

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PLATFORM SCIENCE, INC.,  
Petitioner,

v.

OMNITRACS, LLC,  
Patent Owner.

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IPR2020-01612  
Patent 6,925,308 B2

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Before BART A. GERSTENBLITH, JAMES J. MAYBERRY, and  
FREDERICK C. LANEY, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision  
Determining No Challenged Claims Unpatentable  
35 U.S.C. § 318(a)

## I. INTRODUCTION

### A. Background

Platform Science, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1–4, 6–9, 11, 12, and 15 (“the Challenged Claims”) of U.S. Patent No. 6,925,308 B2 (Ex. 1001, “the ’308 patent”). Omnitrac, LLC (“Patent Owner”) filed a Preliminary Response (Paper 9). Applying the standard set forth in 35 U.S.C. § 314(a), we denied institution of *inter partes* review. Paper 11 (“Initial Decision”).

Petitioner timely filed a Request for Rehearing (Paper 12, “Rehearing Request” or “Req. Reh’g”) of our Initial Decision. After considering the arguments presented, we granted Petitioner’s Request for Rehearing and instituted *inter partes* review of the Challenged Claims of the ’308 patent on all grounds asserted in the Petition. Paper 14 (“Rehearing Decision” or “Rehearing Dec.”). Subsequent to our Rehearing Decision, Patent Owner filed a Patent Owner Response (Paper 18, “PO Resp.”), Petitioner filed a Reply (Paper 26, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 33, “PO Sur-reply”). An oral hearing was held on June 2, 2022, and a copy of the transcript is in the record. Paper 36 (“Tr.”).

We have jurisdiction pursuant to 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of the claims on which we instituted trial. Petitioner bears the burden of proving unpatentability of the Challenged Claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2019).

Having reviewed the arguments and the supporting evidence, we determine that Petitioner has not shown, by a preponderance of the evidence, that the Challenged Claims of the '308 patent are unpatentable.

*B. Related Proceedings*

Petitioner and Patent Owner identify the following related matter: *Omnitracs, LLC and XRS Corp. v. Platform Science, Inc.*, 20-cv-0958 (S.D. Cal.). Pet. 77; Paper 5 (Patent Owner Omnitracs, LLC's Mandatory Notices Pursuant to 37 C.F.R. § 42.8), 2. In addition, Petitioner challenged several claims of the '308 patent in IPR2020-01613.<sup>1</sup> Paper 5, 2.

*C. Real Parties in Interest*

Petitioner identifies Platform Science, Inc. as the real party in interest. Pet. 77. Patent Owner identifies Omnitracs, LLC and XRS Corporation as the real parties in interest. Paper 5, 2.

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<sup>1</sup> The Board did not institute an *inter partes* review in IPR2020-01613. See *Platform Science, Inc. v. Omnitracs, LLC*, IPR2020-01613, Paper 14 (PTAB Apr. 13, 2021).

*D. The Instituted Grounds of Unpatentability and Declaration Evidence*

Petitioner challenges the patentability of claims 1–4, 6–9, 11, 12, and 15 of the '308 patent on the following grounds:

| <b>Claim(s) Challenged</b>        | <b>35 U.S.C. §<sup>2</sup></b> | <b>Reference(s)/Basis</b>    |
|-----------------------------------|--------------------------------|------------------------------|
| 1–4, 6–9, 11, 12, 15 <sup>3</sup> | 102(e),<br>103(a)              | Coffee <sup>4</sup>          |
| 1–4, 7–9, 12                      | 103(a)                         | Coffee, Heijden <sup>5</sup> |

Pet. 2. Petitioner supports its challenge with a Declaration of Scott Andrews (Ex. 1003) and a Declaration of Jason W. Wolff (Ex. 1015). Patent Owner supports its arguments with a Declaration of Joseph C. McAlexander III (Ex. 2006).

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<sup>2</sup> The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. Because the '308 patent has an effective filing date before March 16, 2013, we apply the pre-AIA versions of the statutory bases for unpatentability.

<sup>3</sup> Petitioner’s listing of grounds does not include claim 4 as challenged in what it refers to as “Ground 1A” based on Coffee under §§ 102 and/or 103, but Petitioner’s Ground 1A heading and the discussion that follows includes claim 4. *Compare* Pet. 2 (Petitioner’s grounds listing), *with id.* at 25 (Ground 1A heading), 43–47 (discussing claim 4). Accordingly, we understand that Petitioner’s first ground includes claim 4 and we treated it as such in our Initial and Rehearing Decisions. Initial Dec. 4 & n.3; Rehearing Dec. 7 & n.4.

<sup>4</sup> U.S. Patent No. 6,611,755 B1, issued August 26, 2003, from an application filed December 19, 1999 (Ex. 1005, “Coffee”).

<sup>5</sup> U.S. Patent No. 6,880,016 B1, issued April 12, 2005, from an application filed October 13, 1998, and published April 22, 1999 (Ex. 1006, “Heijden”).

*E. The '308 Patent*

The '308 patent is directed to “text-based communications” and more particularly to “providing a method and apparatus for automatically entering information into pre-formatted messages in a communication terminal.”

Ex. 1001, 1:7–11. The '308 patent explains that traditional text-based communications between a dispatch station and a vehicle operator have several disadvantages, particularly when considering response messages (i.e., messages sent by a vehicle operator in response to messages from a dispatch station). *Id.* at 2:21–29. In particular, the '308 patent indicates that manually entering information (a) may lead to errors in the entries and (b) is a slow process, which can delay the vehicle operator from transporting goods as quickly as possible. *Id.* The '308 patent states that “[w]hat is needed is a method and apparatus for allowing information to be entered quickly into such response messages to minimize the chances of error and to reduce the vehicle operator’s time spent sending response messages.” *Id.* at 2:30–33.

Figure 1 is reproduced below:

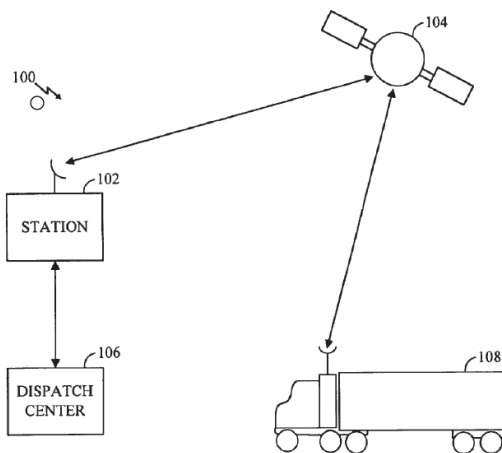


FIG. 1

Figure 1 of the '308 patent “illustrates a communication system 100 in which the method and apparatus for automatically entering information into

formatted messages is used.” Ex. 1001, 3:36–38; *see id.* at 3:1–3. The ’308 patent explains that “[d]ispatch center 106 and vehicle 108 are capable of communication with each other via central station 102 and satellite 104.” *Id.* at 3:38–40. “In one embodiment, vehicle 108 is a commercial trucking vehicle having a mobile communications terminal (MCT) mounted in a tractor or cab of the vehicle, not shown [in Figure 1].” *Id.* at 3:50–52. The ’308 patent states, “[t]he MCT is capable of respectively transmitting and receiving communication signals to and from central station 102 via data satellite 104.” *Id.* at 3:52–55.

The ’308 patent explains the following regarding messages transmitted between the MCT and the central station:

Information transmitted between the MCT and central station 102 is accomplished using formatted messages, otherwise known as “macro” messages, or pre-formatted messages. Formatted messages are useful because they minimize the amount of information being transmitted, thus reducing communication costs. Cost savings are achieved by transmitting only pertinent data, without sending “overhead” information.

Ex. 1001, 3:59–66. Figure 2 is reproduced below:

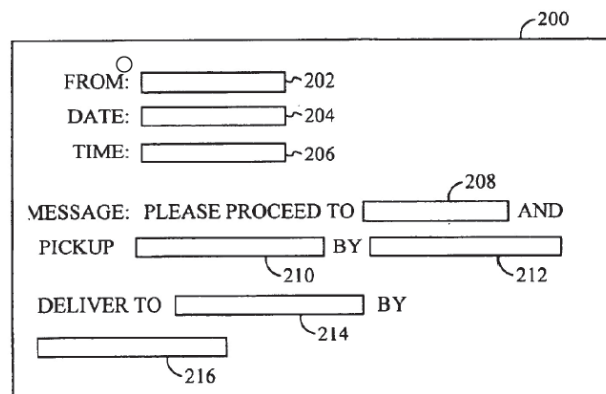


FIG. 2

Figure 2 of the ’308 patent “illustrates one embodiment of a formatted message 200 which instructs vehicle 108 to pick up goods at one location

and deliver the goods to a second location within given time constraints.” *Id.* at 4:1–4; *see id.* at 3:4–6. The ’308 patent states that the type of message shown in Figure 2 is “typically known in the transportation industry as a ‘load assignment’ message.” *Id.* at 4:4–5.

The ’308 patent describes the following regarding “formatted message 200”:

Formatted message 200 comprises information fields 202 through 216. When a formatted message is transmitted, only the information contained in the information fields, plus some overhead information, is transmitted. The other information in the formatted message 200 is not transmitted, for example, the words “From”, “Date:”, “Time:”, “Message: Please proceed to”, “and pick up”, “by”, . . . “Deliver to”, [and] “by” . . . . When formatted message 200 is created at, for example, central station 102, an operator first chooses which formatted message to send to vehicle 108 from the total number of formatted messages which are already defined. In this example, the operator chooses to send a load assignment message, which has been predefined as having a message identification code of “1”. After choosing formatted message 200, the operator then enters information into the information fields 202 through 216.

Ex. 1001, 4:11–26. The ’308 patent explains that a variety of formatted messages can be defined that allow vehicle 108 to transmit status and operational information to central station 102, including “message acknowledgments, vehicle location, speed, and direction, engine characteristics, arrival and departure notifications, and so on.” *Id.* at 4:46–51. Each predefined, formatted message is assigned “a unique message identification code for identifying the type of formatted message. For example, formatted message 200 could be given a message identification code of ‘1’, while another formatted message instructing vehicle 108 to

report its present location could be given a message identification code of ‘2’.” *Id.* at 4:53–60.

The ’308 patent explains the following regarding the message identification code:

The message identification code is used by central station 102 and vehicle 108 to determine which type of formatted message is being received so that it can be “decoded” correctly. For example, when a formatted message having a message identification code of “1” is transmitted to vehicle 108, only the message identification code and the information fields are sent. This information is received by a processor onboard vehicle 108 that determines that it is a load assignment message based on the message identification code, and that the received information is in a format in accordance with a predefined “template” stored locally to vehicle 108 (or central station 102, as the case may be). The template comprises information relating to overhead information that is not transmitted, i.e., the words “Message: Please proceed to” and other non-fielded information which comprises a formatted message. The template also contains information relating to each information field. For example, a received message having a message identification code of “1” is defined as a message having 8 information fields 202 through 216, and in one embodiment, a definition of how much information is contained in each field, for example, the number of bits or characters which represent each information field. In another embodiment, the template does not define how much information is contained within each information field.

Using the template information, the received information can then be used to reconstruct the original formatted message and presented to a user at either vehicle 108 or at central station 102.

Ex. 1001, 4:61–5:22.

Figure 3 is reproduced below:

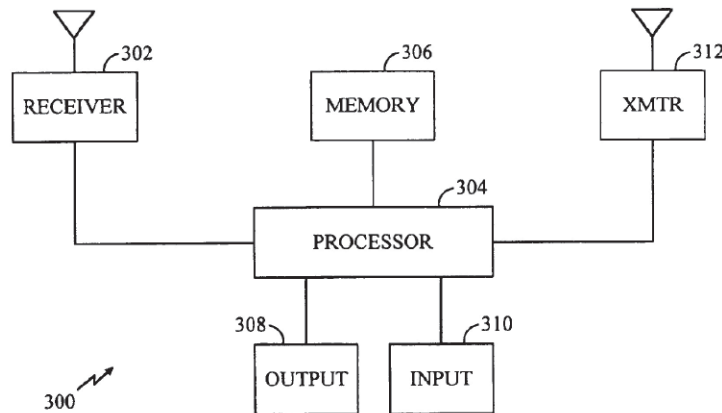


FIG. 3

Figure 3 of the '308 patent “illustrates a functional block diagram of communication terminal 300 used to transmit and receive information relating to formatted messages.” Ex. 1001, 5:23–25; *see id.* at 3:7–9. The functional blocks shown in Figure 3 can be used onboard vehicle 108 or at central station 102. *Id.* at 5:25–28.

