62.

Signal contends the header is “a distinctive code for tire transmitters and vehicle function transmitters” that identifies the source as a tire sender or keyless entry fob, and the ID is a code identifying the particular transmitter. PO Resp. 4, 20–21. Signal further contends the header (distinctive code) is used in step 78 of Figure 6. *See id.*; Tr. 39:12–24 (citing Ex. 1001, 5:21–23, Fig. 6). Figure 6 of the ’374 patent is reproduced below.

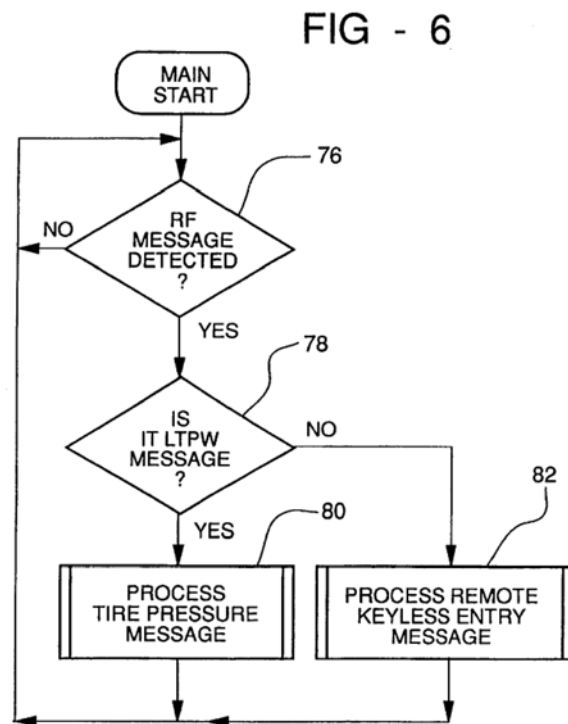


Figure 6 depicts the flow of operations in a processor that is associated with the remote function actuator/receiver. Ex. 1001, 3:12–13; 5:17–19. At step 78, the processor determines whether a detected message is a tire pressure related message and, based on this determination, the processor enters a routine either for processing tire pressure messages or for processing keyless entry messages. Ex. 1001, 5:23–25, Fig. 6.

FCA argues that the Specification of the '374 patent does not use the word “code” with reference to the header, but it does use “code” to describe the “unique transmitter identification code.” Tr. 51:24–53:5. In this way, FCA argues that its proposed construction and application of “distinctive codes” as not requiring category identification is more consistent with the Specification. *Id.*

We are persuaded by Signal’s arguments. “Distinctive” ordinarily means “characteristic of one person or thing, and so serving to distinguish it

from others.” *Distinctive*, NEW OXFORD AMERICAN DICTIONARY (1st ed. 2001) (Ex. 3001). Accordingly, the plain and ordinary meaning of the limitation “distinctive codes for tire transmitters and vehicle function transmitters” must reflect that the recited codes distinguish tire transmitters from vehicle function transmitters. This is consistent with the surrounding language of claim 1, which recites different actions taken depending on whether the transmitted data contains “a distinctive code for tire transmitters” or “a distinctive code for the vehicle function transmitters.” This usage within the claim is important because “the claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Phillips*, 415 F.3d at 1314. In particular, “the context in which a term is used in the asserted claim can be highly instructive.” *Id.*

We also note that FCA’s proposed interpretation would read out language from the claim. Under FCA’s theory, the claim does not require the codes to distinguish between tire transmitters and vehicle function transmitters, and encompasses codes that are merely distinct from each other. In effect, FCA would have us read the limitation as “the remote transmitters all having the same data format but distinctive codes.” The claim does not stop there, however. The full limitation is “the remote transmitters all having the same data format but distinctive codes *for tire transmitters and vehicle function transmitters*” (emphasis added). Thus, the codes are distinctive “for” tire transmitters and vehicle function transmitters, and the processor performs different actions depending on whether the transmitted data contains “a distinctive code for tire transmitters” versus “a distinctive code for vehicle function transmitters.” FCA’s proposed interpretation would read out this important aspect of the claim.

Interpreting the claim to require the codes to distinguish between the two types of transmitters also is consistent with the Specification. We agree with Signal that the usage of “distinctive codes” in claim 1 is supported by the Specification’s disclosure of an exemplary message format with a “header” that “identif[ies] the source as a tire sender or a keyless entry fob.” Ex. 1001, 4:51–55, Fig. 4. Importantly, the header is separate and distinct from the “unique transmitter identification code,” an identifier unique to each transmitter that corresponds to the “ID” block in Figure 4. *Id.* at 4:55–56, Fig. 4. In other words, the Header distinguishes types of transmitters (i.e., a tire sender or keyless entry fob) by their function or category, whereas the ID uniquely identifies a particular transmitter and distinguishes it from the others. An exemplary use of the ID block is illustrated with respect to step 94 of Figure 7, and it serves to show the different uses of the Header and the ID: After a message is determined to be a tire pressure message via category identification at step 78, a low pressure warning may be displayed “for the particular tire position which sent the message as determined by the identification code incorporated in the transmission,” among other things. *Id.* at 5:20–23, 5:32–44, Fig. 7.

