

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TANKLOGIX, LLC,
Petitioner,

v.

SITEPRO, INC.,
Patent Owner.

IPR2025-00652
Patent 11,294,403 B2

Before BART A. GERSTENBLITH, TERRENCE W. McMILLIN, and
SHEILA F. McSHANE, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

TankLogix, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of *inter partes* review of claims 1–23 and 25–30 (“the Challenged Claims”) of U.S. Patent No. 11,294,403 B2 (Ex. 1001, “the ’403 patent”). SitePro, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 9, “Prelim. Resp.”).¹

An *inter partes* review may be instituted only if “the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2024). For the reasons given below, on this record Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of any of the Challenged Claims. Accordingly, we do not institute an *inter partes* review.

B. Related Proceedings

The parties identify the following pending litigation involving the ’403 patent: *SitePro, Inc. v. TankLogix, LLC*, 6:24-cv-00642 (W.D. Tex.). Pet. 5; Paper 3 (Patent Owner’s Mandatory Notices), 1. Petitioner also identifies *SitePro, Inc. v. TankLogix, LLC*, 6:24-cv-00643 (W.D. Tex.), as a related matter. Pet. 5. And Patent Owner identifies the following additional related matters: *SitePro, Inc. v. WaterBridge Resources, LLC*, 6:23-cv-

¹ Patent Owner and Petitioner also filed briefs, arguing for and against discretionary denial, respectively. Papers 7, 8. The Acting Director determined that discretionary denial was not appropriate and referred the Petition to the Board. Paper 10.

00115 (W.D. Tex.); *The Integration Group of Americas v. SitePro, Inc.*, IPR20024-00724, IPR2024-00737, IPR2024-00738, IPR2024-00739, IPR2024-00740, IPR2024-00741, and IPR2024-00742²; *SitePro, Inc. v. Plow Technologies LLC*, 6:24-cv-00645 (W.D. Tex.); and *TankLogix, LLC v. SitePro, Inc.*, IPR2025-00647, IPR2025-00648, IPR2025-00649, IPR2025-00650, IPR2025-00651, and IPR2025-00653. Paper 3, 1–2.

C. Real Parties in Interest

Petitioner identifies TankLogix, LLC as the real party in interest. Pet. 5. Patent Owner identifies SitePro, Inc. as the real party in interest. Paper 3, 1.

D. The Asserted Grounds of Unpatentability and Declaration Evidence

Petitioner challenges the patentability of claims 1–23 and 25–30 of the ’403 patent on the following two grounds³ (Pet. 10–66):

² IPR2024-00742, which was terminated prior to a decision on institution, also involved claims of the ’403 patent. Paper 3, 1.

³ Petitioner filed an unopposed “Notice of Errata” to the Petition whereby Petitioner corrected “clerical or typographical errors in the Petition and corresponding expert declaration,” which reclassified one reference as § 102(e) prior art as opposed to § 102(a). *See* Ex. 1010, 1. The changes are reflected in how this Decision refers to the Petition and the grounds presented therein.

Claim(s) Challenged	35 U.S.C. § ⁴	Reference(s)/Basis
1, 2, 4, 5, 7	102/103(a)	Kahn ⁵
1–3, 6, 8–23, 25–30	103(a)	Kahn, Almadi, ⁶ Gutierrez ⁷

Additionally, Petitioner supports its challenge with a Declaration of Gary R. Wooley, Ph.D. (Ex. 1002). Patent Owner supports its Preliminary Response with a Declaration of Dr. Robert A. Durham (Ex. 2009).

E. The '403 Patent

The '403 patent is directed to “fluid-handling devices and, more specifically, to remote control of fluid-handling devices.” Ex. 1001, 1:31–33. The '403 patent describes “a system for remotely controlling fluid-handling device[s] of an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station”; “a tangible, non-transitory machine-readable medium storing instructions that when executed by a data processing apparatus cause the data processing apparatus to perform operations” pertaining to remotely controlling fluid-handling devices; and a “process” with similar steps for remotely controlling fluid-handling devices. *Id.* at 2:6–49.

⁴ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. The '403 patent claims priority to an application filed before March 16, 2013 (*see, e.g.*, Ex. 1001, code (63)), and, therefore, we apply the pre-AIA version of the statutory bases for unpatentability.