The '308 patent explains that “[c]ommunication terminal 300 comprises receiver 302 for receiving information relating to formatted messages.” Ex. 1001, 5:32–33. “The received information, comprising a message identification code and one or more information fields, is provided to processor 304, where it is decoded for presentation to a user of communication terminal 300.” *Id.* at 5:45–48. According to the '308 patent, “[p]rocessor 304 determines the message identification code of the received information and uses a predefined template stored in memory 306 corresponding to the message identification code to reconstruct the formatted message, using information stored in memory 306 and the information fields of the received information.” *Id.* at 5:50–55. “The reconstructed message may then be stored within memory 306 as a

formatted message and/or presented to the user via output device 308.” *Id.* at 5:55–58. And, output device 308 may be a display device, such as a computer screen or monitor. *Id.* at 6:12–13.

Figure 5 is reproduced below:

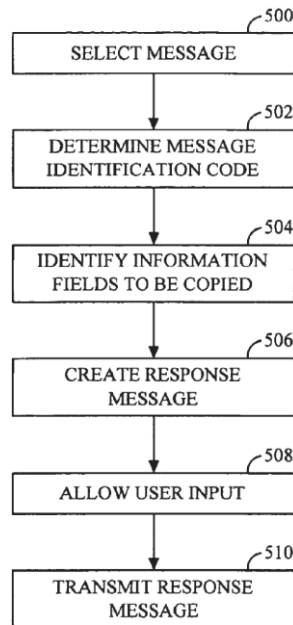


FIG. 5

Figure 5 of the '308 patent “illustrates a flow diagram of one embodiment of a method for automatically entering information into formatted messages in a communication terminal.” Ex. 1001, 7:48–50; *see id.* at 3:15–17. The '308 patent explains the following regarding Figure 5:

In step 500, a formatted message is selected to respond to. The formatted message comprises a message identification code and a number of information fields, the information fields filled in by a sender of the formatted message. The message may be chosen as a message which is currently-displayed by output device 308, or it may be selected from a number of messages stored within a memory of the communication terminal.

In any case, a request to respond to the selected message is entered using input device 310. Processor 304 receives the user's request to respond to the selected formatted message. The request indicates which formatted message the user wishes

to respond, either explicitly with an indication of which formatted message to respond, or implicitly by processor 304 knowing which formatted message the user is viewing when the response request is entered.

Processor 304 then determines the message identification code of the formatted message to which a response is desired, as shown in step 502. The message identification code is either provided explicitly along with the request to respond, or it is determined by processor 304 identifying the selected formatted message and determining the message identification code by accessing memory 306. Memory 306 contains information linking each received formatted message with a corresponding message identification code. In step 504, processor 304 identifies information fields from the formatted message to be copied into the response message using field-mapping information stored in memory 306. The field-mapping information comprises a number of stored message identification codes and corresponding field identification information for each stored identification code. The field identification information identifies which information fields from each type of formatted message is copied into information fields of corresponding response messages. . . .

After processor 304 has identified the field-mapping information corresponding to the identified message identification code, a response message is created and provided to output device 308, shown as step 506. Processor 304 copies information fields from the message being responded to into the response message information fields as directed by the field-mapping information corresponding to the message identification code of the formatted message.

In step 508, the user enters information into any information fields that were not filled in automatically by processor 304. Some response messages may not need any user input, while other response messages may rely heavily on user input. Generally, the user will be able to alter certain information fields, as allowed by the field-mapping information. . . .

After the user has entered information into the response message, the response message is provided to processor 304, where it is then transmitted to central station 102 in step 510. Of course, the entire response message is not transmitted. Processor 304 transmits a message identification code corresponding to the response message type, and each information field. Generally, some kind of formatting information is transmitted as well, such as an indication of stop/start bits between information fields, error correction coding, and so on.

*Id.* at 7:49–8:57.

*F. Illustrative Claim*

Claims 1, 7, and 12 are the independent claims challenged in this proceeding. Claim 1 is illustrative of the claimed subject matter and is reproduced below with Petitioner's bracketing added for reference:

1. [pre] A communication terminal, comprising:

[1a] a receiver for receiving a formatted message out of a number of pre-defined formatted messages, comprising a message identification code and a plurality of information fields;

[1b] an output device for presenting said formatted message to a user of said communication terminal;

[1c] an input device for responding to said formatted message;

[1d] a memory for storing said formatted message and for storing field-mapping information, said field-mapping information for indicating information to be copied from said formatted message to a response message based on which one of said pre-defined formatted messages was received;

[1e1] a processor for creating said response message in response to an indication from said input device of a request to respond to said formatted message, [1e2] said response message comprising at least one response message information field, [1e3] wherein information from at least one of said plurality of

information fields of said formatted message is copied into at least one of said response message information fields based on said field-mapping information; and

[1f] a transmitter for transmitting said information relating to said response message.

Ex. 1001, 9:2–24.

*G. Level of Ordinary Skill in the Art*

Petitioner, supported by Mr. Andrews’s testimony, proposes that a person of ordinary skill in the art at the time of the invention

would have had at least a Bachelor of Science degree (or equivalent) in electrical engineering, computer engineering, computer science, or a related technical field, and at least 2–3 years of experience in the fields of messaging systems, and wireless communication devices, or an equivalent advanced education in the field of messaging systems, including wireless communication devices.

Pet. 12 (citing Ex. 1003 ¶ 28).

In our Initial and Rehearing Decisions, we noted that Patent Owner did not contest Petitioner’s proffered level of ordinary skill in the art at that stage of the proceeding and we found “Petitioner’s proposal consistent with the level of ordinary skill in the art reflected by the ’308 patent and the prior art of record.” Initial Dec. 13 (citing *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978)); Rehearing Dec. 16 (same). Therefore, we adopted Petitioner’s unopposed position as to the level of ordinary skill in the art. Initial Dec. 13; Rehearing Dec. 16.

In its Patent Owner Response, Patent Owner states that “[f]or purposes of this proceeding, Patent Owner does not dispute Petitioner’s offered level of ordinary skill in the art.” PO Resp. 7.

Accordingly, we maintain our preliminary finding by adopting Petitioner’s proposed level of ordinary skill in the art, as set forth above.

## II. CLAIM CONSTRUCTION

In this *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2019). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art at the time of the invention. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). In construing claims in accordance with their ordinary and customary meaning, we take into account the specification and prosecution history. *Phillips*, 415 F.3d at 1315–17.

Additionally, only terms that are in controversy need to be construed, and these need be construed only to the extent necessary to resolve the controversy. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

The parties dispute two aspects of the claims pertaining to claim construction—(1) whether “a processor for creating said response message” invokes 35 U.S.C. § 112 ¶ 6 (Pet. 3–7; PO Resp. 7–10; Pet. Reply 1–2; PO Sur-reply 1–2), and (2) whether “[t]he claim language requires the ability to perform copying from multiple pre-defined formatted messages” (PO Resp. 10–13; Pet. Reply 2–4; PO Sur-reply 2–3). To resolve the ultimate

dispute between the parties here, we need not reach either claim construction issue. Accordingly, we do not construe any claim terms expressly. *Vivid Techs.*, 200 F.3d at 803; *Nidec Motor Corp.*, 868 F.3d at 1017.

### III. ANALYSIS

#### A. Legal Standards – Anticipation

“[A] claim is anticipated ‘if each and every limitation is found either expressly or inherently in a single prior art reference.’” *King Pharm., Inc. v. Eon Labs., Inc.*, 616 F.3d 1267, 1274 (Fed. Cir. 2010) (quoting *Celeritas Techs., Ltd. v. Rockwell Int’l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998)). “Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991). Anticipation is a question of fact, *In re Gleave*, 560 F.3d 1331, 1334–35 (Fed. Cir. 2009), assessed from the perspective of one of ordinary skill in the art, *see Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003) (“the dispositive question regarding anticipation [i]s whether *one skilled in the art* would reasonably understand or infer from the [prior art reference’s] teaching that every claim element was disclosed in that single reference” (alteration in original) (quotation omitted)).

#### B. Legal Standards – Obviousness

The U.S. Supreme Court set forth the framework for applying the statutory language of 35 U.S.C. § 103 in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966):

Under [§] 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at

issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

The Supreme Court explained in *KSR International Co. v. Teleflex Inc.* that

[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”)).

Additionally, “[i]nherency is established in the context of obviousness when ‘the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art.’”

*Hospira, Inc. v. Fresenius Kabi USA, LLC*, 946 F.3d 1322, 1329 (Fed. Cir. 2020) (quoting *Par Pharm. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1194 (Fed. Cir. 2014)).

Further, “[w]hether an ordinarily skilled artisan would have been motivated to modify the teachings of a reference is a question of fact.”

*WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1327 (Fed. Cir. 2016) (citations omitted). “[W]here a party argues a skilled artisan would have been

motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

*C. Anticipation by and/or Obviousness over Coffee*

Petitioner contends that Coffee discloses each and every element of claims 1–4, 6–9, 11, 12, and 15 and/or Coffee would have rendered the subject matter of claims 1–4, 6–9, 11, 12, and 15 obvious to one of ordinary skill in the art at the time of the invention. Pet. 25–62. We address Petitioner’s contentions as to anticipation together with Petitioner’s contentions as to obviousness, with specific delineation of each where appropriate.

As reflected below, each of the three independent claims challenged in this proceeding—claims 1, 7, and 12—recite that information or information fields are “copied” (claims 1 and 7) or “filled in” (claim 12) from a formatted message to a response message. In particular, claim 1 is directed to “[a] communication terminal.” Ex. 1001, 9:2. Limitation 1d recites “a memory for storing said formatted message and for storing field-mapping information, said field-mapping information for indicating information to be copied from said formatted message to a response message based on which one of said pre-defined formatted messages was received” and limitation 1e3 recites “wherein information from at least one of said plurality of information fields of said formatted message is copied into at least one of said response message information fields based on said field-mapping information.” *Id.* at 9:10–14, 9:19–23.

Independent claim 7 is directed to “[a] signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform operations for automatically entering information into formatted messages in a communication terminal,” and comprises [limitation 7e] “identifying which information fields, from said plurality of information fields, to be copied into said response message, based on said message identification code.” Ex. 1001, 9:53–57, 10:1–3.

Claim 12, which is directed to “[a] method for automatically entering information into formatted messages in a communication terminal,” recites limitations similar to those of claim 1 that require [limitation 12c1] “identifying one or more information fields of said formatted message to be copied into a response message based on field-mapping information stored in a memory,” [limitation 12c2] “said field-mapping information for indicating information to be copied from said formatted message to a response message based on which one of said pre-defined formatted messages was received,” and [limitation 12d] “creating said response message . . . wherein at least one of said response message information fields is filled in<sup>6</sup> with information from one or more of said information fields of said formatted message based on said field-mapping information” (footnote added). Ex. 1001, 10:33–35, 10:40–52.

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<sup>6</sup> In its discussion of limitation 12d, Petitioner represents that one of ordinary skill in the art “would have understood that, in the context of the ’308 patent, response message information fields ‘*filled in with information*’ is the same as information ‘*copied into at least one of said response message information fields.*’” Pet. 61 (citing Ex. 1003 ¶ 195). Accordingly, for ease of reference, we refer to copying in most of the discussion below.

As discussed further below, the Petition presents most of its analysis as to these limitations in the context of claim 1 and incorporates that analysis when addressing the similar limitations of claims 7 and 12. In its Patent Owner Response, Patent Owner groups its arguments such that it primarily addresses claims 1 and 12 together and refers to those arguments, amongst others, in its discussion of claim 7.