We are not persuaded by FCA’s argument that the Specification’s failure to use the word “code” in conjunction with its teachings on the header negates or undermines the connection between the header and the recited “distinctive codes.” *See* Tr. 51:24–53:5. The one-byte-long header, as described in the Specification, is a code regardless of whether the Specification uses the word “code” in describing it. *See* Ex. 1001, 4:51–55. Nor does the use of “code” in the Specification’s description of the “unique transmitter identification code” necessarily suggest a connection to the

recited “distinctive codes” of claim 1 (*see* Tr. 51:24–53:5); nothing in the Specification’s teachings related to these identification codes distinguishes between tire transmitters and vehicle function transmitters. Rather, they distinguish between the individual transmitters themselves.⁴

Accordingly, for purposes of this Decision, we interpret “all having the same data format but distinctive codes for tire transmitters and vehicle function transmitters” to mean “all having the same number and arrangement of data bits or elements but including coded data that distinguishes tire transmitters from vehicle function transmitters.”

II. ANALYSIS

A. *Obviousness Ground Based on Schuermann and Mock*

In its Petition, FCA contends claim 3 would have been obvious under 35 U.S.C. § 103(a) over the combination of Schuermann and Mock. Pet. 29–37. In support of this asserted ground of unpatentability, FCA relies upon a claim chart to explain how the proffered combination teaches the claimed subject matter recited in claim 3, as well as the Declaration of Pradeep Lall, Ph.D. (Ex. 1009 ¶¶ 30–35) to support its positions. *Id.*

In its Patent Owner Response, Signal argues a person of ordinary skill in the art would not have combined Mock with Schuermann. PO Resp. 15. Specifically, Signal argues Schuermann has no need for Mock’s sign-up process, because Schuermann’s controller is already aware of the tire transmitters, which are separately interrogated. *Id.* Signal also argues FCA

⁴ Unlike claim 1, which recites “distinctive codes for tire transmitters and vehicle function transmitters,” claim 4, for example, recites “a code peculiar to said pressure data message transmitter.”

relies on an embodiment of Mock with an external interrogation unit, which is not compatible with Schuermann’s integrated interrogation unit. *Id.* at 15–17. Signal additionally argues Mock “uses a switching device in the receiver, and not at the transmitting devices.” *Id.* at 17.

1. *Principles of Law*

A claim is unpatentable under 35 U.S.C. § 103(a)⁵ if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). We analyze this ground based on obviousness with the principles identified above in mind.

⁵ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the ’374 patent has an effective filing date before the effective date of the applicable AIA amendments, throughout this Decision we refer to the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

2. *Level of Ordinary Skill in the Art*

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). In addition, the prior art of record in this proceeding—namely, Schuermann, Mock, Steele, and Williams—is indicative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579; *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

Citing the testimony of Dr. Lall, FCA contends a person with ordinary skill in the art would be an individual who possesses the following: (1) a Bachelor’s degree in mechanical or electrical engineering; and (2) one to three years of experience in vehicle electronics, including experience in the design of automobile components. Pet. 17 (citing Ex. 1009 ¶¶ 17–19). Signal contends we should give little or no weight to Dr. Lall’s testimony because it recites only “broad categories of undergraduate degrees and years of experience” and does not “provide any explanation of particular skills, learning or knowledge of the hypothetical person of ordinary skill.” PO Resp. 8–10. Nevertheless, Signal does not provide any alternative definition of the level of ordinary skill in the art. *See* Tr. 47:17–48:25.

We disagree with Signal. In particular, FCA cites Dr. Lall’s testimony on “experience in vehicle electronics” and “experience in the design of automobile components.” Pet. 17 (citing Ex. 1009 ¶¶ 17–19). In

addition, Dr. Lall testified at his deposition that an ordinarily skilled artisan also would have had the general background tools provided by obtaining a bachelor's degree in mechanical or electrical engineering, as defined by the standard curricula for those degrees. *See, e.g.*, Ex. 2001, 11:16–15:22.

Dr. Lall also referenced his familiarity with these curricula based on his employment as a professor in the Department of Mechanical Engineering at Auburn University. *See id.* at 12:19–13:5; Ex. 1009 ¶ 4. Accordingly, we do not agree with Signal that Dr. Lall's testimony as to the level of ordinary skill in the art for the '374 patent is conclusory and/or lacking a factual basis. As such, we decline to discount the weight given to Dr. Lall's testimony on that issue.⁶

Importantly, Signal never proposed an alternative definition of the ordinary level of skill in the art. *See* Tr. 48:17–25. As such, we have no indication from Signal about what particular aspects of FCA's definition Signal believes are incorrect, if any. FCA's proposed definition of the level of ordinary skill comports with the qualifications a person would need to understand and implement the teachings of the '374 patent and the prior art of record. Accordingly, we apply it for purposes of this Decision.

⁶ Signal also argues Dr. Lall's testimony related to "the combinations of the references" should be given little or no weight based on the same criticisms of Dr. Lall's level of skill analysis. Tr. 47:17–48:25; *see also* PO Resp. 8–10. Nevertheless, because we find Dr. Lall's analysis sufficiently detailed on the level of ordinary skill in the art, we decline to discount the weight given to his other testimony on obviousness combinations on that basis. We additionally observe that none of Signal's arguments regarding obviousness hinges on the determined level of ordinary skill in the art.