⁵ U.S. Patent No. 7,424,399 B2, issued Sept. 9, 2008 (Ex. 1005, “Kahn”).

⁶ U.S. Patent No. 8,667,091 B2, issued Mar. 4, 2014 (Ex. 1006, “Almadi”).

⁷ U.S. Patent No. 9,709,995 B2, issued July 18, 2017 (Ex. 1007, “Gutierrez”).

Figure 1, reproduced below, “illustrates an example of a command-center server and site master-controller.” Ex. 1001, 2:57–59.

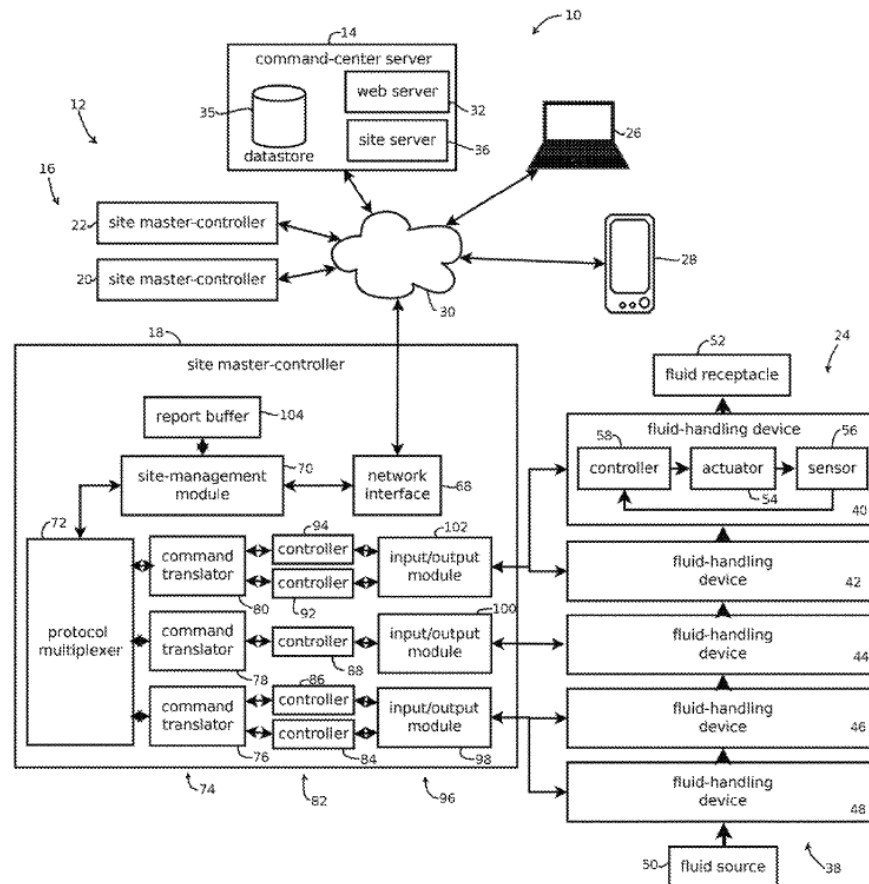


FIG. 1

Figure 1 shows control system 12 that includes command-center server 14 and site master-controllers 18, 20, and 22 “that cooperate to facilitate remote control at a fluid-handling site 24 from user devices 26 or 28 via the Internet 30.” Ex. 1001, 3:17–23. The ’403 patent explains that “[e]ach site master-controller 16 may be co-located with a corresponding fluid-handling site 24 and, in some embodiments, may include logic that implements remotely issued commands.” *Id.* at 3:23–26. The ’403 patent further explains that command-center server 14 may “be operative to present a command interface and receive commands via a web interface in a web

browser on user devices 26 and 28, such that fluid-handling devices can be controlled remotely without the need to install special-purpose software on the computing device through which remote control is exercised.” *Id.* at 3:36–42.

