

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.,
Petitioner,

v.

FIRST-CLASS MONITORING, LLC,
Patent Owner.

Case IPR2017-01932
Patent 6,014,089

Before PHILLIP J. KAUFFMAN, JUSTIN T. ARBES, and
SHARON FENICK, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

FINAL WRITTEN DECISION

Inter Partes Review

35 U.S.C. § 318(a)

I. INTRODUCTION

In this *inter partes* review Unified Patents Inc. (“Petitioner”) challenges the patentability of claims 1–10 and 16–22 of U.S. Patent No. 6,014,089 (Ex. 1001, “the ’089 patent”), which was assigned to First Class Monitoring, LLC (“Patent Owner”).

We have jurisdiction under 35 U.S.C. § 6(b)(4). This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a), addresses issues and arguments raised during this *inter partes* review. For the reasons discussed below, we determine that Petitioner has proven by a preponderance of the evidence that claims 1–5, 7, 9, 10, and 16–22 of the ’089 patent are unpatentable, but has not proven by a preponderance of the evidence that claims 6 and 8 are unpatentable. See 35 U.S.C. § 316(e) (“In an *inter partes* review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”).

A. *Procedural History*

On August 14, 2017, Petitioner requested *inter partes* review of claims 1–10 and 16–22 of the ’089 patent. Paper 1 (“Pet.”). The Petition relies on a Declaration of Tim A. Williams, Ph.D. (Ex. 1006). Patent Owner waived filing of a preliminary response. Paper 7.

On March 16, 2018, based on the record before us and in accordance with the Board’s practice at the time, we instituted an *inter partes* review of claims 1–5, 7, 9, 10, and 16–22. Paper 8 (“Decision on Institution” or “Dec.”), 2, 41. We did not institute on claims 6 or 8, or on claims 3 and 4

under the ground of anticipation by Lahtinen,¹ though we did institute on claims 3 and 4 under the ground of obviousness over Lahtinen. *Id.* at 40.

On May 3, 2018, pursuant to the Supreme Court’s decision in *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348, 1358 (2018), holding that a decision to institute under 35 U.S.C. § 314 may not institute on less than all claims challenged in the petition, we issued an Order modifying our Decision on Institution to institute review of all claims and all grounds presented in the Petition. Paper 12. Accordingly, this review involves the following grounds:

Reference	Basis	Claims Challenged
Serbetciouglu ²	§ 102(e)	1–5, 7, 9, 10, and 16–22
Serbetciouglu	§ 103	1–10 and 16–22
Lahtinen	§ 102(b)	1–5, 7, 9, 10, 18, and 20
Lahtinen	§ 103	1–5, 7, 9, 10, 18, and 20

See Pet. 2–3; Paper 12.

Patent Owner filed a Patent Owner Response (Paper 13, “PO Resp.”) and Petitioner filed a Reply (Paper 14, “Pet. Reply”). Patent Owner filed a Sur-Reply (Paper 16, “PO Sur-Reply”). Oral Argument occurred on November 13, 2018, and a transcript of that hearing is of record. Paper 22 (“Tr.”).

B. Related Matters

Petitioner and Patent Owner each indicated that the ’089 patent was at issue in the following litigation: *First-Class Monitoring, LLC v. JPMorgan*

¹ Lahtinen et al., U.S. Patent No. 5,351,235, issued Sept. 27, 1994 (Ex. 1005).

² Serbetciouglu et al., U.S. Patent No. 5,719,918, filed July 6, 1995, issued Feb. 17, 1998 (Ex. 1004).

Chase & Co., No. 6:17-cv-365 (E.D. Tex.). Pet 1; Paper 3, 2. Patent Owner later indicated that no litigation involving the '089 patent remained pending. Paper 10, 2. Petitioner and Patent Owner each identifies only itself as a real party in interest. Pet. 1; Paper 3, 2.

C. The '089 Patent

The '089 patent is titled “Method for Transmitting Data Using a Digital Control Channel of a Wireless Network.” Ex. 1001, [54]. The '089 patent is directed to transmission of data from a data collection device using short message service (SMS) functionality. *Id.*, Abstract, 1:11–22, 2:17–21, 25–33, 39–43. Figure 1 of the '089 patent is reprinted below.

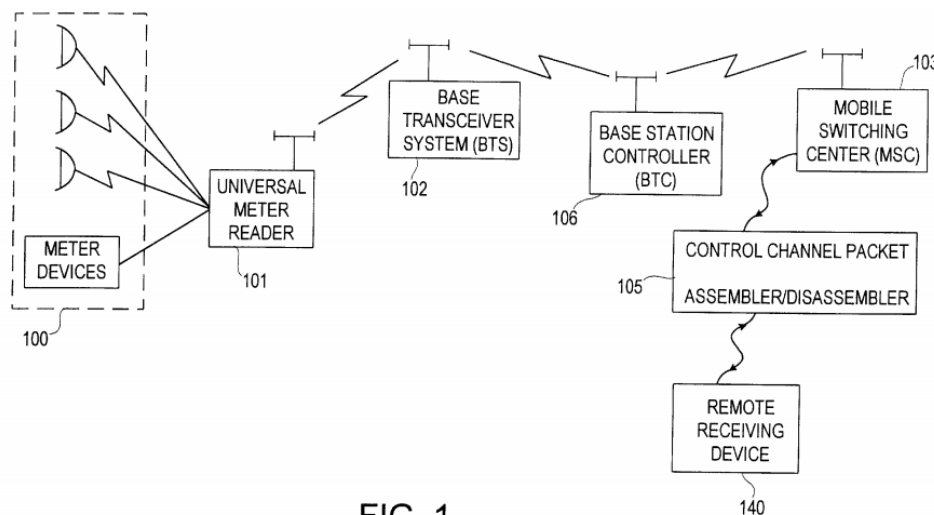


FIG. 1

Figure 1 is a block diagram of one embodiment of a communications system according to the invention of the '089 Patent. *Id.* at 4:12–13. Meters 100, e.g., utility meters such as electric meters, transmit data to data collection device 101, labelled in Figure 1 as “universal meter reader.” *Id.* at 4:34–47, 5:39–41. Data from data collection device 101 is transmitted to remote receiving device 140 for processing. *Id.* at 5:43–46, 6:6–14. These transmissions are sent using the short message service portion of a personal

communications system transmission protocol. *Id.* at 11:54–60. The short message service portion operates within the control channel of the personal communications system transmission protocol. *Id.* at 11:41–46.