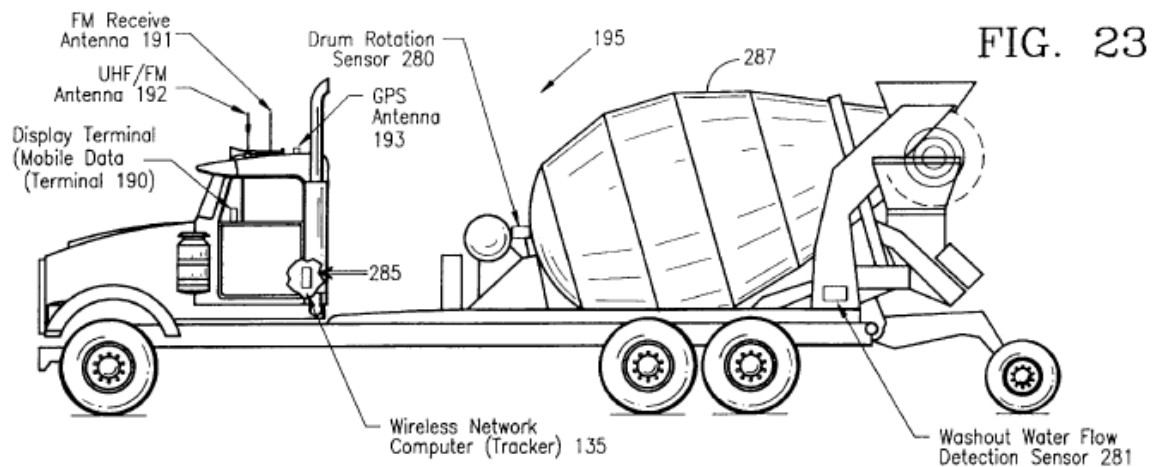
On the complete record before us and for the reasons explained below, we find that Petitioner fails to show, by a preponderance of the evidence, that Coffee discloses that information or information fields are “copied” or “filled in” from a formatted message to a response message. Although the Petition presents the first ground as based on anticipation “and/or” obviousness, Petitioner does not present any argument or evidence that it would have been obvious to modify Coffee to meet these particular claim limitations. Rather, as discussed below, Petitioner’s alternative challenge based on obviousness, in this first ground, is directed specifically to “field-mapping information.” We focus the discussion below on the “copied” and “filled in” limitations because our findings are outcome determinative of the issues presented in this proceeding.

*1. Scope and Content of the Prior Art – Coffee*

Coffee is directed to “asset management systems, and more particularly to a system for tracking the real-time location and status of vehicles of a fleet, and for communicating between the vehicles and a dispatcher or expediter in the fleet offices.” Ex. 1005, 1:6–10. Coffee explains that “[t]he primary goal of the fleet management system . . . is to provide fleet management information to customers (i.e., the owners, operators, subscribers, or users of the fleet . . .) to enable them to manage

their assets more profitably.” *Id.* at 2:38–50. Coffee provides several means to accomplish this goal by: (1) giving a fleet operator the capability to locate vehicles of the fleet in real-time; (2) allowing the operator to communicate with those vehicles over a very efficient and reliable wireless network; (3) enabling the operator to receive timely, accurate data regarding what each vehicle of the fleet is doing; and (4) providing the operator with an ability to correlate the position and messaging information generated by the system with the operator’s other management information systems to provide an integrated information source for improved fleet business management. *Id.* at 2:50–64.

Figure 23 is reproduced below:



Coffee’s Figure 23 “illustrates an exemplary placement of the tracker, a Mobile Data Terminal (MDT) and antennas on a typical fleet vehicle, the vehicle being further equipped for accommodating various sensors for event reporting.” *Id.* at 8:1–4. Coffee explains the following regarding the MDT:

The MDT 190 serves as a control and display unit (CDU) for the tracker 135 (FIGS. 23, 26), primarily for the convenience of the vehicle operator.

The MDT is a small conventional programmable computer similar to but generally smaller than a notebook PC

(with customer-specific software) and display terminal with liquid crystal display (LCD), keypad, associated memory, and internal (integrated) circuitry, to enable display of text and other data, and to enable the vehicle operator to respond to text paging messages and to enter other data to be transmitted to the dispatcher. MDT 190 and tracker 135 communicate over a balanced, differential, asynchronous serial interface, which, in the exemplary embodiment, uses a Texas Instruments (TI) SN65C1167NS dual differential driver/receiver interface circuit. . . .

. . . .

In keeping with NavCore and other message numbering conventions, each interface is identified by a different thousands place in the message ID number. The MDT-tracker interface uses 7000 as the interface identifier. Messages transmitted by tracker 135 use ID numbers beginning with 7100 and messages received by it use ID numbers beginning with 7200. In the exemplary embodiment, the message IDs are:

For tracker to MDT:

7101 Navigation Data  
7102 Received Message Data  
7103 Received User Data  
7104 Available Message Data  
7106 User Data Message List

For MDT to tracker:

7201 Data Request  
7202 Text Message Response  
7203 User Data Output  
7204 Request Available Message Data  
7205 Request Message  
7206 Request User Data Message List

When requested by MDT 190 (by action of the vehicle operator), tracker 135 sends navigation data (message 7201,

Table 57, Appendix B) including current position, velocity, and time at approximately 1 Hz to the MDT. When the tracker receives a “Request Message” (7205, Table 66) from the MDT, it sends the data for the requested text message to the MDT using a “Received Message Data” packet (7102, Table 58). The latter either contains the full text of the received message or an ID number indicating a “canned” text to display. A response set is sent along with the text message, containing a unique set of text items that can be selected by the vehicle operator in response to the received message.

Each message has an identifier, or issue of data (IOD), a rollover counter, to differentiate messages within the system and to associate messages with their responses. When the operator selects a response to a message (e.g., an inquiry from the dispatcher), that message’s IOD is sent back to the tracker with the response in message 7202. The response is selected using arrow keys on the face (keypad) of the MDT.

*Id.* at 54:66–55:67.

Coffee explains that a pre-defined message definition packet provides trackers with a text message that should be associated with a specified “pre-defined message ID.” Ex. 1005, 19:64–67. “Trackers receiving this message store the pre-defined message definition . . . [and] [t]his stored association is then used to display the appropriate message upon receipt of a ‘Pre-Defined Message Packet.’” *Id.* at 20:4–9. The packet “allows a shorter message format for ‘canned’ user messages that are frequently transmitted by an individual customer. Since the trackers know the text of these messages a priori, only a message ID and a 16-bit cyclic redundancy check (CRC) need be sent by the NDC.” *Id.* at 20:9–13. Coffee states that “[t]he ID identifies the message and the CRC allows the tracker to determine whether the text matches the CRC of the known pre-defined message.” *Id.* at 20:13–15.

Coffee further explains the following regarding receiving and responding to messages:

In the “Received Message Data” (Table 58), the Message Type indicates whether the message contains a canned or fall [sic] text message. If the message is canned, the next byte contains the ID number of the message; otherwise, it contains the length in bytes of the received message text. The next 2 bytes contain the IOD number of the received text message and the user response if a message has already been sent. The next 3 words indicate the date and time the message was received. The next word contains the number of valid responses in the response list. Next is the list of 4 text responses to be displayed above softkeys of the MDT. Unused response strings are zero filled. If the message is full text, the characters of the message follow in order. . . .

. . . .

Tracker 135 is programmed with a set of canned “User Data” messages, a list of which (message 7106, Table 61) may be requested for display on the MDT by the driver’s sending “Request User Data Message List” message (7206, Table 67). Upon subsequent receipt of a “Request Message” for a specific “User Data” message, the tracker will provide the text of that requested message to the MDT. . . .

. . . .

When the vehicle operator selects a response to a received text message, the MDT sends that response to the tracker using a Text Message Response message (7202, Table 63) which contains the IOD of the message being answered and the numeric response value.

The tracker is used to send customer-defined data to the NDC . . . .

Ex. 1005, 56:5–57:2.

Coffee's Tables 58 and 63, described in detail above, are reproduced below:

| TABLE 58                            |                                                          |        |           |       |
|-------------------------------------|----------------------------------------------------------|--------|-----------|-------|
| <u>Received Message Data (7102)</u> |                                                          |        |           |       |
| Word Number                         | Description                                              | Type   | Units/LSB | Range |
| 1-5                                 | Header                                                   |        |           |       |
| 6 (lsb)                             | Message Type 1 = canned, 2 = full text                   | uchar  |           |       |
| 6 (msb)                             | Canned ID/Text Length (L)                                | uchar  |           |       |
| 7 (lsb)                             | IOD                                                      | uchar  |           | 0-255 |
| 7 (msb)                             | User Response                                            | uchar  |           | 0-4   |
| 8                                   | Year                                                     | ushort |           |       |
| 9 (lsb)                             | Month                                                    | uchar  |           | 1-12  |
| 9 (msb)                             | Day                                                      | uchar  |           | 1-31  |
| 10 (lsb)                            | Hour                                                     | uchar  |           | 0-23  |
| 10 (msb)                            | Minute                                                   | uchar  |           | 0-59  |
| 11 (lsb)                            | Number of valid responses                                | uchar  |           | 0-4   |
| 11 (msb)                            | Spare                                                    | uchar  |           |       |
| 12-16                               | Response 1 Text                                          | char   |           |       |
| 17-21                               | Response 2 Text                                          | char   |           |       |
| 22-26                               | Response 3 Text                                          | char   |           |       |
| 27-31                               | Response 4 Text                                          | char   |           |       |
| next L/2                            | Text if type = 2, padded with 0 in last byte if L is odd | char   |           |       |

| TABLE 63                            |               |        |           |       |
|-------------------------------------|---------------|--------|-----------|-------|
| <u>Text Message Response (7202)</u> |               |        |           |       |
| Word Number                         | Description   | Type   | Units/LSB | Range |
| 1-5                                 | Header        |        |           |       |
| 6 (lsb)                             | IOD           | uchar  |           | 0-255 |
| 6 (msb)                             | Response      | ushort |           | 0-7   |
| 7                                   | Data Checksum |        |           |       |

*Id.* at 101:14-35 (Table 58), 102:44-54 (Table 63). Coffee's Table 58 shows "Received Message Data" 7102 (Ex. 1005, 55:54-55), and Coffee's Table 63 shows "Text Message Response" 7202 (*id.* at 56:65).

## 2. Differences Between the Prior Art and the Claims; Motivation to Modify

### a. Independent Claim 1

#### i. Limitations 1d and 1e3 – the Parties' Arguments

As noted above, limitations 1d and 1e3 recite limitations that bear on the parties' arguments pertaining to copying information or information fields from a formatted message into a response message. Patent Owner directs its arguments to each of these limitations somewhat collectively. In order to best explain the parties' positions, we first set forth Petitioner's arguments as to limitations 1d and 1e3, followed by Patent Owner's arguments in response.

Petitioner asserts that Coffee “discloses and/or renders obvious” “a memory for storing said formatted message and for storing field-mapping information, said field-mapping information for indicating information to be copied from said formatted message to a response message based on which one of said pre-defined formatted messages was received,” as recited in limitation 1d, by disclosing that the MDT “includes ‘memory, and internal (integrated) circuitry, [] to enable the vehicle operator to respond to text paging messages and to enter other data to be transmitted to the dispatcher.” Pet. 31 (citing Ex. 1003 ¶ 98; Ex. 1005, 54:66–55:9) (alteration by Petitioner). Petitioner contends that “the MDT stores the received message while it is displayed to the operator.” *Id.* (citing Ex. 1003 ¶ 98; Ex. 1005, 56:1–3).