To execute commands at fluid-handling site 24, “site master-controller 18 translates the received commands into a protocol appropriate for the corresponding fluid-handling device 38 (identified individually by reference numbers 40, 42, 44, 46, and 48).” Ex. 1001, 5:42–46. The ’403 patent teaches that “[t]he fluid-handling devices may be any of a variety of different types of devices that handle fluids. For example, . . . a valve, a pump, a process chamber (for instance a[n] oil/water separation tank), or a process filter, or level switch.” *Id.* at 5:59–63. In some instances, “the fluid-handling device may include an actuator, for instance an electric motor or a hydraulic drive, by which fluid flow or other parameters are manipulated, a sensor 56 by which process parameters are measured, or a local controller 58 by which power to the actuator 54 is modulated.” *Id.* at 5:63–6:1. Additionally, the ’403 patent explains that “[f]luid-handling devices 38 may include a variety of types of sensors, for instance, a temperature, viscosity, flowrate, fluid level, pressure, conductivity, or other parameter sensor.” *Id.* at 6:1–4.

Figure 2 is reproduced below:

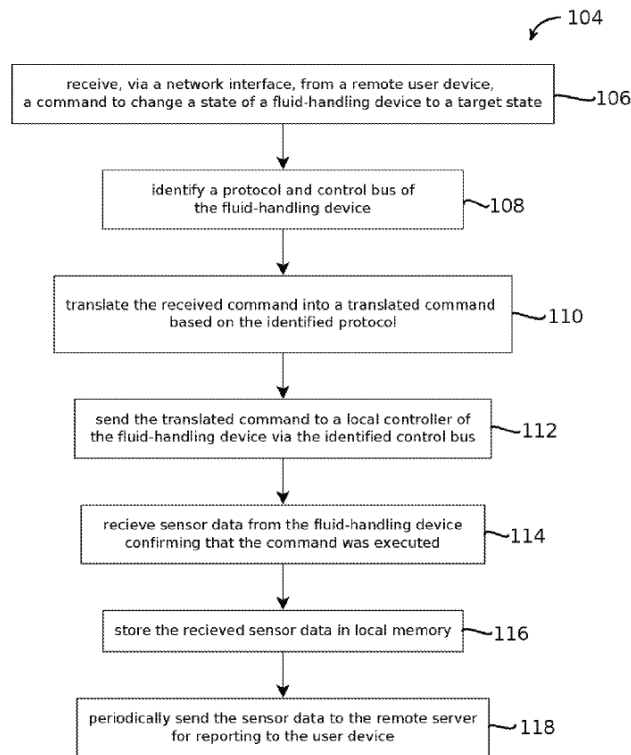


FIG. 2

Figure 2 “illustrates an example of a process by which remote control of fluid-handling devices is exercised in accordance with some embodiments” of the ’403 patent. Ex. 1001, 2:60–62. Process 104 for exercising remote control of a fluid-handling site can include “receiving, via a network interface, from a remote user device, (e.g., via a command-center server) a command to change a state of a fluid-handling device to a target state, as illustrated by block 106.” *Id.* at 11:52–56. The ’403 patent explains

[t]he command may be received from . . . site server 36, which may have received the command from a remote user device via a web browser of the user device. Further, the command to change the fluid-handling device to a target state may include a command that changes the fluid-handling device to a plurality

of different states over time, such as a command to ramp up or down a motor speed or oscillate some parameter.

Id. at 11:56–64.

F. Illustrative Claim

Claims 1 and 30 are the only independent challenged claims. Each of claims 2–23 and 25–29 depends, directly or indirectly, from claim 1.

Claim 1 is illustrative of the claimed subject matter and is reproduced below with Petitioner’s bracketing added for reference:

1. [1.1] A system, comprising:

[1.2] a first computer system disposed at a first fluid-handling site, the first fluid-handling site comprising a first pump, a first valve, and a first tank that handle a first fluid, the first tank having a first fluid-level sensor with which the first computer system is configured to communicate to obtain a level of the first fluid in the first tank, and the first computer system being configured to provide remote control of the first pump or the first valve; and

[1.3] a server system remote from the fluid-handling site, wherein the server system has memory storing instructions that, when executed, effectuate operations comprising:

[1.4] receiving, with the server system, from the first computer, via a network, a first fluid level sensed by the fluid-level sensor;

[1.5] obtaining, with the server system, credentials from a first client computing device;

[1.6] determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid-handling site, wherein the server system hosts data about other fluid-handling sites the user is not authorized to interact;

[1.7] after the determination, providing, with the server system, via the network, information by which a first client computing device presents a user interface indicating the first fluid level, the first client computing device being remote from the server system and the first computer system;

[1.8] receiving, with the server system, from the first client computing device, a first command to change a state of the first pump; and

[1.9] causing, with the server system, the first computer system disposed at the first fluid-handling site to effectuate the command by changing the state of the first pump to a sequence of different target states that change over time.