In some embodiments, transmission of data from a data collection device occurs after a remote device request for data from the data collection device. *Id.* at 11:54–67, 12:12–15, 13:12–16. The data collection device receives and interprets the request, compiles the requested data, and transmits a response, including the compiled data. *Id.* at 12:56–63. In one embodiment, data collection device 101 includes a device for date stamping collected data, thus providing a time relationship to the collected data readings. *Id.* at 3:30–36, 13:26–33. Time-stamped data is stored in the data collection device for later retrieval. *Id.* at 3:32–36, 13:33–35. This data may be used to develop reporting or consumption profiles of data. *Id.* at 3:37–42, 13:35–38.

C. Illustrative Claims

Petitioner challenges claims 1–10 and 16–22 of the '089 patent, of which claims 1 and 7 are independent. Claims 1, 6, 7, 8, and 10 are reproduced below:

Claim 1 recites:

1. A method for transmitting a data sequence via a personal communications system transmission protocol comprising the steps of:
 - composing at least one data packet including a request for data said at least one data packet including said request for data being in a form which conforms to conventional short message data packets;
 - transmitting said at least one data packet including said request for data from an access point to a data collection unit via a short message service portion of a control

channel of the personal communications system transmission protocol as one or more short messages, wherein said step of transmitting said at least one data packet including said request for data includes the step of inserting said at least one data packet including said request for data into the control channel;

receiving said at least one data packet including said request for data at said data collection unit;

interpreting said request or data from said access point by said data collection unit;

compiling data from said data collection unit, said compiled data being requested in said request for data;

composing at least one data packet including, said compiled data, said at least one data packet including compiled data being in a form which conforms conventional short message data packets;

transmitting said at least one data packet including said compiled data from said data collection unit to said access point via said short message service portion of the control channel of the personal communications system transmission protocol as one or more short messages,

wherein said step of transmitting said at least one data packet including said compiled data includes the step of inserting said at least one data packet including said compiled data into the control channel; and

receiving said at least one data packet including said compiled data at said access point.

Ex. 1001, 14:12–50.

6. The method, according to claim 1, further comprising the steps of:

collecting data at said data collection unit;

electronically stamping said collected data with a date and time that said data was collected by said collecting step;

and

storing said processed and electronically stamped data.

Id. at 15:13–16.

7. A method for transmitting a data sequence via a personal communications system transmission protocol comprising the steps of:

automatically collecting data at a data collection unit;

composing at least one data packet including said collected data, said at least one data packet including said collected data being in a form which conforms to conventional short message data packets,

inserting said at least one data packet including said collected data in a short message service portion of a control channel of the personal communications system transmission protocol as one or more short messages, and

transmitting said at least one data packet including said collected data to an access point via said short message service portion of the control channel of the personal communications system transmission protocol as one or more short messages.

Id. at 15:19–38.

8. The method, according to claim 7, further including the steps of:

stamping said collected data with a date and time that said data was collected by said collecting step.

Id. at 15:39–42.

10. The method, according to claim 7, further comprising the step of:

receiving said at least one data packet including said collected data at said access point; and

interpreting said collected data at said access point.

Id. at 15:52–55.

II. DISCUSSION

A. *Claim Construction*

The '089 Patent is expired. Ex. 1001, 1; Ex. 1002, 235 (indicating a term extension of 0 days); Pet. 13. “[T]he Board’s review of the claims of an expired patent is similar to that of a district court’s review.” *In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). In this context, claim terms generally are given their ordinary and customary meaning, as understood by a person of ordinary skill in the art at the time of the invention, taking into consideration the language of the claims, the specification, and the prosecution history of record because the expired claims are not subject to amendment. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc).

Petitioner suggests that we interpret certain terms in claims 1 and 7. Pet. 13–15. In the Decision on Institution, we determined that the interpretations did not relate to any argument regarding the grounds proposed by the Petition, and did not construe the terms. Dec. 7. The parties present no further arguments relating to the construction of any terms. *See generally* PO Resp.; Pet. Reply; PO Sur-Reply. We conclude that no terms require construction to resolve the issues before us, and decline to construe any terms. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

B. *Level of Ordinary Skill in the Art*

Petitioner proposes, citing the Williams Declaration in support, that a person of ordinary skill in the art would have had a bachelor’s degree in electrical engineering or a related subject, and three or more years of experience working with digital telecommunications systems. Pet. 12 (citing

Ex 1006 ¶ 25). Petitioner further proposes that, “[l]ess work experience may be compensated by a higher level of education, such as a Master’s Degree, and vice versa.” *Id.* Patent Owner presents no discussion relating to the level of skill of a person of ordinary skill in the art. Based on the full record developed during trial, we determine the level of ordinary skill proposed by Petitioner is consistent with the ’089 patent and the asserted prior art, and we adopt that level. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required “where the prior art itself reflects an appropriate level and a need for testimony is not shown”) (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

C. Analysis of the Asserted Grounds

1. Principles of Law

It is a petitioner’s burden to demonstrate unpatentability. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)).

To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either expressly or inherently. *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016). However, this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). Where a reference is silent regarding a given claim requirement, “such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by

persons of ordinary skill.” *Cont’l Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.³ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). We analyze the asserted grounds with the principles stated above in mind.

2. *Claims 1–5, 7, 9, and 16–22*

In our Decision on Institution, we discussed the Petition and concluded that the argument and evidence adduced by Petitioner demonstrated a reasonable likelihood that Petitioner would prevail in showing that claims 1–5, 7, 9, and 16–22 are anticipated by and would have

³ The record contains no allegations or evidence of secondary considerations.

been obvious over Serbetciouglu, that claims 1, 2, 5, 7, 9, 10, 18, and 20 are anticipated by and would have been obvious over Lahtinen, and that claims 3 and 4 would have been obvious over Lahtinen. Dec. 12–21, 23–40. In this Decision, we now determine whether Petitioner has established by a preponderance of the evidence that the specified claims are unpatentable over the cited prior art. 35 U.S.C. § 316(e).