Petitioner asserts that Coffee’s received message also includes information fields corresponding to possible responses from which the user can select a response, as shown in Table 58 reproduced above. Pet. 31 (citing Ex. 1003 ¶ 99; Ex. 1005, 55:55–60). Petitioner contends that “[w]hen the vehicle operator enters a response to the received message with the message ID number 7102, the MDT transmits a response message with the message ID number 7202 back to the tracker.” *Id.* at 32 (citing Ex. 1003 ¶ 100; Ex. 1005, 55:35–47, 56:63–67). Petitioner further asserts that the response message (shown in Table 63) includes “some of the same information as the received message” (shown in Table 58), “such as header information, the IOD, and the response selected by the operator.” *Id.* (citing Ex. 1003 ¶¶ 100–101; Ex. 1005, 56:63–67, Tables 58, 63). Petitioner includes the following side-by-side annotated versions of Coffee’s Tables 58 and 63:

| TABLE 58                     |                                                          |        |           |       | TABLE 63                     |               |        |           |       |
|------------------------------|----------------------------------------------------------|--------|-----------|-------|------------------------------|---------------|--------|-----------|-------|
| Received Message Data (7102) |                                                          |        |           |       | Text Message Response (7202) |               |        |           |       |
| Word Number                  | Description                                              | Type   | Units/LSB | Range | Word Number                  | Description   | Type   | Units/LSB | Range |
| 1-5                          | Header                                                   |        |           |       | 1-5                          | Header        |        |           |       |
| 6 (lsb)                      | Message Type 1 = canned, 2 = full text                   | uchar  |           |       | 6 (lsb)                      | IOD           | uchar  |           | 0-255 |
| 6 (msb)                      | Canned ID/Text Length (L)                                | uchar  |           |       | 6 (msb)                      | Response      | ushort |           | 0-7   |
| 7 (lsb)                      | IOD                                                      | uchar  |           | 0-255 | 7                            | Data Checksum |        |           |       |
| 7 (msb)                      | User Response                                            | uchar  |           | 0-4   |                              |               |        |           |       |
| 8                            | Year                                                     | ushort |           |       |                              |               |        |           |       |
| 9 (lsb)                      | Month                                                    | uchar  |           | 1-12  |                              |               |        |           |       |
| 9 (msb)                      | Day                                                      | uchar  |           | 1-31  |                              |               |        |           |       |
| 10 (lsb)                     | Hour                                                     | uchar  |           | 0-23  |                              |               |        |           |       |
| 10 (msb)                     | Minute                                                   | uchar  |           | 0-59  |                              |               |        |           |       |
| 11 (lsb)                     | Number of valid responses                                | uchar  |           | 0-4   |                              |               |        |           |       |
| 11 (msb)                     | Spare                                                    | uchar  |           |       |                              |               |        |           |       |
| 12-16                        | Response 1 Text                                          | char   |           |       |                              |               |        |           |       |
| 17-21                        | Response 2 Text                                          | char   |           |       |                              |               |        |           |       |
| 22-26                        | Response 3 Text                                          | char   |           |       |                              |               |        |           |       |
| 27-31                        | Response 4 Text                                          | char   |           |       |                              |               |        |           |       |
| next L/2                     | Text if type = 2, padded with 0 in last byte if L is odd | char   |           |       |                              |               |        |           |       |

Pet. 33. Table 58, identifying the received message data 7102, and Table 63, identifying the text message response 7202, are shown above, including Petitioner’s annotations which place red boxes around the “Header,” “IOD,” and four “Response” “Text[s]” of Table 58 and the header, IOD, and Response of Table 63. *Id.* at 33 (citing Ex. 1003 ¶ 101; Ex. 1005, Tables 58, 63).

Petitioner asserts that “[a]t least some of the information included with the received formatted message (e.g., header, IOD, and selected response) is copied over from the received message to the response message.” Pet. 33 (citing Ex. 1003 ¶ 102). Petitioner contends that one of ordinary skill in the art “would have understood that this correspondence between fields in the request message and fields in the response message is ‘field-mapping.’” *Id.* (citing Ex. 1003 ¶ 102).

To the extent not explicitly disclosed, Petitioner also asserts Coffee inherently discloses certain elements of limitation 1d. Pet. 33. Specifically, Petitioner asserts that one of ordinary skill in the art would have understood: (1) that, in the context of Tables 58 and 63, “the inclusion of field names of

the received message in the response message is based on field mapping information” and (2) “that, in order to implement this correspondence between the fields of the request message and the fields of the response message, Coffee’s system must inherently use ‘field-mapping information’ to know which field from the received message is to be copied into which corresponding field in the response message.” *Id.* at 33–34 (citing Ex. 1003 ¶ 103). Petitioner contends that “[w]ithout such field-mapping information, the system would not be able to copy over information from the received message into the correct fields of the response message” and “would risk operator error in hunting down and correctly copying over the header, IOD, and response fields so the information in the response message would be correctly matched with the information in the received message.” *Id.* at 34 (citing Ex. 1003 ¶ 103). Petitioner asserts that “[i]t is not reasonable to imagine that a [person of ordinary skill in the art] at the time of the invention would have left such a tedious task, routinely performed on a computer, to a human.” *Id.* (citing Ex. 1003 ¶ 103).

Additionally, with respect to whether Coffee’s MDT includes a memory that stores field-mapping information, Petitioner contends:

To the extent that Coffee is deemed not to explicitly or inherently disclose that “field-mapping information” is stored on the MDT, it would have been obvious to a [person of ordinary skill in the art] to include “field-mapping information” with the “Received Message Data” packet (Table 58), the “Text Message Response” (Table 63), and/or data “to enable the vehicle operator to respond to text paging messages,” all of which are stored, at least temporarily, in memory of the MDT.

Pet. 34 (citing Ex. 1003 ¶ 104; Ex. 1005, 54:66–55:9). Further, Petitioner asserts that one of ordinary skill in the art would have understood that field-mapping information “would necessarily need to be available at the MDT to

generate a response message that includes at least some of the same information as was included with the received message.” *Id.* (citing Ex. 1003 ¶ 105). Petitioner contends that “without such field-mapping information, information from the received message could not be copied to appropriate corresponding fields in the response message because the MDT would have no idea which copied information goes where in the response message.” *Id.* at 34–35 (citing Ex. 1003 ¶ 105).

Regarding limitation 1e3, Petitioner contends that Coffee “discloses and/or renders obvious” “wherein information from at least one of said plurality of information fields of said formatted message is copied into at least one of said response message information fields based on said field-mapping information.” Pet. 36–39. As noted above, this limitation is similar in some respects limitation 1d, and, therefore, Petitioner repeats some of the same arguments set forth above. *Compare* Ex. 1001, 9:9–14 (limitation 1d), *with id.* at 9:19–23 (limitation 1e3). Petitioner asserts “[t]he message received at the MDT with the message ID number 7102 (the ‘formatted message’), includes information fields such as header information, the IOD, and a set of responses specific to the received message.” *Id.* at 36–37 (citing Ex. 1003 ¶ 114; Ex. 1005, 55:55–60, Table 58). Petitioner contends the response message generated at the MDT with the message ID 7202 “includes the IOD of the received message to associate the response message with the received message, the header, and the response selected by the vehicle operator (*i.e.*, response message information fields[]).” *Id.* at 37 (citing Ex. 1003 ¶ 115; Ex. 1005, 55:61–67, Table 63).

Petitioner argues that, “[w]hen the vehicle operator responds to a received message (*e.g.*, an inquiry from the dispatcher), the header, the IOD, and the selected response are automatically sent back to the tracker from the MDT.” Pet. 37 (citing Ex. 1003 ¶ 116; Ex. 1005, 55:61–67, Tables 58, 63). Petitioner includes the following side-by-side annotated versions of Coffee’s Tables 58 and 63:

| TABLE 58                     |                                                          |        |           |       | TABLE 63                     |               |        |           |       |
|------------------------------|----------------------------------------------------------|--------|-----------|-------|------------------------------|---------------|--------|-----------|-------|
| Received Message Data (7102) |                                                          |        |           |       | Text Message Response (7202) |               |        |           |       |
| Word Number                  | Description                                              | Type   | Units/LSB | Range | Word Number                  | Description   | Type   | Units/LSB | Range |
| 1–5                          | Header                                                   |        |           |       | 1–5                          | Header        |        |           |       |
| 6 (lsb)                      | Message Type 1 = canned, 2 = full text                   | uchar  |           |       | 6 (lsb)                      | IOD           | uchar  |           | 0–255 |
| 6 (msb)                      | Canned ID/Text Length (L)                                | uchar  |           |       | 6 (msb)                      | Response      | ushort |           | 0–7   |
| 7 (lsb)                      | IOD                                                      | uchar  |           | 0–255 | 7                            | Data Checksum |        |           |       |
| 7 (msb)                      | User Response                                            | uchar  |           | 0–4   |                              |               |        |           |       |
| 8                            | Year                                                     | ushort |           |       |                              |               |        |           |       |
| 9 (lsb)                      | Month                                                    | uchar  |           | 1–12  |                              |               |        |           |       |
| 9 (msb)                      | Day                                                      | uchar  |           | 1–31  |                              |               |        |           |       |
| 10 (lsb)                     | Hour                                                     | uchar  |           | 0–23  |                              |               |        |           |       |
| 10 (msb)                     | Minute                                                   | uchar  |           | 0–59  |                              |               |        |           |       |
| 11 (lsb)                     | Number of valid responses                                | uchar  |           | 0–4   |                              |               |        |           |       |
| 11 (msb)                     | Spare                                                    | uchar  |           |       |                              |               |        |           |       |
| 12–16                        | Response 1 Text                                          | char   |           |       |                              |               |        |           |       |
| 17–21                        | Response 2 Text                                          | char   |           |       |                              |               |        |           |       |
| 22–26                        | Response 3 Text                                          | char   |           |       |                              |               |        |           |       |
| 27–31                        | Response 4 Text                                          | char   |           |       |                              |               |        |           |       |
| next L/2                     | Text if type = 2, padded with 0 in last byte if L is odd | char   |           |       |                              |               |        |           |       |

*Id.* Table 58, identifying the received message data 7102, and Table 63, identifying the text message response 7202, are shown above, including Petitioner’s annotations which place red boxes around the header, IOD, and four Response Texts of Table 58 and the header, IOD, and Response of Table 63. *Id.* (citing Ex. 1003 ¶ 117; Ex. 1005, Tables 58, 63). Petitioner contends “[t]hus, Coffee describes copying information from information fields in the received message into corresponding fields of the response message.” *Id.* at 37–38. Petitioner asserts this disclosure meets this claim limitation because, “if Coffee did not employ such copying, the response message would not automatically include information extracted from the received message.” *Id.* at 38 (citing Ex. 1003 ¶ 118). Petitioner contends

that “if the copying were not performed based on field-mapping information, items of information extracted from the received message would not appear in the response message at the correct locations.” *Id.* (citing Ex. 1003 ¶ 118).

Petitioner raises an alternative argument that “[t]o the extent that Coffee is deemed not to explicitly or inherently disclose that information from an information field of a received message is copied to an information field of a response message based on ‘field-mapping information,’ it would have been obvious to a [person of ordinary skill in the art] that the response selected by the vehicle operator in the received message (Table 58) is mapped and copied to the response message (Table 63).” *Id.* (citing Ex. 1003 ¶ 119; Ex. 1005, 55:51–67, 56:63–67). Petitioner asserts that one of ordinary skill in the art: (a) would have understood that “‘field-mapping information’ would necessarily be available at the MDT to generate a response message that includes at least some of the same data as included with the received message”; and (b) would have recognized that “without such field-mapping information, information from the received message could not be copied to appropriate corresponding fields in the response message because the MDT would have no idea which copied information goes where in the response message.” *Id.* (citing Ex. 1003 ¶ 120).

Accordingly, Petitioner contends Coffee teaches or renders obvious limitation 1e3. Pet. 39 (citing Ex. 1003 ¶ 121).

Patent Owner raises several arguments in response to Petitioner’s discussion of limitations 1d and 1e3. As noted above, we focus primarily on Patent Owner’s arguments and evidence directed to whether Coffee discloses that information is “copied” from a formatted message to a

response message. As with the Petition’s discussion of copying, Patent Owner’s Response includes at least two distinct sections responding to the Petition. Although slightly repetitive, we include each for completeness, followed by the arguments raised in the Reply and Sur-reply.