Ex. 1001, 16:40–17:10; *see* Pet. 70–71 (indicating Petitioner’s bracketing);

Ex. 3001 (Certificate of Correction for the ’403 patent), 1.

II. ANALYSIS

A. Legal Standards

1. Anticipation

“[A] claim is anticipated ‘if each and every limitation is found 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)). 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" (alterations in original) (quotation omitted)).

2. *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) (footnote added):

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.⁸

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.” (alteration in original))).

⁸ Neither party submitted evidence of objective indicia of nonobviousness.

“Whether 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)).

B. Level of Ordinary Skill in the Art

Although Petitioner does not address the level of ordinary skill in the art in the Petition, Dr. Wooley testifies that a person of ordinary skill in the art at the time of the invention “would have had at least a bachelor’s degree in engineering (mechanical, chemical, or electrical), computer science, or a related field and significant experience with remotely controlling fluid-handling devices, like [supervisory control and data acquisition (SCADA)] systems.” Ex. 1002 ¶ 25.

Patent Owner asserts that a person of ordinary skill in art “would have had at least a bachelor’s degree in engineering (electrical, chemical, petroleum or mechanical), computer science, or a related field and at least two years of experience designing control systems for remotely controlling fluid-handling devices, like SCADA systems.” Prelim. Resp. 3 (citing Ex. 2009 ¶ 48). Patent Owner contends that, alternatively, one of ordinary skill in the art “would have had at least six years of experience in designing control systems for remotely controlling fluid-handling devices, such as SCADA systems.” *Id.* at 3–4 (citing Ex. 2009 ¶ 48).

The parties' proposed levels of ordinary skill in the art are similar, although Patent Owner proposes two years of experience along with a bachelor's degree whereas Petitioner proposes "significant" experience. Patent Owner also proposes an alternative with more extensive experience in lieu of a bachelor's degree. Although we find Petitioner's proposed qualifications acceptable, we adopt Patent Owner's proposed qualifications for the purposes of this Decision because they offer a wider range of qualifications that nonetheless comport with the level of ordinary skill necessary to understand and implement the teachings of the '403 patent and the asserted prior art. *See 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). Our analysis and findings herein, however, do not turn on any differences in the parties' proposed qualifications.

C. Claim Construction

In an *inter partes* review proceeding, 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) (2024). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims, as would have been 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 assert that each claim term should be construed in accordance with its plain and ordinary meaning. Pet. 10; Prelim. Resp. 4 (citing Ex. 2009 ¶ 73); *see* Ex. 1002 ¶ 22 (opining the same). And, in the respective claim construction sections of their briefs, the parties do not propose any claim terms for express construction.

We agree with the parties that no claim terms require express construction to resolve the controversy before us. *See Realtime Data*, 912 F.3d at 1375.

D. Ground 1: Anticipated by or Obvious over Kahn

Petitioner, relying on the testimony of Dr. Wooley, contends that claims 1, 2, 4, 5, and 7 “are anticipated by . . . Kahn . . . or would be obvious to a [person of ordinary skill in the art] in view of Kahn.” Pet. 10; *see id.* at 10–25 (Petitioner’s challenge based on Kahn).

1. Scope and Content of the Prior Art

a. Kahn (Ex. 1005)

Kahn is directed to sensor systems and methods for fluid monitoring. Ex. 1005, 1:28–29. Kahn discloses:

sensor systems and methods for fluid (e.g., water) quality data gathering including on-line fluid quality monitoring by means of sensors with wired or wireless connections to a communications

network (e.g., the Internet), for access and visualization of fluid quality data over the Internet via a graphical web-browser interface, and for sharing of such data via the Internet.