We previously instructed Patent Owner that “any arguments for patentability not raised in the [Patent Owner Response] will be deemed waived.” Paper 9, 4; *cf. In re NuVasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016) (holding that patent owner’s failure to raise an argument during trial as instructed in scheduling order constituted waiver on appeal). Additionally, the Board’s Trial Practice Guide states that a patent owner response “should identify all the involved claims that are believed to be patentable and state the basis for that belief.” Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012).

Patent Owner presents no arguments with respect to challenged claims 1–5, 7, 9, and 16–22. *See* PO Resp. 1 (introducing the Response by arguing that “[t]he Board should not find claims 6, 8, and 10 of [the ’089 patent] unpatentable”), 12 (concluding the Response by arguing that Petitioner has not demonstrated unpatentability of claims 6, 8, or 10); PO Sur-Reply (similarly discussing only claims 6, 8, and 10); Tr. 16:22–20:24, 23:14–24:16 (Patent Owner discussing only claims 6, 8, and 10 at Oral Argument). As explained above, it is Petitioner’s burden to prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); *Magnum Oil*, 829 F.3d at 1375–80. We have reviewed the record anew and, based upon the arguments provided and evidence cited in the Petition (Pet. 18–39, 41–46,

47–50, 55–69, 70–71), which we adopt as our own, and as further discussed in the Decision on Institution (Dec. 12–21, 23–40), we conclude that Petitioner has proven by a preponderance of evidence that claims 1–5, 7, 9, and 16–22 are anticipated by and would have been obvious over Serbetciouglu; that claims 1, 2, 5, 7, 9, 18, and 20 are anticipated by and would have been obvious over Lahtinen; and that claims 3 and 4 would have been obvious over Lahtinen.

With respect to anticipation of claims 3 and 4 by Lahtinen, each claim adds limitations relating to transmission using a specific packet in the control channel of the personal communications system transmission protocol. Ex. 1001, 14:62–67 (claim 3, requiring transmitting using “a stand-alone dedicated control channel (SDCCH) packet”), 15:1–6 (claim 4, requiring transmitting using “a slow associated control channel (SACCH) packet”). Petitioner alleges only that a specific standard disclosed in Lahtinen uses both types of packets to transmit messages over the control channel. Pet. 65. Petitioner does not allege that one type of packet or the other is disclosed expressly or inherently in Lahtinen as being used for the transmissions specified in the claims. See Pet. 65; Dec. 35–36. We are not persuaded that the claimed transmissions occur in Lahtinen using SDCCH or SACCH packets, and therefore are not persuaded that Petitioner has proven by a preponderance of the evidence that claims 3 and 4 are anticipated by Lahtinen.

*3. Alleged Anticipation of Claim 10 by Serbetciouglu and
Alleged Obviousness of Claims 6, 8, and 10 over Serbetciouglu*

Petitioner argues that claim 10 is anticipated by Serbetciouglu. Pet. 41–45 (discussing claim 7, from which claim 10 depends), 46–47. Additionally, Petitioner argues that claims 6, 8, and 10 would have been

obvious over Serbetciouglu. *Id.* at 18–35 (discussing claim 1, from which claim 6 depends), 39–41 (discussing claim 6), 41–45 (discussing claim 7, from which claims 8 and 10 depend), 45 (discussing claim 8), 46–47 (discussing claim 10). For the reasons discussed below, we determine that Petitioner has not proven by a preponderance of the evidence that claims 6 and 8 are unpatentable as obvious over Serbetciouglu, but has proven by a preponderance of the evidence that claim 10 is unpatentable as anticipated by and obvious over Serbetciouglu.

a. Overview of Serbetciouglu (Ex. 1004)

Serbetciouglu relates to a transaction handling system (THS) for receiving a request from a source, such as a point of sale terminal, interpreting the request information, formulating a query to a relevant database, and routing an interpreted reply from the database to the terminal. Ex. 1004, Abstract, 3:13–60. Alternatively, the THS may issue a request to a terminal and receive a reply containing information, such as when a THS requests a utility meter reading from a utility meter terminal. *Id.* at 6:47–67, 14:59–67. These request and reply messages are transferred using short messages. *Id.*, Abstract, 3:13–60. Figure 3 of Serbetciouglu is reproduced below:

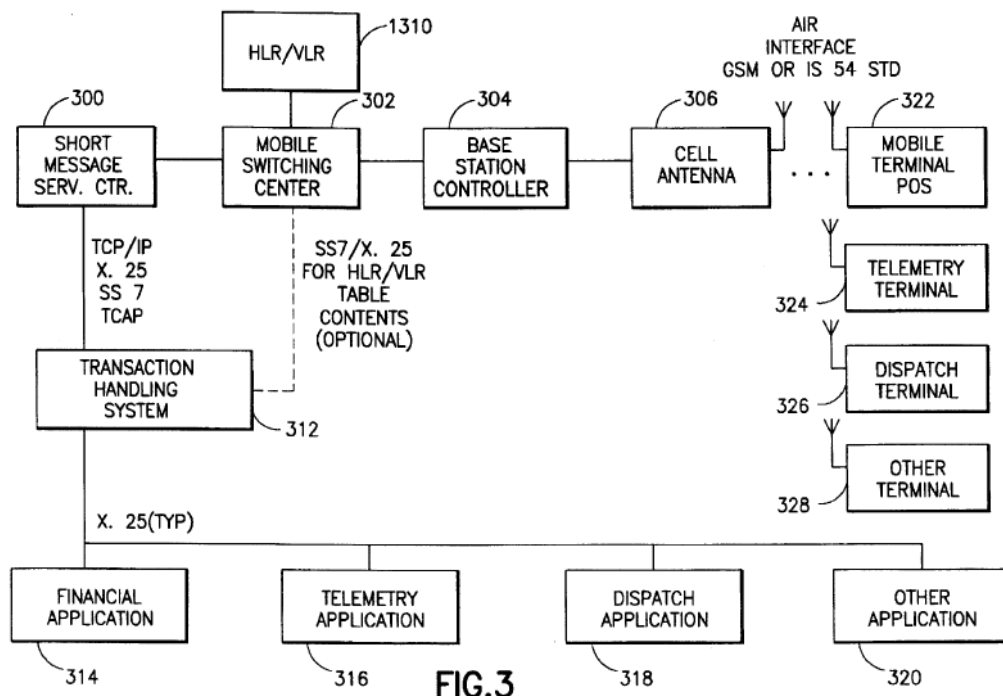


Figure 3 illustrates THS 312 in operation with a conjunction of terminals, including mobile terminal POS (“point of sale”) 322, telemetry terminal 324, dispatch terminal 326, and other terminal 328. *Id.* at 4:20–22, 4:65, 5:57–62. The path of communication between these terminals and THS 312 includes a short message service center (SMSC) 300, and communication occurs with short messages sent via a wireless/cellular air interface, for example GSM (Global System for Mobile Communications Cellular Standard). *Id.* at 1:18–26, 5:62–65, 6:31–34. THS 312 is also interfaced to other applications such as financial application 314, telemetry application 316, dispatch application 318, and other application 320. *Id.* at 6:17–22. THS 312 provides for the secure exchange of information between terminals and databases or applications. *Id.*, Abstract, 3:1–7, 6:1–40.