First, Patent Owner contends that “[w]hile Petitioner identifies information that is the same in the ‘Received Message Data’ (7102) message and the ‘Text Message Response’ (7202) message, Petitioner never shows that any fields are copied into the response, and there is no disclosure in Coffee stating otherwise.” PO Resp. 18. Patent Owner asserts that, “[a]t best, Petitioner identifies a field in the response message that has the same information as the field in the received message—the IOD field.” *Id.* (citing Pet. 38). But, Patent Owner argues, “[m]erely because two fields have the same information . . . does not mean that data is ‘copied’ over from one field to another.” *Id.*

Second, Patent Owner challenges the testimony of Petitioner’s expert on this issue. PO Resp. 18. In particular, Patent Owner asserts that a user could enter the IOD from the received message into the response message, and that Coffee discloses “softkeys” that a user could press to select the IOD. *Id.* (citing Ex. 2006 ¶ 61). Additionally, Patent Owner contends that “the lack of description in Coffee for how an IOD ends up in a response message does not necessitate the conclusion that a user could not have entered it.” *Id.* at 18–19 (citing Ex. 2006 ¶ 61). Further, Patent Owner posits that “the system could pull the IOD from another source besides the received message, or from an internal counter that keeps track of message identifiers.” *Id.* at 19. Patent Owner contends, “[c]ritically, nothing in Coffee ever describes copying the IOD from a received message to a

response message, and Petitioner and its expert cannot point to disclosure in Coffee (or any other reference) to the contrary.” *Id.*

Third, Patent Owner reiterates some of its arguments above, addressing the three fields that Petitioner relies on for copying. Patent Owner asserts that “Petitioner’s argument primarily relies on Coffee purportedly copying information from a formatted message to a response message because the ‘Received Message Data (7102)’ and ‘Text Message Response (7202)’ both contain fields labeled ‘Header,’ ‘IOD,’ and ‘Response.’” PO Resp. 25 (citing Pet. 33). But, Patent Owner argues, “Coffee does not suggest these fields are copied into a response message, much less that they are copied ‘based on said field-mapping information.’” *Id.*

Regarding the field labeled “Header,” Patent Owner asserts that the “Received Message Data” (7102) and “Text Message Response” (7202) messages “both have a field labeled ‘Header,’ but Coffee does not suggest that they are copied between messages. Instead, Coffee states that each message in its system has a **unique** header, as Petitioner’s expert admits.” PO Resp. 25 (citing Ex. 1005, Table 89, 67:51–68:33; Ex. 2007 (Deposition Transcript of Mr. Andrews), 111:3–15).

Regarding the “Response” field, Patent Owner asserts that field is not copied either. PO Resp. 26. Patent Owner contends that Coffee’s possible responses “are displayed on the MDT above numbered softkeys, which the operator presses to select a response.” *Id.* (citing Ex. 1005, 56:14–15, 24:27–34). According to Patent Owner, “[w]hen the operator selects a response, the MDT returns the ‘numeric response value,’ or ‘softkey number,’ and **not** the displayed text, in the response message.” *Id.* (citing

Ex. 1005, 56:63–67, 24:31–34, Table 38, 31:51–53). Thus, Patent Owner argues that the “user enters the ‘numerical response value’ into the response message.” *Id.*

Regarding the IOD, Patent Owner notes that “Coffee states a ‘Text Message Response message [] contains the IOD of the message being answered.’” PO Resp. 27 (alteration by Patent Owner) (citing Ex. 1005, 56:65–66). Patent Owner contends that “Petitioner argues that ‘this disclosure meets this claim limitation because, if Coffee did not employ such copying, the response message would not automatically include information extracted from the received message.’” *Id.* (quoting Pet. 38). Patent Owner asserts that “Petitioner’s argument is flawed from the outset” because “Coffee never discloses that the IOD is automatically extracted from the received message.” *Id.* (citing Ex. 1005, 56:63–67). Patent Owner argues that, “[a]t most, Petitioner establishes that a response message 7202 contains the same IOD value as received message 7102, not that it is automatically extracted.” *Id.* Patent Owner points to testimony by Petitioner’s expert, essentially stating that if, in the abstract, you have two messages without any defined relationship between them, and they happen to have fields with the same name, there would not be a reason to think that the contents of one were copied into the other. *Id.* at 27–28 (citing Ex. 2007, 131:22–132:13).

Particularly relevant to anticipation, Patent Owner also asserts that “Petitioner acknowledges that this step could be performed by a human and not done automatically, which would not meet the claim language.” PO Resp. 28 (citing Pet. 34; Ex. 2007, 137:21–138:3). Patent Owner contends that Petitioner’s concession “doom[s] Petitioner’s inherency argument” because if there is another alternative to explain how the received message’s

IOD is included in the response message, it is not correct that the IOD must invariably be copied. *Id.* at 31 (citing *InTouch Tech., Inc. v. TGO Commc'ns, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014)).

Patent Owner also explains that in contrast to Coffee's description of the IOD, when Coffee copies information, it "does so explicitly." PO Resp. 31. In particular, Patent Owner points to the following statement in Coffee discussing the memory system for the tracker: "When the block [of memory] becomes full, the records not marked for reclamation are **copied** to a new block, and the old block is erased." *Id.* (quoting Ex. 1005, 54:26–28). Patent Owner asserts that, "[i]f text was copied based on field-mapping information, Coffee would have explicitly disclosed that information was copied." *Id.* at 31–32.

In Reply, Petitioner first points to our Rehearing Decision where, on the preliminary record at the time, we found that "[a]lthough Coffee does not use the terms 'copy' or 'copied' in the description of its process, Coffee describes steps that support Petitioner's argument that Coffee copies the IOD." Pet. Reply 8 (citing Rehearing Dec. 32–33; Pet. 31–39). In particular, Petitioner reiterates that we recognized an apparent distinction between Coffee's description of certain actions as those of the vehicle operator as compared to Coffee's description of the formatted message's IOD being sent back in the response message, which is not expressly attributed to the actions of the operator. *Id.* (citing Rehearing Dec. 32–33).

Second, Petitioner asserts that Patent Owner's expert "speculates" that the vehicle operator could enter the IOD in the response message via Coffee's softkeys, but that Mr. McAlexander "provides no support for these statements." Pet. Reply 9 (citing Ex. 2006 ¶ 61) (footnote omitted).

Petitioner contends that “Mr. McAlexander testified that ‘there’s certainly some indication that the response message has to include an IOD,’ but that he hasn’t ‘seen anything that indicates to me that – how that IOD is entered.’” *Id.* at 9 n.7 (quoting Ex. 1012 (Deposition Transcript of Mr. McAlexander), 23:10–17). Petitioner argues that Coffee states that, when a softkey is pressed (by selecting arrow keys on the keypad of the MDT) to respond to a message, the softkey number is returned to the NDC. *Id.* (citing Ex. 1005, 24:27–34, 55:66–67, 56:14–15).

Third, Petitioner asserts that Patent Owner “speculates that ‘the system could pull the IOD from another source besides the received message, or from an internal counter that keeps track of message identifiers’ – but Coffee does not describe any of this.” Pet. Reply 10. Rather, Petitioner points to Coffee’s description of the response message including the received message’s IOD and reiterates our preliminary finding that “Coffee describes steps that support Petitioner’s argument that Coffee copies the IOD.” *Id.* (quoting Rehearing Dec. 32–33).

Fourth, Petitioner responds to Patent Owner’s arguments directed to Petitioner’s reliance on the header field, response field, and IOD field. Regarding the header field, Petitioner asserts that “Coffee discloses that header information is copied from the received message 7102 to the response message 7202.” Pet. Reply 14 (citing Pet. 31–39). Petitioner relies on Mr. Andrews’s testimony, that a portion of the header is copied, to assert that Coffee discloses copying. *Id.* (citing Ex. 2007, 111:3–7; Ex. 1005, 67:57–60).

Regarding the Response field, Petitioner contends that “[o]nce the user selects a response in received message 7102, the selected response (or

corresponding ‘numeric response value’) is copied from message 7102 to message 7202 – which occurs based on field-mapping information since the MDT would otherwise not know what field to copy the information from and to.” Pet. Reply 14–15 (citing Rehearing Dec. 5, 34; Pet. 32–33; Req. Reh’g 10–12).

Regarding the IOD, Petitioner points to its expert’s testimony that, although Coffee’s MDT has a keyboard, inputs are performed “through the soft keys and the response sets.” Pet. Reply 15 (citing Ex. 2007, 137:19–138:7). Petitioner also points to Mr. Andrews’s testimony that “Coffee does not describe any mechanism by which the user would learn the IOD, and [Coffee] doesn’t describe any mechanism by which the user would then have a field on the display that he could input that data to.” *Id.* at 15–16 (alteration by Petitioner) (quoting Ex. 2007, 134:18–135:10).

Petitioner asserts that, as argued above, “Coffee’s MDT necessarily copies the IOD based on field-mapping information, because otherwise the MDT would not know from which field in the received message (7102) to retrieve the IOD and into which field in the response message (7202) to copy the IOD.” Pet. Reply 16 (citing Rehearing Dec. 5, 34; Pet. 32–33, Req. Reh’g 10–12).

In its Sur-reply, Patent Owner reiterates that “Coffee never once states that any fields from any message are copied into the fields of another message.” PO Sur-reply 6. And, “[n]otably, Coffee *does* explicitly describe when information is copied in *other* places throughout its description.” *Id.* (citing Ex. 1005, 54:26–28). Patent Owner also contends that Petitioner does not dispute Mr. McAlexander’s “conclusion that Coffee describes softkey-functionality that allows the IOD to be input.” PO Sur-reply 6.

Additionally, Patent Owner argues that, “[t]o the extent Petitioner now argues that Coffee inherently performs copying, it has failed to carry this burden” because Petitioner cannot show that it “invariably happen[s].” *Id.* (quoting *Gubelmann v. Gang*, 408 F.2d 758, 766 (CCPA 1969)). Patent Owner asserts that Mr. McAlexander testified that “the ‘more plausible way’ to include the IOD in 7202 is ‘where the operator would enter in the IOD number that’s associated with the message he wants to respond to.’” *Id.* at 6–7 (quoting Ex. 1012, 26:11–16). Patent Owner contends that “Petitioner’s argument to the contrary is unsupported by evidence—particularly given that Coffee never describes the IOD as being copied or describe[s] functionality that would enable the IOD to be copied—and is purely hindsight.” *Id.* at 7 (citation omitted). Further, Patent Owner contends that “no other fields in 7102 are copied into 7202” because the softkeys can be used to select the numeric response value and “the header is unique and separately calculated for each individual message.” *Id.* (citations omitted).

*ii. Limitations 1d and 1e3 – Discussion*

To address the parties’ arguments, it is important to understand exactly which theory of unpatentability Petitioner relies on to satisfy the claim requirement of copying. And, in so doing, we are focused specifically on *copying* as opposed to whether any copying is based on field-mapping information. Identifying the specific challenge by Petitioner is important at least because Petitioner presents this ground as anticipation by “and/or” obviousness over a single reference—Coffee. And, in the context of the Petition’s discussion of limitations 1d and 1e3, the lines between the different theories may at first appear difficult to discern.

In the Petition, as reiterated above, Petitioner begins by stating that “[t]he response message (Table 63) includes some of the same information as the received message (Table 58), such as header information, the IOD, and the response selected by the operator.” Pet. 32 (citing Ex. 1003 ¶¶ 100–101; Ex. 1005, 55:63–67; Tables 58, 63). Petitioner includes the following side-by-side annotated versions of Coffee’s Tables 58 and 63:

| TABLE 58                     |                                                          |        |           |       | TABLE 63                     |               |        |           |       |
|------------------------------|----------------------------------------------------------|--------|-----------|-------|------------------------------|---------------|--------|-----------|-------|
| Received Message Data (7102) |                                                          |        |           |       | Text Message Response (7202) |               |        |           |       |
| Word Number                  | Description                                              | Type   | Units/LSB | Range | Word Number                  | Description   | Type   | Units/LSB | Range |
| 1–5                          | Header                                                   |        |           |       | 1–5                          | Header        |        |           |       |
| 6 (lsb)                      | Message Type 1 = canned, 2 = full text                   | uchar  |           |       | 6 (lsb)                      | IOD           | uchar  |           | 0–255 |
| 6 (msb)                      | Canned ID/Text Length (L)                                | uchar  |           |       | 6 (msb)                      | Response      | ushort |           | 0–7   |
| 7 (lsb)                      | IOD                                                      | uchar  |           | 0–255 | 7                            | Data Checksum |        |           |       |
| 7 (msb)                      | User Response                                            | uchar  |           | 0–4   |                              |               |        |           |       |
| 8                            | Year                                                     | ushort |           |       |                              |               |        |           |       |
| 9 (lsb)                      | Month                                                    | uchar  |           | 1–12  |                              |               |        |           |       |
| 9 (msb)                      | Day                                                      | uchar  |           | 1–31  |                              |               |        |           |       |
| 10 (lsb)                     | Hour                                                     | uchar  |           | 0–23  |                              |               |        |           |       |
| 10 (msb)                     | Minute                                                   | uchar  |           | 0–59  |                              |               |        |           |       |
| 11 (lsb)                     | Number of valid responses                                | uchar  |           | 0–4   |                              |               |        |           |       |
| 11 (msb)                     | Spare                                                    | uchar  |           |       |                              |               |        |           |       |
| 12–16                        | Response 1 Text                                          | char   |           |       |                              |               |        |           |       |
| 17–21                        | Response 2 Text                                          | char   |           |       |                              |               |        |           |       |
| 22–26                        | Response 3 Text                                          | char   |           |       |                              |               |        |           |       |
| 27–31                        | Response 4 Text                                          | char   |           |       |                              |               |        |           |       |
| next L/2                     | Text if type = 2, padded with 0 in last byte if L is odd | char   |           |       |                              |               |        |           |       |

Pet. 33. Table 58, identifying the received message data 7102, and Table 63, identifying the text message response 7202, are shown above, including Petitioner’s annotations which place red boxes around the “Header,” “IOD,” and four “Response” “Text[s]” of Table 58 and the header, IOD, and Response of Table 63. *Id.* (citing Ex. 1003 ¶ 101; Ex. 1005, Tables 58, 63). Relying on Mr. Andrews’s declaration, Petitioner then states, “[a]t least some of the information included with the received formatted message (e.g., header, IOD, and selected response) is copied over from the received message to the response message.” *Id.* (citing Ex. 1003 ¶ 102). Paragraph 102 of Mr. Andrews’s declaration is nearly identical to this

sentence of the Petition, substituting “formatted request message” where the Petition states “received message.” Ex. 1003 ¶ 102.