3. *Schuermann*

Schuermann is a patent directed to an “automotive on-board integrated signal communications and control system.” Ex. 1003, 2:4–6.

Figure 1 of Schuermann is reproduced below.

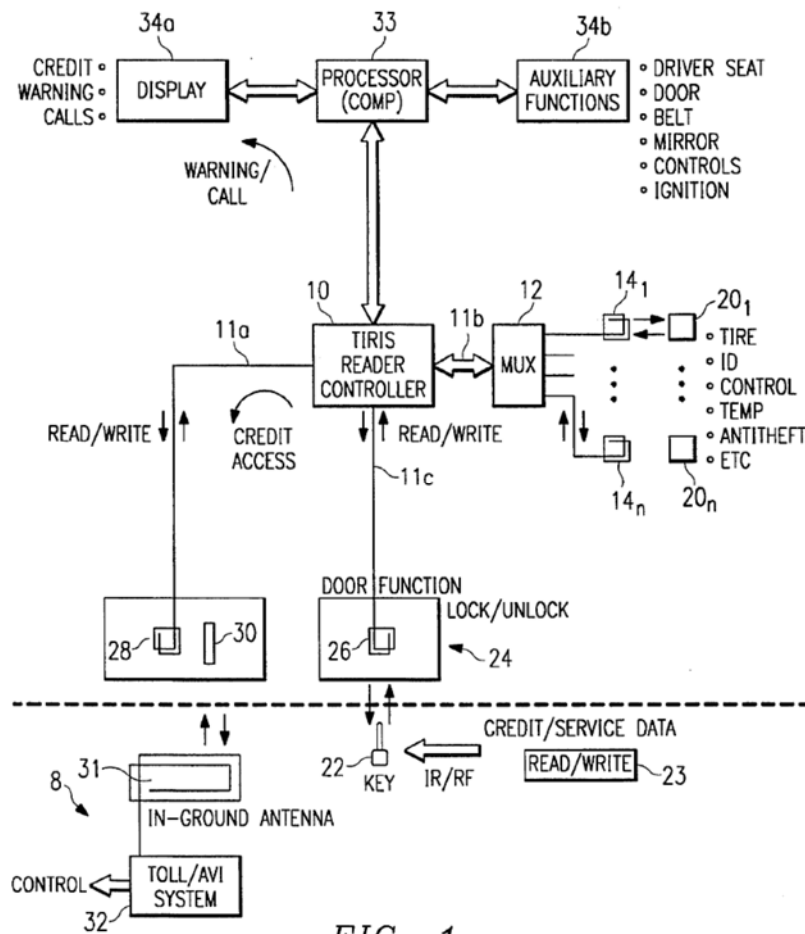


FIG. 1

Figure 1 depicts an integrated vehicle communication system having central interrogation unit 10, which interrogates and communicates with self-contained read/write transponders 20₁–20_n installed onboard the vehicle. *Id.* at 4:37–46. Central interrogation unit 10 communicates with read/write message processor 33, which includes a central processor unit that can cause the display of information or command vehicle on-board functions. *Id.* at 7:63–8:22. Transponders 20₁–20_n “may be affixed to components of the

vehicle such as road wheels, e.g. to tires themselves (as by being buried in tire tread)” and “may also include condition-monitoring or parameter-monitoring means.” *Id.* at 6:12–19. An example of condition monitoring described in Schuermann is the use of “transponders integrated with appropriate transducers” in the road wheels to signal tire temperature and air pressure. *Id.* at 9:30–34. Transponders “carry data identifying the specific transponder,” and this data “uniquely identifies the respective transponder to controller 10.” *Id.* at 6:12–25, 8:23–25.

Key transponder 22 “provides remote control for some functions of the vehicle” by, for example, communicating with door module 26 to control vehicle access and entry. *Id.* at 6:48–7:2. Key transponder 22 also communicates with central interrogation unit 10. *Id.* at 6:61–65.

Schuermann II, which is incorporated into Schuermann, *see supra* note 2, teaches the use of responder units attached to spare parts for detection and monitoring while they are stored. *See* Ex. 1004, 1:37–45; 12:58–64.

Schuermann qualifies as prior art to the ’374 patent under 35 U.S.C. § 102(e) because Schuermann’s filing date of February 14, 1994, was before the filing date of the application that led to the ’374 patent, which was March 10, 1994. *See* Ex. 1003, [22]; Pet. 4.

4. *Mock*

Mock is a patent directed to “monitoring the air-pressure in the air chamber of pneumatic tires of vehicle wheels.” Ex. 1005, 1:9–11. Figure 2 of Mock is reproduced below.