One example of an application is financial application 314, which may facilitate credit card operations for a mobile point of sale terminal such as mobile terminal (POS) 322. *Id.* at 6:17–30. Alternatively, automatic

teller machine functionality may be provided by a POS terminal. *Id.* at 6:41–46. Dispatch operations for, e.g., emergency or delivery vehicles, may be provided by using THS 312 with dispatch terminal 326 and a dispatch application 318. *Id.* at 7:1–8:23. In such cases, “Ground Positioning System (GPS)” or accelerometer data reporting can be provided as part of dispatch terminal 326 to provide location information to THS 312. *Id.* at 7:51–55, 8:9–17. As yet another function, database services can be provided to terminal 328, which may query, interact with, update, respond to, or otherwise operate on databases via THS 312. *Id.* at 8:24–37.

Messages exchanged between THS 312 and a terminal include a message correlator, which uniquely identifies a first message and is assigned by the initiator of a message (either THS 312 or the terminal). *Id.* at 9:65–10:1, 11:64–67. This message correlator is also used for subsequent messages (e.g., a reply to the initial messages) in order to allow those subsequent messages to be correlated with the initial message, for example, in order to recognize that one or more incoming messages are a reply to a previously sent request. *Id.* at 10:1–2, 11:67–12:7.

Petitioner, in its arguments regarding claim 1, sets forth and designates as a “first mode” and a “second mode” two distinct “modes of operation” of Serbetciouglu. Pet. 18–19. In the “first mode,” as denoted by Petitioner, Serbetciouglu’s remote terminal sends a request and receives a reply (and is thus analogized to the claimed “access point”), and the THS receives the request and sends a reply (as does the claimed “data collection unit”). *Id.* at 18. In the “second mode” according to Petitioner, Serbetciouglu’s remote terminal acts as the data collection unit and the THS as the claimed access point. *Id.* at 18–19. We adopt Petitioner’s

terminology to describe these two different ways in which Serbetciouglu functions.

b. Claims 1 and 7

Claim 6 depends from claim 1, and claim 8 from claim 7. As discussed above in Section II.C.2, we find that Petitioner has shown by a preponderance of the evidence that Serbetciouglu discloses the limitations of claims 1 and 7. As discussed below, Petitioner shows this to be true in each of the first mode description in Serbetciouglu of a terminal requesting data from a THS, and the second mode description in Serbetciouglu of a THS requesting data from a terminal. Pet. 19–35; *see* Dec. 12–20.

With respect to the preamble of claim 1, Petitioner argues that Serbetciouglu’s SMS messages exchanged over GSM between a terminal and THS disclose the preamble’s data sequence transmitted via a personal communications system transmission protocol. Pet. 20 (citing Ex. 1004, Title, Abstract, 1:9–2:11, 3:1–4:8, 5:57–6:16, 8:37–9:15; Ex. 1006 ¶ 52).

For the step of composing the request for data, Petitioner argues that, according to mode 1 operation as described in the Petition, the terminal composes an SMS message including a request for data, such as information the THS can extract from a database. *Id.* at 20–21 (citing, *inter alia*, Ex. 1004, 6:31–40; Ex. 1006 ¶ 54). Petitioner further argues that conformance to “conventional short message data packets” is disclosed by Serbetciouglu’s disclosure that messages exchanged between the THS and terminal may be formatted using Transaction Capability Application Part (TCAP), which Serbetciouglu discloses as a protocol used to implement short messaging service. *Id.* at 20 (citing, *inter alia*, Ex. 1004, 1:18–40, 9:16–26; Ex. 1006 ¶ 54). Petitioner additionally argues that, according to mode 2 operation, the

THS composes a request to a terminal for data. *Id.* at 21–22 (citing, *inter alia*, Ex. 1004, 6:47–67; Ex. 1006 ¶ 56).

For the claim limitations relating to the transmitting and receiving of the request, Petitioner argues that the claimed at least one data packet including a request for data composed by Serbetciouglu’s terminal (corresponding to the “access point” in Petitioner’s mode one) or THS (corresponding to the “access point” in Petitioner’s mode two) is transmitted in Serbetciouglu to “a data collection unit via a short message service portion of a control channel of the personal communications system transmission protocol as one or more short messages.” *Id.* at 23–25 (citing, *inter alia*, Ex. 1004, 6:31–40, 8:24–36; Ex. 1006 ¶¶ 59–60).

Serbetciouglu also, according to Petitioner, discloses that these transmissions occur “via a short message portion of a control channel of the personal communications system transmission protocol.” *Id.* at 24–25 (citing, *inter alia*, Ex. 1004, 1:9–2:5, 3:11–21, 5:27–48; Ex. 1006 ¶ 60). Additionally, Petitioner alleges that the transmitting disclosed in Serbetciouglu includes the insertion of the at least one data packet including the request into the control channel. *Id.* at 25–26 (citing Ex. 1006 ¶¶ 64–65). Petitioner argues that Serbetciouglu discloses that requests sent by a terminal to the THS are received by the THS (mode one) and that requests sent by a THS to a terminal are received by the terminal (mode two). *Id.* at 27 (citing, *inter alia*, Ex. 1004, Abstract, 6:47–53; Ex. 1006 ¶¶ 68–69).