After this point in the Petition’s discussion of limitation 1d, the Petition shifts focus to address whether the now-presumed copying is based on “field-mapping” information and does not further argue or explain how Coffee discloses copying. See Pet. 33 (addressing whether correspondence between fields is “field mapping”; asserting that one of ordinary skill in the art would have understood that the inclusion of field names is based on field mapping). And, Petitioner relies on the now-presumed copying to support its argument that Coffee must be understood to copy based on field mapping because otherwise Coffee could not copy. See *id.* at 33–34 (“Coffee’s system must inherently use ‘field-mapping information’ to know which field from the received message is *to be copied* into which corresponding field in the response message. . . . *Without such field-mapping information, the system would not be able to copy* over information from the received message into the correct fields of the response message, and for that matter, would risk operator error in hunting down and correctly copying over the header, IOD, and response fields so the information in the response message would be correctly matched with the information in the received message.” (emphases added) (citing Ex. 1003 ¶ 103)). But, as reflected in these statements in the Petition, to make the leap to address whether Coffee discloses field-mapping information, Petitioner’s argument assumes that Coffee copies these fields. Petitioner concludes this portion of the Petition stating that “[i]t is not reasonable to imagine that a [person of ordinary skill in the art] at the time of the invention would have left such a tedious task, routinely performed on a computer, to a human.” *Id.* at 34 (citing Ex. 1003

¶ 103). It is not clear what aspect of limitation 1d Petitioner seeks to address with this statement, because whether something is “reasonable to imagine” is not how one determines whether a claim limitation is disclosed by a reference.

The next paragraph on page 34 of the Petition turns to Petitioner’s alternative challenge based on obviousness, but, critically, the discussion is about storing field-mapping information on the MDT; the Petition does not argue that *copying* would have been obvious. See Pet. 34 (“*To the extent that Coffee is deemed not to explicitly or inherently disclose that ‘field-mapping information’ is stored on the MDT, it would have been obvious to a [person of ordinary skill in the art] to include ‘field-mapping information’ with the ‘Received Message Data’ packet (Table 58), the ‘Text Message Response’ (Table 63), and/or data ‘to enable the vehicle operator to respond to text paging messages,’ all of which are stored, at least temporarily, in memory of the MDT.*” (emphasis added) (citing Ex. 1003 ¶ 104; Ex. 1005, 54:66–55:9)). The Petition then appears to shift to arguing that field-mapping information is inherently disclosed in Coffee. *Id.* at 34–35 (“A [person of ordinary skill in the art] would have understood that ‘field-mapping information’ would *necessarily* need to be available at the MDT to generate a response message that includes at least some of the same information as was included with the received message. . . . Specifically, a [person of ordinary skill in the art] would have recognized that, without such field-mapping information, information from the received message could not be copied to appropriate corresponding fields in the response message because the MDT would have no idea which copied information goes where in the response message.” (emphasis added) (citing Ex. 1003 ¶ 105)).

The Petition's discussion of limitation 1e3 is similar. See Pet. 36–39. Petitioner contends that “[w]hen the vehicle operator responds to a received message (*e.g.*, an inquiry from the dispatcher), the header, the IOD, and the selected response are automatically sent back to the tracker from the MDT.” *Id.* at 37 (citing Ex. 1003 ¶ 116; Ex. 1005, 55:61–67, Tables 58, 63). The Petition then states, “[t]hus, Coffee describes copying information from information fields in the received message into corresponding fields of the response message.” *Id.* at 37–38. The next point, which appears to be copied from Mr. Andrews's declaration, states, “[i]n my opinion, this disclosure meets the claim limitation because, if Coffee did not employ such copying, the response message would not automatically include information extracted from the received message.” *Id.* at 38 (citing Ex. 1003 ¶ 118). And, further, “if the copying were not performed based on field-mapping information, items of information extracted from the received message would not appear in the response message at the correct locations.” *Id.* (citing Ex. 1003 ¶ 118).

As with the discussion of limitation 1d, the next paragraph of the Petition's discussion of limitation 1e3 turns to address field-mapping information, arguing that it would have been obvious to include field-mapping at the MDT. See Pet. 38 (“*To the extent that Coffee is deemed not to explicitly or inherently disclose that information from an information field of a received message is copied to an information field of a response message based on ‘field-mapping information,’ it would have been obvious to a [person of ordinary skill in the art] that the response selected by the vehicle operator in the received message (Table 58) is mapped and copied to the response message (Table 63).*” (emphases added) (citing Ex. 1003 ¶ 119;

Ex. 1005, 55:51–67; 55:63–67)). Again, similar to the discussion addressing limitation 1d, the Petition then shifts to arguing that field-mapping information is inherently disclosed because it “would necessarily be available at the MDT” and that “without such field-mapping information, information from the received message could not be copied to appropriate corresponding fields in the response message.” *Id.*

Given the somewhat confusing arguments by Petitioner that seem to flip between legal theories, we asked Petitioner’s counsel at the oral hearing to clarify the “legal principle or theory that Petitioner is relying on to show copying in Coffee.” Tr. 33:22–24. Petitioner responded as follows.

MR. WOLFF: For Coffee, *it is inherency* essentially, that a person of ordinary skill reading what is disclosed in Coffee would understand that the IOD is necessarily copied from the message that came in to the message that came back because there is no other way that I think everybody agrees that the IOD could have been entered in by a user manually.

*Id.* at 33:25–34:5 (emphasis added). On rebuttal, counsel for Petitioner further clarified that copying is discussed in the Petition at pages 38–39 and Mr. Andrews’s declaration at paragraphs 117–119. *Id.* at 79:19–80:1. This portion of the Petition and these paragraphs of Mr. Andrews’s Declaration address limitation 1e3 and are discussed in detail above. At a minimum, the oral hearing confirmed that Petitioner does not rely on obviousness to establish copying. And, even though the Petition does not assert “inherency” when discussing copying specifically (as opposed to “field-mapping information”), we address Coffee’s express disclosure and also consider whether Petitioner has established that Coffee inherently copies.

As noted above, Petitioner relies on three fields from Coffee's "Received Message Data" (7102): the header, the response, and the IOD. We address each.

First, regarding the header, it is undisputed that the header of the received message 7102 and the header of the response message 7202 are not the same. PO Resp. 25 (citations omitted); Pet. Reply 14. In the Petition, Petitioner argued that "header information" was the same in each message (received and response). Pet. 32 (citations omitted), 36–37. Petitioner relies on Tables 58 and 63, which show "Header." *Id.* at 32–33, 37. Petitioner also relies on paragraphs 102 and 118 of Mr. Andrews's Declaration. Neither the Petition nor Mr. Andrews's Declaration, however, provide any sufficient basis to find that even a portion of the header or header information is *copied* from the received message to the response message. Mr. Andrews states his opinion as though it were fact without providing the underlying factual support for his opinion. *See* Ex. 1003 ¶¶ 102, 118; *see* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.").

In cross-examination, Mr. Andrews provided additional information explaining which portion of the headers he believes are the same, but he still does not provide any explanation as to why he believes the information is *copied*. *See, e.g.*, Ex. 2007 at 111:3–25. The same is true of Petitioner's Reply, which reiterates Mr. Andrews's deposition testimony, but still fails to provide any reason as to why Coffee's charts or Mr. Andrews' testimony *necessarily means* that Coffee copies a portion of the header from the received message to the response message. *See Continental Can Co.*

*U.S.A., Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991) (“Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.”). And, despite Petitioner’s identification of a “Header” listed in Tables 58 and 63, Coffee does not expressly describe the header or part of the header as being copied from the received message to the response message.

The Petition and Mr. Andrews also state that “if Coffee did not employ such copying, the response message would not automatically include information extracted from the received message.” Pet. 38 (citing Ex. 1003 ¶ 118). But, Coffee does not expressly describe the header as being “extracted from the received message” or describe automatically including the header in a response message to make the leap argued by Petitioner and Mr. Andrews.

Accordingly, on the full record before us, we find that Petitioner has not established that Coffee explicitly or inherently discloses copying the header or header information and we do not credit Mr. Andrews’ testimony, discussed above, because he fails to provide the underlying factual basis for the opinions offered.

Second, Petitioner has not established that Coffee discloses (expressly or inherently) that the selected response is copied from the received message to the response message. As with the header, Petitioner raises the same arguments and relies on the same paragraphs of Mr. Andrews’s Declaration. See Pet. 32–33, 37–38 (citations omitted). Coffee teaches that “[t]he response is selected using arrow keys on the face (keypad) of the MDT.” Ex. 1005, 55:66–67. “When the vehicle operator selects a response to a

received text message, the MDT sends that response to the tracker using a Text Message Response (7202, Table 63), which contains the IOD of the message being answered and the numeric response value.” *Id.* at 56:63–67. As with the header, Coffee does not expressly state that the response value is copied from the received message to the response message. And, neither Petitioner nor Mr. Andrews explains why an operator selecting a response with arrow keys *necessarily* means that the response number is *copied* from the received message to the response message. *See* 37 C.F.R. § 42.65(a). Rather, we find it at least equally plausible, on the facts and evidence presented, that the user’s selection enters the numerical response value into the response message. In other words, there is nothing in Coffee that *necessitates* that the numerical response value be *copied* from a received message to a response message.

Notably, Coffee does not disclose that the “numeric response value” is included in received message 7102 such that it even could be copied. Table 58 includes “Response 1 Text” through “Response 4 Text” whereas Table 63 just includes “Response.” Ex. 1005, Tables 58, 63. Coffee explains that the text message response 7202 includes the “numeric response value,” but Coffee does not similarly indicate that received message 7102 includes the “numeric response value”; rather, Coffee states that received message 7102 includes “[a] response set . . . containing a unique set of text items that can be selected by the vehicle operator in response to the received message.” Ex. 1005, 55:57–60.

In its Reply, Petitioner asserts that Patent Owner “acknowledges that the ‘numeric response value’ is copied from message 7102 to message 7202” (Pet. Reply 14 (citing PO Resp. 26)), but that portion of Patent Owner’s

Response does not appear to so acknowledge. Rather, Patent Owner reiterates Coffee's disclosure, i.e., that when the operator selects a response, the MDT sends that response to the tracker. PO Resp. 26. And, Patent Owner expressly states, "[t]hus, the user enters the 'numerical response value' into the response message." *Id.* In short, we do not agree with Petitioner's contention.

Accordingly, on the full record before us, we find that Petitioner has not established that Coffee explicitly or inherently discloses copying the "Response" field or numerical response value and we do not credit Mr. Andrews's testimony, discussed above, because he fails to provide the underlying factual basis for the opinions offered.

Third, we now consider whether Petitioner has established that Coffee discloses – expressly or inherently – that the IOD is copied from a received message to a response message. We recognize that, in our Rehearing Decision, we addressed this issue based on the preliminary record before us at that time and the reasonable likelihood standard at the institution stage. In light of the arguments and evidence presented as this record has developed during trial, including the precise legal theory on which Petitioner relies, we determine that Petitioner has not established that Coffee copies the IOD from a received message to a response message.