Id. at 1:30–36. Kahn further discloses that a service provider can receive fluid test data generated from multiple different entities and the system permits authorized users for the different entities to visualize information associated with that data via the Internet using graphical computer interfaces at their respective computers. *Id.* at 2:50–54.

Figure 3, reproduced below, is a block diagram of a data collection network for a water monitoring system. Ex. 1005, 18:40–43.

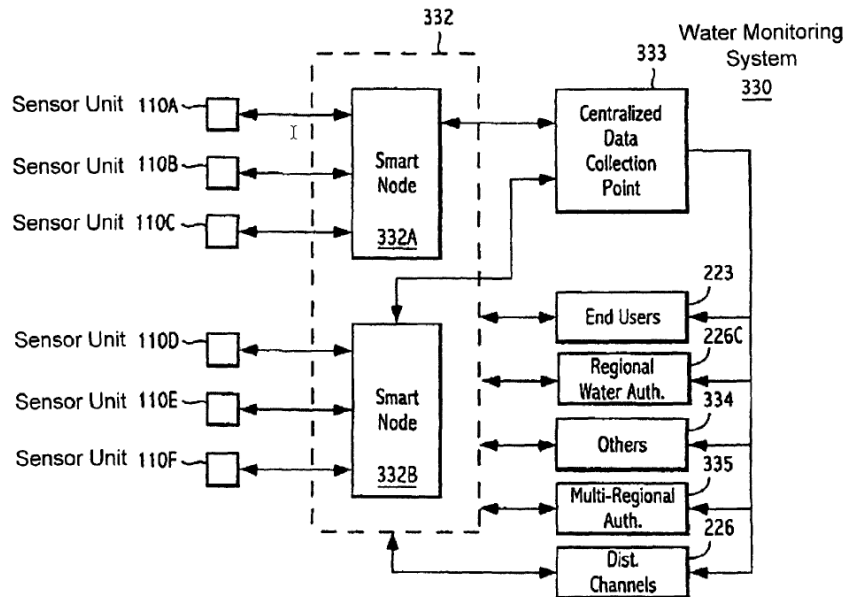


FIG. 3

Figure 3 depicts sensor units 110A–110F located at different sites that are connected to water quality monitoring system 330 by communication links. *Id.* at 18:44–47. The sensor units may be connected to respective smart nodes 332A, B where the smart nodes may have a relationship to the region or water authority 226C, for example. *Id.* at 18:53–62.

Figure 8A, reproduced below, depicts a display for an authorized user.
Ex. 1005, 28:30–35.