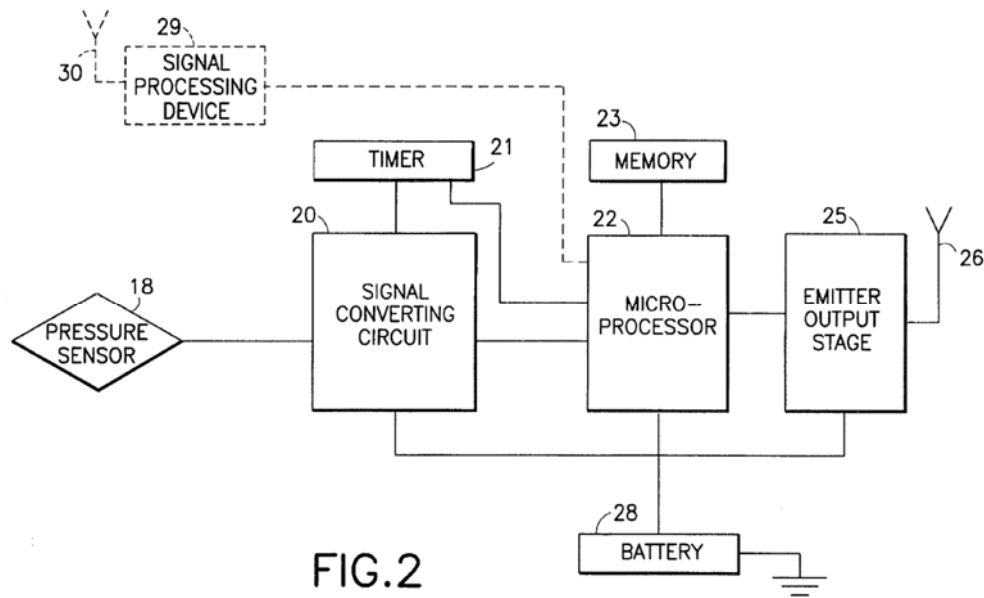


FIG.2

Figure 2 depicts a transmitter device for placement on a vehicle wheel. *Id.* at 6:1–53. The transmitter device includes pressure sensor 18, microprocessor computer 22, and antenna 26, among other things. *Id.* Data from the transmitter device are received by receivers mounted near each wheel and/or a central receiving part. *Id.* at Abstract, 6:3–7, 7:64–67.

Figure 3 of Mock is reproduced below.

PREAMBLE	IDENTIFICATION-SIGNAL	DATA	POST-AMBEL
16 BIT	32 BIT	24 BIT	4 BIT

FIG.3

Figure 3 is a schematic representation of the signals emitted from the transmitting device. *Id.* at 5:43–44. This exemplary signal includes a preamble of 16 bits for synchronization, an identification signal of 32 bits that is “unique to each transmitter,” a data block of 24 bits containing the

measured pressure value, and a post-amble of 4 bits. *Id.* at Abstract; 6:63–7:9.

Mock additionally describes the placement of an activating device, such as a magnet, near a wheel to switch the transmitter at the wheel into a pairing mode. *Id.* at 13:9–13. The transmitting device may include a Reed contact for this purpose. *Id.*

Mock qualifies as prior art to the '374 patent under 35 U.S.C. § 102(e) because Mock's U.S. filing date of November 23, 1993, was before the filing date of the application that led to the '374 patent, which was March 10, 1994. *See id.* at [86]; Pet. 5–6.

5. *Comparison of Schuermann and Mock to Claim 3*

FCA cites Schuermann's teachings on read/write transponders 20₁–20_n in road tires for the recited set of remote tire transmitters. Pet. 31–32 (citing Ex. 1003, Abstract, 4:37–43, 5:57–67, 6:5–6, 8:38–46). Regarding the limitation “one mounted in each tire,” FCA contends Schuermann II teaches the use of a transponder in the spare tire based on, *inter alia*, Schuermann II's “monitor[ing of] ‘individual spares’ (parts) in storage.”⁷ *Id.* at 32 (citing Ex. 1004, 12:58–64). For the “keyless entry transmitter,” FCA cites Schuermann's transponder key 22 and its communication with controller 10 to permit access to the vehicle. *Id.* at 20–21, 30 (citing Ex. 1003, Abstract, 6:48–58, 6:61–65, 8:46–48), 33. According to FCA, both

⁷ Neither Schuermann nor Mock mentions spare tires. In the absence of such discussion, and in light of our construction of “each tire” from above (i.e., “each tire inclusive of *any* spare tire” (*see supra* § I.F.1 (emphasis added))), consideration of spare tires is not at issue for this obviousness combination.

Schuermann's tire transponders 20₁–20_n and transponder key 22 communicate with central interrogation unit 10, which FCA maps to the “radio receiver,” via radio frequency communications. *Id.* at 33–34 (citing Ex. 1003, 2:35–43, 4:36–44, 6:48–58, 6:61–65, 8:40–42). FCA additionally maps Schuermann's read/write message processor 33 to the processor of claim 3. *Id.* at 25–27, 34 (citing, *inter alia*, Ex. 1003, 3:43–52, 7:63–8:15), 34.

For the limitation “a controller coupled with each tire transmitter having a pressure detector for providing pressure data to the tire transmitter,” FCA cites Schuermann's tire transponders as including a controller and as being integrated with pressure transducers to provide air pressure data. *Id.* at 22, 34 (both citing Ex. 1003, 9:28–33). FCA contends Schuermann teaches “an identification code for transmission with the pressure data” by virtue of its teachings on uniquely identifying transponders in communications with controller 10. *Id.* at 35 (citing Ex. 1003, 2:54–59, 6:12–25, 8:23–25).