To begin, we find that Coffee does not expressly disclose that the IOD is copied from a received message to a response message. We acknowledged the same in our Rehearing Decision on the preliminary record. Rehearing Dec. 32. And, Petitioner confirmed at the oral hearing that Petitioner's legal theory as to copying is based on inherency. Tr. 33:22–

34:5. Petitioner does not argue that Coffee expressly discloses copying the IOD; and we find that it does not.

We now consider whether Petitioner establishes that Coffee inherently discloses copying. On the complete record, this is where our final determination differs from our preliminary one. In particular, Coffee’s description is very sparse. In our Rehearing Decision, we stated the following:

Although Coffee does not use the terms “copy” or “copied” in the description of its process, Coffee describes steps that support Petitioner’s argument that Coffee copies the IOD. In describing the MDT, Coffee explicitly describes certain actions as those of the vehicle operator, for example, “select[ing] a response to the received message.” Ex. 1005, 55:63–64 (“When the operator selects a response to a message . . .”). In contrast, however, when describing that the formatted message’s IOD is sent back to the tracker in the response message, Coffee does not attribute that action to the vehicle operator. See Ex. 1005, 63–66 (“When the operator selects a response to a message (e.g., an inquiry from the dispatcher), that message’s IOD is sent back to the tracker with the response in message 7202.”), 56:63–67 (“When the vehicle operator selects a response to a received text, the MDT sends that response to the tracker using a Text Message Response message (7202, Table 63) which contains the IOD of the message being answered and the numeric response value.”). On the preliminary record before us, these descriptions by Coffee support Petitioner’s argument that Coffee’s system automatically copies the formatted message’s IOD to include it in the response message.

Additionally, our understanding of Coffee is supported by Mr. Andrews’s testimony. Mr. Andrews considered Coffee’s disclosure and opined that, *inter alia*, the IOD was copied from the formatted message to the response message. Ex. 1003 ¶ 102; see *id.* ¶¶ 100–102 (testifying that some information included with the received formatted message is

copied over from the formatted request message to the response message).

Rehearing Dec. 32–33 (footnote omitted).

In considering this issue anew, as we must do at this stage of the proceeding and on the full record before us, we do not find that Coffee’s *silence* is sufficient to support Petitioner’s argument. *See Campbell Soup Co. v. Gamon Plus, Inc.*, 787 Fed. Appx. 731, 739 (Fed. Cir. 2019) (“We do not find any error in the Board changing its understanding of the teachings of [a prior art reference] from the institution decision to the final written decision. ‘The Board is not bound by any findings made in its Institution Decision. At that point, the Board is considering the matter preliminarily without the benefit of a full record. The Board is free to change its view of the merits after further development of the record, and *should do so* if convinced that its inclinations were wrong.’” (quoting *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016))). Coffee does not explain the process by which the IOD of the received message is included in the response message; rather, Coffee just states that the response message “contains the IOD of the message being answered.” *See, e.g.*, Ex. 1005, 56:63–67 (see full text quoted above). In particular, although Coffee attributes certain actions to the operator, the lack of attribution to the operator does not *necessitate* that the only viable possibility remaining is that Coffee *copies* the IOD from the received message to the response message. Even if it may be said that Coffee probably (or possibly) copies the IOD, that probability is not sufficient to find that Coffee *necessarily* copies the IOD. *See Continental Can*, 948 F.2d at 1269 (“Inherency . . . may not be established by probabilities or possibilities. The mere fact that a

certain thing *may* result from a given set of circumstances is not sufficient.”).<sup>7</sup>

Additionally, on the full record before us, we determine that Mr. Andrews’s testimony, as with his testimony as to copying of the header and selected response, fails to provide any factual or underlying support for his opinions expressed therein. *See* Ex. 1003 ¶¶ 100–102. In particular, the leap occurs in paragraph 102, where Mr. Andrews takes the fact that some information (at least the IOD) from the received formatted message is included with the response message to opine that this means the information is “copied over.” *Id.* ¶ 102. But, again, Coffee is silent. And because Mr. Andrews did not provide any underlying factual basis for his opinion, we do not credit his testimony as to copying the IOD. 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Further, Patent Owner argues that Coffee does not *necessarily* copy the IOD, contending that even “Petitioner acknowledges that this step could be performed by a human and not done automatically, which would not meet the claim language.” PO Resp. 28 (citing Pet. 34; Ex. 2007, 134:6–9, 137:21–138:3). Patent Owner relies on its expert, Mr. McAlexander, who

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<sup>7</sup> To the extent it can be interpreted that Petitioner relies on inherency in the context of obviousness, we find, for the same reasons, that Petitioner has not shown that copying “necessarily must be present” in Coffee. *See Hospira*, 946 F.3d at 1329 (“Inherency is established in the context of obviousness when ‘the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art.’” (quoting *Par Pharm.*, 773 F.3d at 1194)).

provides further support for Patent Owner's position that Coffee need not *necessarily* copy the IOD. Mr. McAlexander testifies,

Coffee, however, does allow for the vehicle operator to use the softkeys, and in my opinion, the vehicle operator could easily utilize these softkeys to enter the IOD into the response message. The IOD, which contains a three-digit value for any given message, could easily be entered into the response message by the vehicle operator. The system could alternatively pull the IOD from another source besides the received message, or from an internal counter that keeps track of message identifiers.

Ex. 2006 ¶ 61. Petitioner's argument in its Reply, relying on Mr. Andrews's deposition testimony, asserts that, even though Coffee discloses a keyboard, Coffee does not describe that the IOD is displayed and does not describe any mechanism by which a user would learn and enter the IOD. Pet. Reply 15–16 (citing Ex. 2007, 137:19–138:7, 134:18–135:10).

We agree with Petitioner that Coffee does not describe whether the IOD is displayed, but we also agree with Patent Owner that Coffee does not describe the IOD as copied. Fundamentally, Coffee is silent. Thus, we cannot accept Petitioner's premise that Coffee's silence as to displaying or manually entering an IOD means that Coffee *necessarily* discloses (i.e., inherently discloses) copying the IOD from a received message to a response message when Coffee is similarly silent as to copying. Coffee indicates certain actions by operators and there are other actions that are not expressly attributed to the operators (as we acknowledged and relied on in our Rehearing Decision), but Petitioner's evidence is lacking to support the ultimate finding that actions not expressly attributed to operators *necessarily*

mean that Coffee must copy as claimed.<sup>8</sup> *See Continental Can*, 948 F.2d at 1269.

We also acknowledge that, as Patent Owner contends (PO Resp. 31), Coffee discloses copying *explicitly* in at least one instance. In particular, when describing its “Linear File Store (LFS) system,” Coffee states,

[a]s a storage method, a Linear File Store (LFS) system is preferably used to store parameter data. This method generates a linked list of variable length records which extends to fill a block of memory. When the block becomes full, the records not marked for reclamation are *copied* to a new block, and the old block is erased.

Ex. 1005, 54:23–28 (emphasis added). The issue addressed above, however, is not explicit disclosure; rather, it is inherent disclosure. Thus, even though we recognize Coffee’s explicit disclosure of copying in this instance, it does not impact our analysis (above) regarding Petitioner’s failure to sufficiently show that Coffee inherently discloses copying the IOD (or any other information or information field from a received message to a response message). Accordingly, on the full record before us, we find that Petitioner

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<sup>8</sup> Petitioner asserted at the oral hearing that Mr. McAlexander opined that there is no mechanism by which a user can enter information into the MDT in Coffee. *See* Tr. 88:22–89:6. But, that is not what Mr. McAlexander stated. Rather, his testimony was directed to the response number. *See* Ex. 2006 ¶ 120 (“Coffee did not disclose a method for mapping information from multiple pre-defined formatted messages into various response messages. Instead, Coffee allowed the vehicle operator to select from one of four response options for each ‘canned’ message using the softkeys. The response number the vehicle operator selected was static, not configurable, and prevented user input. None of the information was copied or filled in.”). And, on the question of copying, Mr. McAlexander testified that “Coffee’s messaging system does not invariably describe that the IOD is copied or inserted based on field-mapping.” *Id.* ¶ 61.

has not established sufficiently that Coffee expressly or inherently discloses that the IOD is *copied* from a received message to a response message.

In our Rehearing Decision, we recognized that the Petition alleges that Coffee copies information from other received messages into other response messages<sup>9</sup> (e.g., information from received user data 7103 into user data output 7203), and not just copying information from received message data 7102 into text message response 7202. Rehearing Dec. 3–5. Our analysis there, however, focused on whether Petitioner had raised the assertion and not whether the assertion was adequately supported. *See id.* at 5–6 (explaining that we misapprehended the Petition by not recognizing that Petitioner relies on other messages besides 7102 and 7202).

The arguments raised by Petitioner as to whether information is copied from other messages exchanged in Coffee fail to find support in Coffee or Mr. Andrews’s Declaration. First, nothing in Coffee discloses that any information is copied or filled in from one of the other messages to another. Second, Mr. Andrews fails to provide any testimony that any information is copied from one of the other messages to another; rather, Mr. Andrews’s testimony (as discussed above) is directed to received message data 7102 and text message response 7202. Third, even if Mr. Andrews’s testimony as to Coffee were to apply to messages other than 7102 and 7202, that testimony is similarly deficient for the same reasons discussed here regarding the header, response, and IOD fields.

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<sup>9</sup> Patent Owner contends that these other messages are not “response” messages (*see* PO Resp. 21–24), but we need not reach this issue because we find that Petitioner fails to support its argument of copying.

Thus, we find that Petitioner's arguments, as to copying from other messages exchanged in Coffee, are even less supported on the full record before us than Petitioner's arguments as to whether the IOD is copied from received message data 7102 to text message response 7202.

*iii. Conclusion as to Claim 1*

In light of our findings regarding copying, we find that Petitioner has not established, by a preponderance of the evidence, that Coffee anticipates claim 1.

Additionally, as noted above, Petitioner does not argue that copying would have been obvious to one of ordinary skill in the art at the time of the invention based on Coffee. Although we weigh the evidence below, as is required to determine whether subject matter would have been obvious to one of ordinary skill in the art, Petitioner's failure to argue that copying would have been obvious is sufficient to resolve the issue in Patent Owner's favor.

*b. Dependent Claims 2–6*

Claims 2–6 depend from claim 1 and thus each includes the same copying recitation as claim 1. *See* Ex. 1001, 9:25–52. Petitioner incorporates and relies on the same arguments and evidence directed to copying when addressing these dependent claims. *See* Pet. 40–49.

Accordingly, for the reasons discussed above in the context of claim 1, we find that Petitioner has not established, by a preponderance of the evidence, that Coffee anticipates claims 2–6. And, because Petitioner has not argued that copying would have been obvious to one of ordinary skill in the art, we resolve this issue in Patent Owner's favor below.

c. *Independent Claim 7*

As noted above, independent claim 7, limitation 7e, recites “identifying which information fields, from said plurality of information fields, to be copied into said response message, based on said message identification code.” Ex. 1001, 10:1–3. Petitioner relies on the same arguments and evidence discussed above pertaining to identifying information fields to be copied into a response message from a received, formatted message. Pet. 52–53. In particular, Petitioner states

As discussed in Sections VI.A.1.(b), (e)-(h) (incorporated here), header information, the IOD, and response data is mapped between the received message (*i.e.*, the “formatted message”) and the response message. . . . When the vehicle operator responds to a received message (*e.g.*, an inquiry from the dispatcher), the header, the IOD, and the selected response are automatically sent back to the tracker from the MDT. . . .

In other words, *at least some of the information fields included with the received formatted message are necessarily copied over from the received message to the response message. . . . A [person of ordinary skill in the art] would have understood that, to implement this copying scheme, Coffee’s system must identify which field from the received message is to be copied to which corresponding field in the response message. . . .*

*Id.* (emphases added) (citations omitted).

As also noted above, Patent Owner raises the same arguments in response. See PO Resp. 41 (“But as discussed above, Petitioner fails to show that Coffee discloses automatically copying information from the ‘Received Message Data’ message (7102) to the ‘Text Message Response’ message (7202).”).

Accordingly, for the same reasons discussed above in the context of claim 1, we find that Petitioner has not established, by a preponderance of

the evidence, that Coffee anticipates claim 7. And, because Petitioner has not argued that copying would have been obvious to one of ordinary skill in the art, we resolve this issue in Patent Owner's favor below.