With respect to the steps relating to the data collection unit’s interpreting the request and compilation of data, Petitioner argues that a THS or terminal receiving a request in Serbetciouglu must interpret the request in order to identify the data to be compiled. *Id.* at 28–29 (citing, *inter alia*,

Ex. 1004, 6:31–40, 8:24–36, 11:12–40; Ex. 1006 ¶¶ 72–73). According to Petitioner, in Serbetciouglu, the THS or terminal compiles requested data received by the THS from a database or application (if mode one) or a terminal compiles requested data received from a device such as a GPS or utility meter (if mode two). *Id.* at 29–30 (citing, *inter alia*, Ex. 1004, 3:31–56, 6:47–64, 8:9–17, 12:11–21; Ex. 1006 ¶¶ 72–73).

With respect to the claimed steps regarding composing and transmitting a responsive transmission, Petitioner argues that a response to the request is sent from the THS to the terminal (in mode one) and from the terminal to the THS (in mode two), which consists of compiled data. *Id.* at 30–31. For mode one, Petitioner notes Serbetciouglu’s disclosure that the THS includes “means for transforming and interpreting [a] query result” for transmission to a requester terminal. *Id.* at 30 (citing, *inter alia*, Ex. 1004, 3:42–61; Ex. 1006 ¶ 75). For mode two, Petitioner notes that Serbetciouglu discloses a telemetry terminal reporting requested telemetry readings to the THS, and a terminal reporting positioning information to the THS, including information from a GPS interfaced to a terminal. *Id.* at 31–32 (citing, *inter alia*, Ex. 1004, 6:57–65, 7:1–8:23; Ex. 1006 ¶¶ 78, 80, 83, 85). Petitioner’s arguments that Serbetciouglu discloses the limitations of claim 1 relating to the form and transmission of the at least one data packet including compiled data largely mirror those relating to the form and transmission of the request, discussed above. *See id.* at 30–34 (citing, *inter alia*, Ex. 1006 ¶¶ 79, 84, 87–90).

With respect to the last step of claim 1, “receiving said at least one data packet including said compiled data at said access point,” Petitioner argues that the data packet including the compiled data is received by the

access point – i.e., the terminal (mode one operation) or the THS (mode two operation). *Id.* at 34–35. For mode one, Petitioner notes Serbetciouglu’s disclosure that the results are sent to the original requesting terminal. *Id.* (citing, *inter alia*, Ex. 1004, 3:25–30, 57–61; Ex. 1006 ¶ 91). For mode two, Petitioner notes that Serbetciouglu discloses telemetry readings reported by a terminal to the THS, and a terminal reporting positioning information to the THS including information from a GPS interfaced to a terminal. *Id.* at 35 (citing, *inter alia*, Ex. 1004, 6:57–65, 7:1–8:23; Ex. 1006 ¶ 93).

Claim 7 requires “automatically collecting data at a data collection unit.” Regarding this limitation, Petitioner argues that, in mode one operation, Serbetciouglu discloses the collection of data from an application or database. *Id.* at 42 (citing, *inter alia*, Ex. 1004, 3:31–56, 6:17–40; Ex. 1006 ¶ 122). Petitioner additionally argues that, in mode two operation, Serbetciouglu discloses the collection of data by a terminal in its disclosure of a telemetry terminal, which reports readings, and a terminal, which reports GPS data. *Id.* at 42–43 (citing, *inter alia*, Ex. 1004, 6:47–64, 7:1–8:23; Ex. 1006 ¶ 123). With respect to the preamble and the other limitations of claim 7, Petitioner makes the same or substantially similar arguments to, and refers to, arguments regarding similar limitations of claim 1. *Id.* at 41, 43–45 (citing Ex. 1006 ¶¶ 120, 125–127, 129–131).

c. Claim 6

Claim 6 depends from claim 1, and further recites the steps of “[1] collecting data at said data collection unit; [2] electronically stamping said collected data with a date and time that said data was collected by said collecting step; and [3] storing said processed and electronically stamped data.” Ex. 1001, 15:13–19.

Patent Owner does not make any arguments with respect to the first and third steps, and we find that Serbetciouglu does disclose these steps. *See* Pet. 30, 40, 41; Ex. 1004, 6:47–64, 15:39–45; Ex. 1006 ¶¶ 116, 118.

With respect to the second step, Petitioner argues that Serbetciouglu discloses the “electronically stamping” limitations of claim 6 in a disclosure of a terminal that electronically stamps the collected data with a time that the data was collected. Pet. 40 (citing Ex. 1004, 10:8–14, Fig. 10). Petitioner further argues that Serbetciouglu “renders it obvious to stamp the data with both the date and time because doing so was a conventional, known method for telemetry applications with predictable results.” *Id.* at 40–41 (emphasis omitted). We do not find either argument to be proven by a preponderance of the evidence.

(1) Message Correlator

The portion of Serbetciouglu that the Petition cites as allegedly disclosing stamping of data with a time describes:

In general, the Message Correlator identifies, for subsequent correlation with a possible reply within THS 312, the transaction being transmitted from the terminal as well as the number of short messages that may need to be considered to form a complete transaction query. This identification is made up of one or more of the following, for example, a combination of the time of day internal to the terminal

Ex. 1004, 10:8–14 (cited at Pet. 40). Figure 10, also cited, shows “time of day” included in processing unit 1002 of terminal unit 1020, which processing unit encapsulates a message for transmission; however, no additional explanation of its inclusion is given in Serbetciouglu. *Id.*, Fig. 10 (cited at Pet. 40), 4:45–47, 15:30–33, 16:32–35. At Oral Argument, Petitioner confirmed that its argument is that timestamping in Serbetciouglu

occurs in the message correlator. Tr. 10:17–26 (Petitioner’s counsel: “[A]ll that needs to happen is that the terminal needs to be capable of timestamping the data. And that’s where the parties do agree that there is a timestamping of data.” Judge Fenick: “Other than in the message correlator?” Petitioner’s counsel: “No[. I believe we agree that there’s a timestamping based on the message correlator.”)

We found in the Decision on Institution that “the cited portion of Serbetciouglu . . . relates to a Message Correlator, which ‘identifies, for [a] subsequent correlation with a possible reply within THS 312, the transaction being transmitted from the terminal.’” Dec. 22 (quoting Ex. 1004, 10:8–10). We noted that the cited passage discloses “generating a unique identifier for a *message* sent by either a terminal or THS 312” and not to time stamping of a time of *collection* for data collected at a collection unit, such as data contained within the message being transmitted, as required by the claim language. *Id.* Patent Owner echoes this position in its arguments that “the disclosure relied upon by Petitioner may suggest generating a unique identifier (including a time of transmission) for a message sent by either a terminal or THS 312 . . . but does *not* suggest time stamping the collected data itself.” PO Resp. 8–9.