FCA relies on Mock as teaching the recited “switch activated by a vehicle user for transmitting a sign-up message.” *Id.* at 35 (citing Ex. 1005, 13:1–17). Specifically, FCA cites Mock's teaching of a tire pressure monitoring system with a pairing mode that is activated, at each wheel, via a magnetic switch; the activation of the switch “causes the transmission of a sign-up message.” *Id.* at 35–36 (citing Ex. 1005, Abstract, 2:65–3:15, 6:61–7:9, 13:1–17). FCA additionally cites Mock as teaching storage of identification codes and comparison with later data “to differentiate data transmitted from various tire locations” via Mock's “identification-reference

signal.” *Id.* at 36–37 (citing Ex. 1005, 2:65–3:15, 11:49–65). FCA’s arguments, supported by the testimony of Dr. Lall, are persuasive.

Signal argues Mock describes a pairing approach that “uses a switching device in the receiver, and not at the transmitting devices” (PO Resp. 17), but FCA relies on Schuermann, not Mock, for the receiver. Pet. 33–34 (citing Schuermann’s “onboard interrogation/control unit” at, *inter alia*, Ex. 1003, 2:35–43, 4:36–44). In addition, FCA relies on Mock’s description of a sign-up procedure with a “Reed contact” as a switch at the transmitting device that is “activated by an outside magnet brought close to the tire.” *Id.* at 35 (quoting Ex. 1005, 13:1–17). For these reasons, we are not persuaded by Signal’s argument.

Thus, FCA has established that Schuermann and Mock teach every limitation of claim 3.

6. *Rationale for Combining Schuermann and Mock*

Citing testimony from Dr. Lall, FCA contends an ordinarily skilled artisan “would have added Mock’s magnetic sign-up message to the Schuermann system to obtain the predictable result of identifying the specific wheel sending the signal and its position (more accurately).” Pet. 29 (citing Ex. 1009 ¶ 35). FCA argues that Schuermann is silent on pairing transponders with a central interrogation unit, so Mock’s sign-up process represents “one of a limited number of known sign-up procedures that would be implemented into the Schuermann system with predictable results.” Pet. Reply 4–5 (citing *KSR*, 550 U.S. at 416–18). FCA also cites Mock’s teaching about cost reductions associated with having a changeable identification signal for the tire transmitter. *Id.* at 7 (citing Ex. 1005, 4:47–

51). FCA contends this would have motivated the combination of Schuermann with Mock's pairing mode to allow for the "use of the pressure monitoring system when a wheel is changed, without interruption." *Id.* Having considered FCA's explanation and Dr. Lall's testimony, we determine FCA has established sufficient reasons for why a person of ordinary skill in the art would have combined the teachings of Schuermann and Mock.

Signal argues Mock's sign-up process is unneeded in Schuermann "because Schuermann's controller 10 is always aware of which tire is being addressed through multiplexer 12." PO Resp. 15 (citing Ex. 1003, 5:62–66; Ex. 2001, 33:7–35:7). According to Signal, "Schuermann teaches a system in which each tire transponder is separately interrogated using controller 10 and multiplexer 12." *Id.* (citing Ex. 2001, 33:7–35:7).

We are not persuaded by Signal's arguments because we do not agree with Signal that Schuermann's separate interrogation implies that a sign-up procedure is unnecessary. Rather, Schuermann is *silent* as to whether and how a sign-up procedure would be used, so FCA is correct that Schuermann "leaves it to persons of ordinary skill in the art to use known techniques for accomplishing transponder sign-up." Pet. Reply 4. As such, we are persuaded by FCA's rationale that an ordinarily skilled artisan would have had reason to incorporate Mock's sign-up procedure to ensure reliable identification of tire transmitters. See Pet. 29–30; Ex. 1009 ¶ 35. We additionally agree with FCA that an ordinarily skilled artisan would have appreciated the benefits of adding Mock's sign-up procedure based on the cost reductions Mock mentions that are associated with a changeable identification code at the tire transmitter. Ex. 1005, 4:47–51. Signal's

counsel conceded that Mock teaches this benefit at the oral hearing.
Tr. 38:4–25.

Signal also argues FCA “relies on Mock’s teachings concerning an interrogation unit that is not mounted in the vehicle.” PO Resp. 16 (citing Pet. 35; Ex. 1005, 11:29–31). According to Signal, the pairing approach of Mock “uses a switching device in the receiver, and not at the transmitting devices.” *Id.* at 17 (citing Ex. 1005, 10:15–27). FCA argues that Signal’s characterization is incorrect. FCA contends “Mock discloses ‘an activating device’ used in connection with the central receiver unit of the second embodiment, which triggers the switch into a pairing mode.” Pet. Reply 8–9 (citing Ex. 1005, 12:46–13:13). Specifically, FCA cites Mock’s teaching about a Reed contact to establish that “a magnetic switch at the transmitter . . . activates a sign-up message.” *Id.* (citing Ex. 1005, 13:1–13).