*d. Dependent Claims 8, 9, and 11*

Claims 8, 9, and 11 depend from claim 7. Ex. 1001, 10:7–32. Petitioner incorporates and relies on the same arguments and evidence directed to copying when addressing these dependent claims. See Pet. 54–58.

Accordingly, for the reasons discussed above in the context of claim 7, we find that Petitioner has not established, by a preponderance of the evidence, that Coffee anticipates claims 8, 9, and 11. And, because Petitioner has not argued that copying would have been obvious to one of ordinary skill in the art, we resolve this issue in Patent Owner's favor below.

*e. Independent Claim 12*

As noted above, claim 12 recites limitations similar to those of claim 1, and on which we focused the discussion and analysis above. See Ex. 1001, 10:41–52 (limitations 12c1, 12c2, and 12d). Petitioner incorporates and relies on the same arguments and evidence directed to copying and “fill[ing] in” information from a received message to a response message. See Pet. 59–60 (“In other words, the content of one or more information fields included with the received message *is copied* over to the response message.” (emphasis added)), 61 (“Coffee discloses and/or renders obvious claim limitation 12[d] *for the same reasons* as discussed in the analysis of claim limitations 1[d] and 1[e] in Section VI.A.1 (incorporated here).” (emphasis added) (brackets by Petitioner) (citing Ex. 1003 ¶ 194)). Petitioner further asserts that one of ordinary skill in the art “would have

understood that, in the context of the '308 patent, response message information fields '*filled in with information*' is the same as information '*copied into at least one of said response message information fields.*'" *Id.* at 61 (quoting Ex. 1003 ¶ 195).

As also noted above, Patent Owner addresses claim 12 together with claim 1. *See* PO Resp. 17–34 (discussing claims 1–4, 6, 12, and 15).

Accordingly, for the same reasons discussed above in the context of claim 1, we find that Petitioner has not established, by a preponderance of the evidence, that Coffee anticipates claim 12. And, because Petitioner has not argued that copying or filing in would have been obvious to one of ordinary skill in the art, we resolve this issue in Patent Owner's favor below.

*f. Dependent Claim 15*

Claim 15 depends from claim 12. Ex. 1001, 10:62–65. Petitioner incorporates and relies on the same arguments and evidence directed to copying when addressing this dependent claim. *See* Pet. 61–62.

Accordingly, for the reasons discussed above in the context of claim 12, we find that Petitioner has not established, by a preponderance of the evidence, that Coffee anticipates claim 15. And, because Petitioner has not argued that copying or filling in would have been obvious to one of ordinary skill in the art, we resolve this issue in Patent Owner's favor below.

*g. Conclusion as to Anticipation*

As explained above, Petitioner has not shown that Coffee discloses, whether expressly or inherently, each and every limitation of claims 1–4, 6–9, 11, 12, and 15. Accordingly, on the complete record before us, Petitioner has not established, by a preponderance of the evidence, that Coffee anticipates claims 1–4, 6–9, 11, 12, and 15 of the '308 patent.

*h. Objective Indicia of Non-Obviousness*

Patent Owner asserts that objective indicia of non-obviousness support its position that the Challenged Claims would not have been obvious over Coffee. PO Resp. 57–61. Petitioner disagrees. Pet. Reply 22–25. Although we have considered Patent Owner’s evidence, we do not make express factual findings thereon because we determine that Petitioner does not assert that it would have been obvious to one of ordinary skill in the art to copy or fill in information from a received message to a response message based on Coffee.

*i. Weighing the Graham Factors*

“Once all relevant facts are found, the ultimate legal determination [of obviousness] involves the weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan.” *Arctic Cat*, 876 F.3d at 1361. On balance, considering the complete record before us, Petitioner has not shown, by a preponderance of the evidence, that Coffee would have rendered the subject matter of claims 1–4, 6–9, 11, 12, and 15 obvious to one of ordinary skill in the art at the time of the invention.

*D. Obviousness over Coffee and Heijden*

Petitioner contends the combined teachings of Coffee and Heijden would have rendered the subject matter of claims 1–4, 7–9, and 12 obvious to one of ordinary skill in the art at the time of the invention. Pet. 62–76.

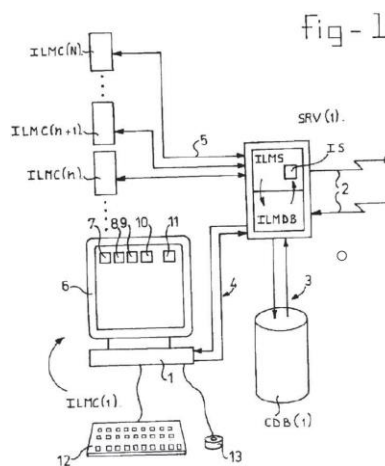
*1. Heijden*

Heijden is directed to a method and apparatus for point-to-point communication between a sender and a receiver by means of messages with flexible message formats. Ex. 1006, code (57). Heijden explains that “[t]he flexible message format contains information that allows a receiver to

interpret, understand and display the contents of the message, even if it has previously never been received.” *Id.* at 9:66–10:2. Heijden states that a user can receive, view, and send messages on a terminal. *Id.* at 10:24–26.

Heijden’s flexible message format consists of header information and a series of fields, objects, maps, and actions. *Id.* at Fig. 2a, 12:26–30, 12:45–13:14.

Figure 1 is reproduced below:



Heijden's Figure 1 shows a general overview in block diagram of the disclosed system. *Id.* at 11:15–16. In particular, Figure 1 shows a plurality of servers (SRV(m)) connected to a customer database (CDB(1)) and one or more terminals (e.g., ILMC(1)), which includes monitor screen 6, processing unit 1, keyboard 12, and mouse 13. *Id.* at 11:22–34.

Heijden explains that server SRV(1) “is provided with a processor called InterLingua™ message server ILMS for receiving, passing or sending messages.” Ex. 1006, 11:47–49. “Part of the ILMS processor is indicated with IS (=InterLingua™ Script).” *Id.* at 11:50–51. IS “is a small, but powerful set of calculation, execution and conditional logic statements that give application level functionality to a message,” including the ability to load and store mapped field data defined by a message. *Id.* at 17:34–38.

Server SRV(L) “also comprises a database ILMDB (=InterLingua™ Message Database) for storing several tables.” Ex. 1006, 11:53–55. Certain relational tables within the database ILMDB are “needed to define and control a message either received or to be sent.” *Id.* at 14:3–5. Heijden explains:

Preferably, the database of the communication apparatus is organized in several tables to which reference is made from the message definition table. Then, the predetermined message definition table comprises a message system identifier for use as a reference to further tables in the database.

One of such further tables may be a field definition table for holding primary definitions for any field of the messages.

Preferably, one of such further tables is a field mapping table comprising mapping information usable by predetermined fields, e.g. for mappings to hyper text markup language fields, database fields, flat file fields and other message fields, said database fields and flat file fields being stored in a customer database.

*Id.* at 8:36–48.

## 2. Discussion

In this Ground, labeled Ground “1B” by Petitioner, Petitioner explains that “[c]laim elements that are not specifically identified below are disclosed or rendered obvious by Coffee as discussed above for Ground 1A (Section VI.A).” Pet. 62. Thus, Petitioner directs its discussion in this ground particularly to claim limitations “1d, 1e1-3, 7d, 7e, 7f, 8, 9a, 9b, 9c, 12b, 12c1-2, [and] 12d.” *Id.* (brackets from claim limitations omitted). Despite reliance on Heijden, Petitioner begins this discussion by asserting that “Coffee discloses and/or renders obvious” these claim limitations. *Id.* Petitioner then contends,

[t]o the extent that Coffee does not explicitly disclose “field-mapping information” that is stored on the MDT, it would have been obvious to a [person of ordinary skill in the art] to include “field-mapping information” with the “Received Message Data” packet (Table 58), the “Text Message Response” (Table 63), and/or data “to enable the vehicle operator to respond to text paging messages,” all of which are stored, at least temporarily, in memory of the MDT, as evidenced by Heijden.

*Id.* at 62–63 (citing Ex. 1003 ¶ 214; Ex. 1005, 54:66–55:9). In other words, Petitioner’s proposed modification of Coffee is to include field-mapping information that is then stored in Coffee’s MDT. *Id.*

Petitioner’s discussion focuses on field-mapping information *generally*, including the alleged benefits of such and reasons why one of ordinary skill in the art would have been prompted to include field-mapping information in Coffee’s MDT. *See id.* at 62–70. None of Petitioner’s discussion, however, explains how the combination of Coffee and Heijden remedies the deficiencies that we identified regarding Petitioner’s challenge based on Coffee. In particular, Petitioner does not assert or explain how the teachings of Heijden would be applied to Coffee such that Coffee would then copy or fill in the specific information from Coffee’s received message to Coffee’s response message, particularly as pertains to the header, Response, and IOD fields (which Petitioner relied on in the first ground), or any other information field from Coffee. The same is true of Mr. Andrews’s testimony. *See* Ex. 1003 ¶¶ 214–231.

Additionally, it appears that Petitioner’s analysis of the combination of Heijden and Coffee maintains the position that Coffee copies information fields. *See* Pet. 70 (“Given that Coffee’s system already implements field mapping to copy information fields . . . .”). And, Mr. Andrews’s testimony

similarly maintains that Coffee copies information fields. See Ex. 1003 ¶ 229 (“Coffee also discloses (at least inherently) field mapping by describing that data is copied from fields in request messages into corresponding fields in response message.”). But, as we explain in detail in the context of Petitioner’s challenge based on Coffee, Petitioner has not shown sufficiently that Coffee copies or fills in information from a received message to a response message. Thus, we do not find and Petitioner does not allege that Ground “1B” fills the gaps identified in Petitioner’s Ground “1A.”<sup>10</sup>

Accordingly, we determine that Petitioner has not established, by a preponderance of the evidence, that the combination of Coffee and Heijden would have rendered the subject matter of claims 1–4, 7–9, and 12 unpatentable.

### 3. *Objective Indicia of Non-Obviousness*

Patent Owner asserts that objective indicia of non-obviousness support its position that the Challenged Claims would not have been obvious over Coffee. PO Resp. 57–61. Petitioner disagrees. Pet. Reply 22–25. Although we have considered Patent Owner’s evidence, we do not make express factual findings thereon because we find that, even without this additional evidence, Petitioner has failed to explain how Heijden remedies the deficiencies of Coffee in the proposed combination for the reasons discussed above.

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<sup>10</sup> Although the discussion in the Petition is directed to claims 1, 7–9, and 12, that portion covers each of the three independent claims and Petitioner does not provide any argument or evidence to address the issues identified here in its discussion of dependent claims 2, 3, and 4. See Pet. 70–76.

4. *Weighing the Graham Factors*

“Once all relevant facts are found, the ultimate legal determination [of obviousness] involves the weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan.” *Arctic Cat*, 876 F.3d at 1361. On balance, considering the record before us, Petitioner has not shown, by a preponderance of the evidence, that the combined teachings of Coffee and Heijden would have rendered the subject matter of claims 1–4, 7–9, and 12 obvious to one of ordinary skill in the art at the time of the invention.

IV. SUMMARY

For the reasons discussed above, Petitioner has not demonstrated, by a preponderance of the evidence, that claims 1–4, 6–9, 11, 12, and 15 of the ’308 patent are unpatentable.

Our conclusions regarding the claims at issue in this proceeding are summarized below:

| <b>Claims Challenged</b> | <b>35 U.S.C. §</b> | <b>Reference(s) /Basis</b> | <b>Claims Shown Unpatentable</b> | <b>Claims Not Shown Unpatentable</b> |
|--------------------------|--------------------|----------------------------|----------------------------------|--------------------------------------|
| 1–4, 6–9, 11, 12, 15     | 102(e), 103(a)     | Coffee                     |                                  | 1–4, 6–9, 11, 12, 15                 |
| 1–4, 7–9, 12             | 103(a)             | Coffee, Heijden            |                                  | 1–4, 7–9, 12                         |
| <b>Overall Outcome</b>   |                    |                            |                                  | 1–4, 6–9, 11, 12, 15                 |

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–4, 6–9, 11, 12, and 15 of U.S. Patent No. 6,925,308 B2 are not determined to be unpatentable; and

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

IPR2020-01612  
Patent 6,925,308 B2

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