Petitioner argues that the time included in a Message Correlator used by a terminal in sending a message (including a meter reading) to a THS in response to a query would be the time of collection. Pet. Reply 8–11; Tr. 5:22–6:5. Petitioner argues “the terminal unit may or may not know when [the ultimate transmission of] the one or more SMS messages [will be]. So it makes sense that the time of day is more likely associated with the collection.” Tr. 5:22–6:15. Petitioner additionally argues that a message

might be sent over multiple transmissions and “may have multiple transmission times,” and that “therefore . . . it makes more sense that you have a time of a data collection because you have a single message payload . . . that can be transmitted in multiple SMS messages.” Tr. 6:16–7:24; Pet. Reply 13.

Petitioner’s arguments are not consistent with Serbetciouglu’s teachings regarding the Message Correlator. As Petitioner admits, the unpatentability arguments in the Petition, for claims 6 and 8, relate only to the second mode of Serbetciouglu, where a terminal responds to a query from a THS. Pet. Reply 8–9 n.4 (citing Pet. 39–41, 45). Serbetciouglu’s message correlator “uniquely identifies [a] message sent by either a POS terminal or THS 312” with the initiator of a message assigning the correlator number, which correlator number “then is used for the reply by the recipient of the message.” Ex. 1004, 9:65–10:18, 12:22–37. This stands in stark contrast to Petitioner’s argument that a reply to a message, including responsive collected data, would use a different message correlator – one including the time of data collection rather than the time of the sending of a request. We do not agree with Petitioner that Serbetciouglu teaches a terminal unit, in a response to a request from a THS (“second mode” operation), using a different message correlator – one using a time of collection or a time internal to the terminal – in place of the message correlator of the received request. Therefore, Petitioner has not shown that Serbetciouglu discloses “electronically stamping said collected data with a . . . time that said data was collected,” as recited in claim 6.

(2) Obviousness / One of Ordinary Skill

Petitioner additionally asserts that the Petition contains expert testimony and other evidence (including Ex. 1018; Ex. 1019) to adduce what one of ordinary skill allegedly would have known regarding stamping of telemetry data with both date and time. Pet. Reply 4–5 (quoting Pet. 40–41). Petitioner argues the expert testimony and additional references were cited to show that stamping collected data “with a date and time” would have been obvious. Pet. Reply 4–6. But in the Petition, Petitioner contended that “*Serbetciouglu* **discloses** the terminal electronically stamping the collected data with a time that the data was collected” and, immediately following that contention, that “*Serbetciouglu* **renders it obvious** to stamp the data with both the *date and time* because doing so was a conventional, known method for telemetry applications with predictable results.” Pet. 40 (bold emphases added). To the extent that the obviousness argument rests on the argument that Serbetciouglu actually discloses stamping with a time of collection, which we have rejected for the reasons explained above, it falls with that argument.

To the extent Petitioner’s argument is that the entire limitation would have been obvious based on the expert testimony and additional references cited (Pet. Reply 4–6), we decline to treat the single-reference obviousness ground presented in the Petition as if it had been a multiple-reference obviousness ground. See 37 C.F.R. §§ 42.104(b)(2), (b)(4) (“[The petition must set forth] [t]he specific statutory grounds under 35 U.S.C. 102 or 103 on which the challenge to the claim is based and the patents or printed publications relied upon for each ground [and] [h]ow the construed claim is unpatentable under the statutory grounds identified [and] where each

element of the claim is found in the prior art patents or printed publications relied upon.”).

Our reviewing court instructs us that “in appropriate circumstances, a patent [claim] can be obvious in light of a single prior art reference if it would have been obvious to modify that reference to arrive at the patented invention.” *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016) (citations omitted). However, we are cautioned when considering alleged “common knowledge” to supply a missing limitation that the missing limitation must be “unusually simple and the technology particularly straightforward.” *Id.* at 1362. There must be evidence and a reasoned explanation for why a person of ordinary skill in the art would have modified the asserted prior art reference. *Id.* at 1362–63; *NuVasive*, 842 F.3d at 1376. An assertion of obviousness “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.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *Magnum Oil*, 829 F.3d at 1380.

In this case, we find the assertions in the Petition to be insufficient to show a reasoned basis for a resort to common knowledge to establish why a person of ordinary skill in the art would have modified Serbetciouglu to electronically stamp collected data with a date and time of collection. The Petition merely states that stamping collected data with a date and time “was a conventional, known method for telemetry applications with [unspecified] predictable results,” and cites two prior art documents and the expert’s declaration, which mirrors the language of the Petition. Pet. 40 (citing Ex.

1018,⁴ 5:24–32; Ex. 1019,⁵ 5:20–23; Ex. 1006 ¶ 117). Petitioner asserts that “the ’089 Patent . . . identifies prior art that discloses utility meters that perform this limitation,” but the referenced prior art’s display of a date and time appears to relate to a current date and time. *Compare* Ex. 1017,⁶ 13:35–47 (cited at Pet. 40; Ex. 1006 ¶ 117), *with* Ex. 1017, 1:41 (display of clock and calendar at meter), 15:7–22 (display of time along with “current” billing status and “present” usage information).

The alleged motivation to modify Serbetciouglu to use this assertedly conventional method is similarly sparse, based on a brief passage in one prior art reference, which Petitioner’s expert cited without additional support. Pet. 41 (citing Ex. 1018, 5:24–32 (describing time tagging of data as “assisting processing of the collected data at a later date”); Ex. 1006 ¶ 117 (describing data stamping “to assist with *and add functionality to* processing the collected data, *for example, uniquely identifying or visualizing trends in the data over time*” (emphases added))

Thus, we are not persuaded by Petitioner’s argument and evidence that it would have been obvious to modify the system of Serbetciouglu to electronically stamp collected data with a time and date of collection, as recited in claim 6.

We therefore find that Petitioner has not proven by a preponderance of the evidence that claim 6 of the ’089 patent is unpatentable as obvious over Serbetciouglu.