We are not persuaded by Signal’s arguments, which attempt to conflate Mock’s teachings about a receiving device in a transportable housing with Mock’s teachings about the use of a pairing mode where an outside magnet engages a Reed contact in a transmitter. *Compare* Ex. 1005, 11:22–31 *with id.* at 13:9–13. We do not read Mock as inextricably linking these two different teachings, because the Reed contact description is prefaced by the transitional words “[a]n activation of this kind can also be triggered by another kind of result.” *Id.* at 13:9–10. It also states the Reed contact is “[a]t the transmitting device,” *id.* at 13:11–13, which refutes Signal’s argument (PO Resp. 17) that the switching device is in the receiver. Furthermore, even if Signal were correct about Mock’s interrogation unit not being mounted in the vehicle, this still would not persuasively rebut FCA’s obviousness combination, because FCA relies on Schuermann’s, not

Mock's, receiver system. *See* Pet. 33–34 (citing Ex. 1003, 2:35–43, 4:36–44, 6:48–58, 6:61–65, 8:40–42). FCA only relies on Mock as teaching a switch at the tire pressure monitoring transmitter that activates a pairing mode. *See id.* at 35 (citing Ex. 1005, 13:1–17). FCA need not prove that the features of Mock can be bodily incorporated into the Schuermann system in order to prove obviousness. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Accordingly, Signal's arguments are not persuasive.

Thus, FCA has established that a person of ordinary skill in the art would have had reason to combine the teachings of Schuermann and Mock to achieve the system recited in claim 3.

7. *Secondary Considerations of Nonobviousness*

Signal did not put forth any evidence of secondary considerations of nonobviousness.

8. *Conclusion Regarding the Schuermann-Mock Obviousness Ground*

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that claim 3 would have been obvious over the combination of Schuermann and Mock under 35 U.S.C. § 103(a).

B. *Obviousness Ground Based on Schuermann, Mock, and Williams*

FCA contends claim 3 would have been obvious over the combination of Schuermann, Mock, and Williams. Pet. 37–38. Signal disputes FCA's contention for the same reasons discussed above with respect to the combination of Schuermann and Mock. PO Resp. 18.

1. *Williams*

Williams is a patent directed to “tire pressure monitors of the type which are capable of sensing incorrect pressure and alerting the operator of a vehicle of incorrect tire pressure while the vehicle is being operated.” Ex. 1007, 1:8–14. Williams teaches that “[s]pare tires may be monitored if desired.” *Id.* at 5:23–24.

Williams qualifies as prior art to the ’374 patent under 35 U.S.C. § 102(b) because Williams’s issue date of April 28, 1992, was more than one year before the filing date of the application that led to the ’374 patent, which was March 10, 1994. *See* Ex. 1007, [45]; Pet. 6.

2. *Comparison of Schuermann, Mock, and Williams to Claim 3*

FCA’s analysis for this ground is identical to that of the Schuermann-Mock ground except that FCA relies on Williams as teaching the “one mounted in each tire” limitation coextensive with its coverage of spare tires. Pet. 37; *see supra* § I.F.1. As noted by FCA, “Williams . . . expressly discloses monitoring spare tires.” *Id.* (citing Ex. 1007, 5:23–24, 13:30–34). For this reason, and for the reasons stated above, we are persuaded that Schuermann, Mock, and Williams teach every limitation of claim 3.

3. *Rationale for Combining Schuermann, Mock, and Williams*

Building upon its rationale for combining Schuermann and Mock as discussed above, FCA contends “[i]t would have been obvious to combine the monitoring of spare tires in Williams with that of Schuermann and Mock given that Schuermann already monitors tires and spare parts in storage.” *Id.* at 37–38 (citing Ex. 1009 ¶¶ 37–38); *see* Ex. 1004, 1:42–45, 12:59–64

(describing the monitoring of spare parts in storage). We are persuaded by this rationale. As Dr. Lall points out, for example, “[t]he combined references would have the additional benefit that a vehicle operator would be able to monitor the air pressure in its spare tire and would know if the pressure was insufficient, should it become necessary to use the spare tire.” Ex. 1009 ¶ 38. Signal does not dispute FCA’s rationale beyond Signal’s arguments made for the Schuermann-Mock ground. For this reason, and for the reasons stated above, FCA has established that a person of ordinary skill in the art would have had reason to combine the teachings of Schuermann, Mock, and Williams to achieve the system recited in claim 3.

4. *Conclusion Regarding the Schuermann-Mock-Williams Obviousness Ground*

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that claim 3 would have been obvious over the combination of Schuermann, Mock, and Williams under 35 U.S.C. § 103(a).

C. *Obviousness Ground Based on Mock, Steele, and Williams*

FCA contends claim 3 would have been obvious over the combination of Mock, Steele, and Williams. Pet. 38–53. Signal disputes FCA’s contention. PO Resp. 18–20. In particular, Signal recapitulates its arguments that (1) Mock teaches a portable receiver, which is incompatible with a central receiver; and (2) Mock’s magnetic switch is not required when an integrated controller is used. *Id.* at 19.

1. *Steele*

Steele is a patent directed to a remote keyless entry (RKE) system with a receiver on the car and remote transmitter. Ex. 1006, Abstract. Steele teaches that the RKE transmitter's signal may comprise a start portion of four bits, a security portion of four, eight-bit bytes, and a function code portion of eight bits. *Id.* at 4:42–47. If the vehicle receiver receives a valid security code from the transmitter, it decodes the function code and performs a requested function, such as locking or unlocking a vehicle door. *Id.* at 5:47–53.

Steele qualifies as prior art to the '374 patent under 35 U.S.C. § 102(e) because Steele claims priority to an application filed on October 8, 1993, and this was before the filing date of the application that led to the '374 patent, which was March 10, 1994. *See* Ex. 1006, [63]; Pet. 6.

2. *Comparison of Mock, Steele, and Williams to Claim 3*

FCA cites Mock's transmitter device and pressure sensor as illustrated in Figure 2 of Mock for the recited set of remote tire transmitters. Pet. 42–43 (citing Ex. 1005, Abstract, 6:48–51, 6:61–7:9, 7:27–29, 10:49, Fig. 2), 54–56. Regarding the limitation “one mounted in each tire,” FCA cites Williams's teaching that spare tires can be monitored. *Id.* at 56 (citing Ex. 1007, 15:23–24). FCA maps Steele's RKE transmitter to the recited “keyless entry transmitter.” *Id.* at 44 (citing Ex. 1006, 3:5–15, 3:49–62), 56. Regarding the “radio receiver,” FCA cites Mock's receiver device, which can include first receiver part E1–E4 and second central receiving part EZ. *Id.* at 44–45 (citing Ex. 1005, 7:64–67, Fig. 5), 56. FCA contends it would have been obvious to modify Mock's receiver “to receive data from both the

tire transmitter and the remote vehicle function transmitter.” *Id.* at 45 (citing Ex. 1009 ¶¶ 44–47), 56.

FCA maps Mock’s microprocessor 66 to the processor of claim 3 and notes that it is connected to display 73. *Id.* at 49–50, 56–57 (both citing Ex. 1005, 8:24–40, 13:35–38, Fig. 5). FCA also cites Steele’s teaching on permitting vehicle entry when an appropriate signal is received from an RKE transmitter. *Id.* at 50 (citing Ex. 1006, 5:47–53, Fig. 4), 57 (citing Ex. 1006, Abstract). FCA contends it would have been obvious to combine the functionality of Mock’s control of a display and Steele’s control of vehicle entry into one common processor. *Id.* at 57 (citing Ex. 1009 ¶¶ 47, 49).

For the limitation “a controller coupled with each tire transmitter having a pressure detector for providing pressure data to the tire transmitter,” FCA cites Mock’s microprocessor 22 and pressure sensor 18, which are coupled to transmitting antenna 26. *Id.* at 46 (citing Ex. 1005, Abstract, 6:12–15, 6:47–51, Fig. 2), 57–59. FCA contends Mock teaches “an identification code for transmission with the pressure data” via Mock’s “identification signal which contains an identification characteristic specific to the transmitter,” which is described with reference to the data format of Mock’s Figure 3. *Id.* at 47 (citing Ex. 1005, 6:63–7:13, Fig. 3), 57.

FCA again relies on the activation of Mock’s magnetic switch in the tire transmitter as teaching the recited “switch activated by a vehicle user for transmitting a sign-up message.” *Id.* at 58–59 (citing Ex. 1005, Abstract, 2:65–3:15, 6:61–7:9, 13:1–17). FCA also cites Mock’s “identification-reference signal” for differentiating data transmitted from various tire locations, as discussed above. *Id.* at 59 (citing Ex. 1005, 2:65–3:15, 11:49–65).

Based on FCA’s analysis, which we adopt, we are persuaded that the combination of Mock, Steele, and Williams teaches every limitation of claim 3.

3. *Rationale for Combining Mock, Steele, and Williams*

With support from Dr. Lall’s testimony, FCA contends that both tire pressure monitoring systems and RKE systems “were known to reside on the same vehicle,” so “[h]aving a vehicle with both systems provided the advantages of allowing a vehicle owner to know the pressure condition of its tires and be able to remotely control a locking/unlocking function of its door.” Pet. 38–39 (citing Ex. 1009 ¶¶ 41–42). As such, FCA contends an ordinarily skilled artisan would have been motivated to combine the receiving and processing functions for both tire pressure monitoring and RKE into the same hardware component. *Id.* at 39. FCA notes the similarities in receiving, decoding, and processing RF signals in the two systems and contends they would have been combined by a person of ordinary skill in the art to achieve predictable results. *Id.* (citing Ex. 1009 ¶¶ 43–44). According to FCA, having “a single receiver/processor would result in less hardware, which in turn decreases the manufacturing costs and decreases other system complications.” *Id.* at 39–40. FCA further contends it would have been obvious to add Williams’s teachings on monitoring a spare tire to the Mock-Steele combination based on Williams’s and Mock’s common teachings on tire pressure monitoring, thereby “provid[ing] a vehicle user with information about the tire pressure in a spare tire, should it be necessary to utilize the spare tire.” *Id.* at 53 (citing Ex. 1009 ¶ 53). We

are persuaded by FCA's rationale and explanation, and we credit Dr. Lall's testimony, as supporting the combination of Mock, Steele, and Williams.