⁴ Roach, Jr. et al., U.S. Patent No. 5,546,444, issued Aug. 13, 1996.

⁵ Davis et al., U.S. Patent No. 5,576,700, issued Nov. 19, 1996.

⁶ Frew et al., U.S. Patent No. 4,803,632, issued Feb. 7, 1989.

(3) Claim 8

Claim 8 depends from claim 7, and adds to the method of claim 7 the step of “stamping said collected data with a date and time that said data was collected by said collecting step.” Ex. 1001, 15:39–42. Petitioner argues claim 8 on the same grounds as claim 6 (Pet. 45), and for the same reasons we find that Petitioner has not proven by a preponderance of the evidence that claim 8 is unpatentable as obvious over Serbetciouglu.

d. Claim 10

Claim 10 depends from claim 7, and further recites the steps of “[1] receiving said at least one data packet including said collected data at said access point; and [2] interpreting said collected data at said access point.” Ex. 1001, 15:52–56. The parties’ dispute relates only to the second step. PO Resp. 9–10; Pet. Reply 15–19; PO Sur-Reply 3–5. Patent Owner does not make any arguments with respect to the first step, and we find that Serbetciouglu does disclose this step. Pet. 46; Ex. 1004, 3:25–30, 57–61; Ex. 1006 ¶¶ 91, 93, 94, 144; see Dec. 19, 25.

Petitioner argues in the Petition that Serbetciouglu discloses or renders obvious “interpreting said collected data at said access point” for the same reasons given with respect to the claim 1 limitation of “interpreting said request [f]or data from said access point by said data collection unit.” Pet. 46–47 (citing Ex. 1006 ¶¶ 145–146). Petitioner asserts that this is disclosed both in Serbetciouglu’s first mode, in which the THS “interprets the request in order to identify the message as a query and determine the data to be compiled from the corresponding application or database;” and in Serbetciouglu’s second mode, in which the terminal “interprets the request to know what data must be compiled.” Pet. 28 (citing, *inter alia*, Ex. 1004

3:42–61, 6:57–65, 7:1–8:23, 11:3–12:10; Ex. 1006 ¶¶ 75, 78, 80, 83, and 85).

Patent Owner argues, “[r]equests for data and data are not the same, and without explanation it is not at all apparent why they should be equated or why a person of ordinary skill in the art would do so.” PO Resp. 10. Thus, Patent Owner argues, “Petitioner fails to account for, or even recognize, the differences between these interpreting steps and does not explain why they are both taught in Serbetciouglu.” *Id.* However, the reference back to the earlier argument on interpretation of a request is not the only argument in the Petition for this disputed limitation. The Petition cites dispatch applications in Serbetciouglu, in which a driver, via a driver’s terminal, receives routing or location data (from a THS). Pet. 46 (citing Ex. 1004, 7:1–8:36 (“The terminal is used for indicating to the driver in real time where to make the next stop, to either pick up or deliver packages, and also what route to follow to arrive at the next stop.”)). The Petition also cites the analysis by Serbetciouglu’s THS of telemetry data, such as watt-hour meter readings, from a telemetry terminal. Pet. 46–47 (citing Ex. 1004, 6:47–67 (“From THS 312, the information reported by terminal 324 is analyzed.”)). These portions of Serbetciouglu relating to use of received collected data are not addressed by Patent Owner, and we agree with Petitioner that these citations are a disclosure of the interpretation of received collected data by the access point in Serbetciouglu, in both the first and second modes.

Patent Owner also argues that the arguments in Petitioner’s Reply relating to the Petition’s reference back to the “interpreting said request” claim limitation of claim 1 constitute a new argument. PO Sur-Reply 3–4. Patent Owner argues that when the Petition states “*the terminal* (access

point) *interprets* the collected data the same way it interprets a request for data,” the reference must be to the portion of the earlier argument that “*the THS interprets* the request” because each are Serbetciouglu first mode arguments. *Id.* (quoting Pet. 28, 46). Therefore, according to Patent Owner, Petitioner’s argument in its Reply that it relates to another portion of that earlier argument is new and not properly presented. *Id.* at 4 (citing Reply 15). But Petitioner’s reference to the earlier portion of the Petition to explain, for the first mode, how the terminal interprets collected data (“the terminal (*access point*) interprets the *collected data* the same way it interprets a request for data” (Pet. 46)) refers to the portion of that prior explanation relating to *the terminal* interpreting a request, even though that relates to the second mode. We do not see this as a new argument, but rather one that was made in the Petition in the first instance.

For these reasons, we find that Petitioner has proven by a preponderance of the evidence that claim 10 is unpatentable as anticipated by and obvious in view of Serbetciouglu.

4. *Alleged Anticipation and Obviousness of Claim 10: Lahtinen*

Petitioner argues that claim 10 is anticipated by, and would have been obvious over, Lahtinen. Pet. 41–45 (claim 7, from which claim 10 depends), 51–71. For the reasons discussed below, we determine that Petitioner has not proven by a preponderance of the evidence that claim 10 is unpatentable based on these two asserted grounds.

a. *Overview of Lahtinen (Ex. 1005)*

Lahtinen relates to the use of short message service technology to enable communication between terminal equipment units. Ex. 1005, Abstract. A request for information is sent from one terminal equipment

unit to another terminal equipment unit including the requesting equipment's reply address, and the target of the request generates data in reply, which is transmitted to the reply address. *Id.* at 2:33–45, 4:15–32.