Signal again argues that FCA relies on Mock's portable receiver embodiment, which Signal contends would not allow for Steele's RKE system to unlock vehicle doors. PO Resp. 19. But FCA is not relying on Mock's portable receiver embodiment; rather, FCA relies on Mock's teachings regarding the use of centralized receivers. Pet. 44–45 (citing Ex. 1005, Abstract, 7:64–67, Fig. 5), 56; Pet. Reply 11–13. Signal also argues Mock's magnetic switch would not be required in the Mock-Steele-Williams combination because a “magnetic switch is not required when an integrated controller is used.” PO Resp. 19–20. Again, however, this argument relies on Signal's erroneous premise that Mock's magnetic switch necessarily requires Mock's portable receiver and precludes the use of Mock's integrated controller/receiver. *See supra* § II.A.6; Pet. Reply 13–14. We do not agree that an ordinarily skilled artisan would be so constrained. *See In re Boe*, 355 F.2d 961, 965 (CCPA 1966) (“All of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art.”). Accordingly, we are not persuaded by Signal's arguments that Mock, Steele, and Williams would be incompatible.

Thus, FCA has established that a person of ordinary skill in the art would have had reason to combine the teachings of Mock, Steele, and Williams to achieve the system recited in claim 3.

4. *Conclusion Regarding the Mock-Steele-Williams Obviousness Ground*

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that claim 3 would have been obvious over the combination of Schuermann and Mock under 35 U.S.C. § 103(a).

D. *Obviousness Ground Based on Mock and Steele*

FCA contends claims 1 and 2 would have been obvious over the combination of Mock and Steele. Pet. 38–53. Signal disputes FCA’s contention. PO Resp. 20–23.

FCA’s unpatentability analysis for claim 1 is similar to that for claim 3 in the Mock-Steele-Williams obviousness ground, as discussed above. See Pet. 38–53. For the limitation “the remote transmitters all having the same data format but distinctive codes for tire transmitters and vehicle function transmitters,” FCA cites Mock’s data format as depicted in Figure 3 and contends that the format includes a distinctive code in the “identification signal which contains an identification characteristic specific to the transmitter.” *Id.* at 47–48 (citing Ex. 1005, Abstract, 6:63–7:13). FCA also cites Steele’s “specific data structure for all transmitters, with a security code to identify a particular transmitter.” *Id.* at 48 (citing Ex. 1006, Abstract, 1:41–47, 3:5–24, 4:43–47). FCA contends it would have been an obvious design choice to transmit all signals in the same format so that a receiver could process signals in the same manner based on Mock’s and Steele’s “nearly identical data format[s].” *Id.* (citing Ex. 1009 ¶ 50).

Signal argues that “neither Mock nor Steele provides any field or information in these messages that distinguish categories of transmitters, as required by claim 1.” PO Resp. 22. Signal explains that, although “the

security codes taught by Steele and identification information taught by Mock may differentiate one transmitter from another, they do not distinguish tire transmitters from vehicle function transmitters.” *Id.*

As stated above, we construe the “distinctive codes” limitation to mean “coded data that distinguishes tire transmitters from vehicle function transmitters.” *See supra* § I.F.2. FCA’s citations to Mock and Steele establish that each reference teaches a data format including data that identifies *individual* transmitters, but the data format does not distinguish between types of transmitters. Pet. 47–48. Specifically, FCA maps Mock’s “identification signal which contains an identification characteristic specific to the transmitter” to the recited “distinctive codes” (*id.* at 48 (citing Ex. 1005, Abstract, 6:63–7:13)), but this does not teach distinguishing categories of transmitters. FCA’s citations to Steele’s “security code to identify a particular transmitter” for the “distinctive codes” (*id.* (citing Ex. 1006, Abstract, 1:41–47, 3:5–24, 4:43–47)) are similarly devoid of any teaching on transmitter category identification. Thus, we agree with Signal that Mock and Steele do not teach or suggest codes that distinguish tire transmitters from vehicle function transmitters.

In the absence of a teaching or suggestion in the asserted prior art of distinguishing tire transmitters from vehicle function transmitters via distinct coded data, we conclude that FCA has not demonstrated by a preponderance of the evidence that claim 1 would have been obvious over the combination of Mock and Steele. Claim 2 depends from independent claim 1, so claim 2 incorporates the same limitations as the base claim. Thus, for the same reasons discussed with respect to claim 1, we conclude that FCA has not

demonstrated by a preponderance of the evidence that dependent claim 2 would have been obvious over the combination of Mock and Steele.

III. CONCLUSION

FCA has demonstrated by a preponderance of the evidence that claim 3 of the '374 patent is unpatentable under 35 U.S.C. § 103(a) based on the instituted grounds for the following obviousness combinations:

(1) Schuermann and Mock; (2) Schuermann, Mock, and Williams; and (3) Mock, Steele, and Williams. FCA has not demonstrated by a preponderance of the evidence that claims 1 and 2 are unpatentable under 35 U.S.C. § 103(a) over the combination of Mock and Steele. This is a Final Written Decision of the Board under 35 U.S.C. § 318(a).

IV. ORDER

In consideration of the foregoing, it is
ORDERED that claim 3 of the '374 patent is held unpatentable;
FURTHER ORDERED that claims 1 and 2 of the '374 patent have not been shown to be unpatentable; and

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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