For example, Lahtinen describes communication between a conventional GSM telephone and a stock exchange information system allowing the user of the telephone to request stock exchange information. *Id.* at 6:59–7:15, Figs. 8a, 8b. In another example, a user with a GSM mobile phone may communicate with a terminal equipment unit, which is connected to a sensor monitoring the amount of oil in an oil tank to receive the sensor reading. *Id.* at 7:16–25, Figs. 9, 10. Similarly, Lahtinen discloses a GSM mobile phone being used to request data from multiple terminal equipment units each attached to an oil tank monitor. *Id.* at 7:34–61, Fig. 11.

b. Claim 7

As discussed above in Section II.C.2, we find that Petitioner has shown by a preponderance of the evidence that Lahtinen discloses the limitations of claim 7. We note that Lahtinen discloses SMS messages transmitted over a GSM network, and discloses composing and transmitting data packets including collected data as one or more short messages inserted into a control channel. Pet. 55, 57–58, 67 (citing, *inter alia*, Ex. 1005 1:24–68, 3:15–59, 5:15–23; Ex. 1006 ¶¶ 175, 221, 222). Lahtinen discloses the automatic collection of data at a data collection unit. *Id.* at 67 (citing Ex. 1005, Abstract, 3:15–59, 4:30–62, 6:59–7:15, 7:16–61; Ex. 1006 ¶ 218). Additionally, Lahtinen discloses the composition, insertion into a data packet, and transmission of at least one data packet including the collected

data. Pet. 61–64, 67–69 (citing, *inter alia*, Ex. 1005, 3:15–40, 7:3–7:15, 7:26–61; Ex. 1006 ¶¶ 193, 196–200, 218–224).

c. Claim 10

The parties’ dispute relating to claim 10 focuses only on the second step in claim 10: “interpreting said collected data at said access point.” PO Resp. 11–12; Pet. Reply 21–25; PO Sur-Reply 5–6. The first step, that of “receiving at least one data packet including said collected data at said access point,” is shown in the Petition to be disclosed by Lahtinen. Pet. 64, 70 (citing, *inter alia*, Ex. 1005 7:26–61; Ex. 1006 ¶¶ 201, 229, 230).

Petitioner argues that the “interpreting” step in claim 10 is disclosed by Lahtinen:

Upon receiving the collected data from the second terminal, the first terminal (access point) interprets the collected data to determine what to do with the collected data (e.g., “for optimizing distribution operations”). EX1005, 3:15- 59, 4:30-62, 6:59-7:15 (“stock exchange information system, for which data can be inquired by any holder of a normal terminal equipment 1”), 7:16-61 (“information system 37 of a heating oil company can automatically inquire the amounts of oil in the oil tanks”; “transfer of responsibility for the amounts of oil in the tanks to the oil company”; “for optimizing distribution operations”); EX1006, ¶ 231.

Pet. 70 (emphases omitted).

Petitioner additionally argues in its Reply that “[n]othing in claim 10 excludes a human from performing the ‘interpreting’ step because it places no limitation on who or what performs the step. Instead, the claim only limits where the step of interpreting must be performed, i.e., ‘at said access point.’” Pet. Reply 23 (emphases omitted).

While references to Lahtinen’s discussion of a user receiving a response to an information request (Ex. 1005, 3:15–59, 4:30–62) or

inquiring about stock exchange information (Ex. 1005, 6:59–7:15) are included in the Petition, the Petition does not indicate that they are meant to show that the user, rather than the access point, will interpret data. In fact, the Petition plainly says, in the portion for which these citations are provided, that “the first terminal (access point) interprets the collected data.” Pet. 70 (emphases omitted). We agree with Patent Owner that the argument that “at [an] access point” may be by a person is a new theory improperly introduced for the first time in the Reply, and we do not consider it in our analysis. PO Sur-Reply 5–6; see 37 C.F.R. § 42.23(b); Trial Practice Guide Update (August 2018), 15, *available at* https://www.uspto.gov/sites/default/files/documents/2018_Revised_Trial_Practice_Guide.pdf (“Examples of [improper] new issues [under 37 C.F.R. § 42.23(b)] are new theories or arguments necessary to make out petitioner’s case-in-chief for the unpatentability of an original or proposed substitute claim . . .”).

Thus our remaining question is whether the disclosure in Lahtinen relating to an information system of a heating oil company automatically inquiring about the amounts of oil in oil tanks, which, Lahtinen discloses, “opens up completely new horizons for optimizing distribution operations,” discloses the interpretation of collected data at the access point, other than by a person. Ex. 1005, 7:16–61; Pet. 70; Pet. Reply 25; Tr. 15:21–16:13. Patent Owner argues:

While Lahtinen describes automated operations such as querying a sensor for the amount of oil remaining in a tank and the sensor responding with an amount, Ex. 1005 at 7:34 et seq., there is no suggestion that the automation further encompasses the decision-making characteristics hypothesized by Petitioner. Instead, it appears that it remains for someone at the oil company

or in an oil distribution vehicle to make decisions—that is, interpret the data—once it is received. *Id.* There is no suggestion, for example, that a caretaker’s GSM phone which receives the oil level information then “interprets” that data in any way.

PO Resp. 11–12.

Reviewing Lahtinen, we agree with Patent Owner, and find that neither the disclosure of the access point and sensors acting automatically to gather the data, nor the disclosure that the system would “open[] up completely new horizons for optimizing distribution operations” discloses interpretation at the access point receiving the collected data. Thus, we do not find that Petitioner has shown by a preponderance of the evidence that Lahtinen anticipates claim 10. While the Petition argues that claim 10 is also obvious in view of Lahtinen, the discussion of obviousness is related to an argument regarding the first step of claim 10 rather than the step of “interpreting said collected data at said access point.” Pet. 70; Ex. 1006 ¶¶ 227–231. The Petition presents no discussion or explanation relating to the “interpreting” step of claim 10 and whether it would have been obvious to one of ordinary skill in the art in light of the relevant disclosures of Lahtinen. We therefore find that Petitioner has not shown by a preponderance of the evidence that claim 10 would have been obvious over Lahtinen.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated by a preponderance of the evidence that:

A. Claims 1–5, 7, 9, 10, and 16–22 are unpatentable as anticipated by Serbetciouglu;

B. Claims 1–5, 7, 9, 10, and 16–22 are unpatentable as obvious over Serbetciouglu;

C. Claims 1, 2, 5, 7, 9, 18, and 20 are unpatentable as anticipated by Lahtinen; and

D. Claims 1–5, 7, 9, 18, and 20 are unpatentable as obvious over Lahtinen.

We further determine that Petitioner has not demonstrated by a preponderance of the evidence that claims 6 and 8 are unpatentable as obvious over Serbetciouglu, that claims 3 and 4 are unpatentable as anticipated by Lahtinen, or that claim 10 is unpatentable as anticipated by or obvious over Lahtinen.

V. ORDER

For the foregoing reasons, it is:

ORDERED that claims 1–5, 7, 9, 10, and 16–22 of the '089 patent are unpatentable; and

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

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Patent 6,014,089

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