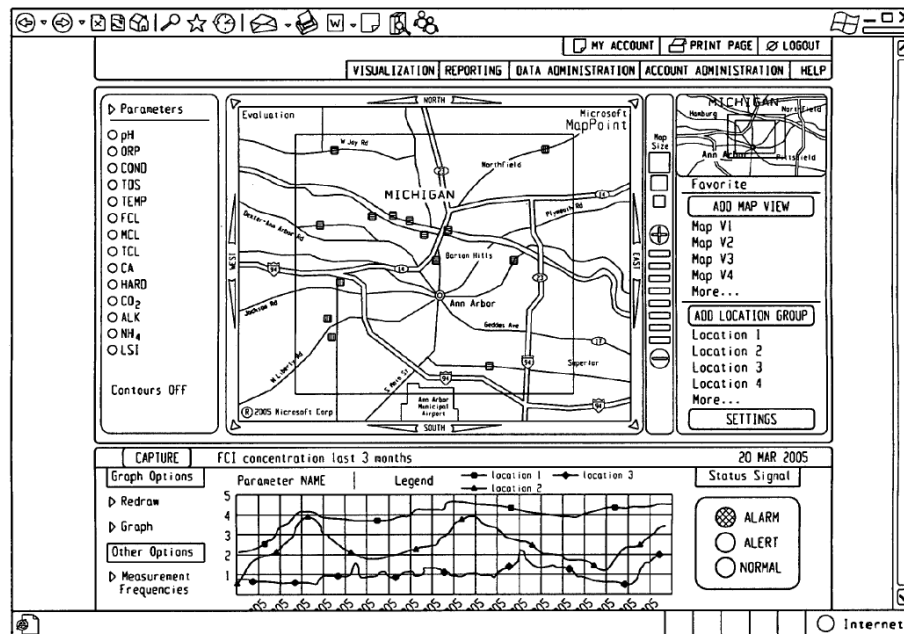


Fig. 8A

Figure 8A depicts information provided to a user that is information associated with fluid test data from sensors in a geographic area that have been acquired over some time frame. *Id.* at 28:30–35. Figure 8A includes main page tabs, such as “VISUALIZATION, REPORTING, DATA ADMINISTRATION, ACCOUNT ADMINISTRATION, and HELP.” *Id.* at 28:39–41. The map over a certain geographic area has squares associated with certain fluid test measurements, and, for instance, certain locations can be selected by clicking on them on the map and certain fluid test parameters in the left area of Figure 8A can also be selected for display. *See id.* at 28:43–54.

2. *Claim 1*

Petitioner contends that Kahn discloses each element of claim 1 ([1.1]–[1.9]). *See* Pet. 10–20 (repeating that “Kahn discloses”). Petitioner also contends that claim 1 would have been obvious in light of Kahn, but the only mention of obviousness in Petitioner’s entire discussion of claim 1 is a single, conclusory sentence after the discussion of element [1.9] in which Petitioner states “Claim 1 is anticipated by Kahn, or would be obvious to a [person of ordinary skill in the art] in view of Kahn.” *Id.* at 20. We focus on element [1.2] because it is dispositive.

Element [1.2] recites

a first computer system disposed at a first fluid-handling site, the first fluid-handling site comprising a first pump, a first valve, and a first tank that handle a first fluid, the first tank having a first fluid-level sensor with which the first computer system is configured to communicate to obtain a level of the first fluid in the first tank, and the first computer system being configured to provide remote control of the first pump or the first valve; and

Ex. 1001, 16:41–48; *see* Ex. 3001, 1. Petitioner asserts that Kahn “discloses a system with Sensor unit 110 that includes multiple sensors . . . [and] a communication unit that connects via a network to centralized data collection points” and that “Sensor unit 110” has “a processor that connects via a network to centralized data collection points.” Pet. 11. In addition to describing Kahn’s fluid-handling site, which includes a pump, filter, and valve, Petitioner contends “Kahn discloses [a] first sensor having actuators controlling valves and pumps.” *Id.* at 12. Further, Petitioner asserts “Kahn discloses receiving information comprising fluid level properties from one or more sensors disposed at a first fluid-handling site . . . through its disclosure

of a computer system that receives first fluid test data from sensors.” *Id.* at 12 (citing Ex. 1002 ¶¶ 39–40).

Of particular relevance to our discussion below, Petitioner asserts the following regarding Kahn and remote control:

A [person of ordinary skill in the art] would understand that the system disclosed in Kahn discloses remote control of a first fluid-handling device of the one or more fluid-handling devices. Controllers are used in remote oil fields and fluid-handling management systems to control fluid-handling devices such as pumps, valves, filters, tanks, motor drive systems, and pump systems including actuators. *See, e.g.,* Ex. 1005, 8:19-21, 10:62-67; *see also id.*, 14:35-15:2, 15:62-16:32. A [person of ordinary skill in the art] would understand from Kahn that it discloses remote control of a first fluid-handling device of the one or more fluid-handling devices. Thus, Kahn discloses the claim element “*the first computer system being configured to provide remote control of the first pump or the first valve.*” Ex. 1002 ¶¶ 41-42.

Pet. 13.

Patent Owner contends that “Petitioner fails to present a proper mapping of Kahn to the claimed feature of ‘*the first computer system being configured to provide **remote control** of the first pump of [sic] the first valve.*’” Prelim. Resp. 5. Patent Owner asserts “Kahn is directed toward ‘sensor systems and methods for fluid monitoring.’” *Id.* (quoting Ex. 1005, 1:27–29) (citing Ex. 1005, Title, Abst.). Patent Owner contends that Petitioner fails to establish that Kahn discloses element [1.2] because “Kahn does not disclose teach [sic] control of fluid actuation devices.” *Id.* at 6 (citing Ex. 2009 ¶ 78). Patent Owner asserts “there is nothing in Kahn that even suggests remote control from a computer system that is remote from the fluid-handling device, e.g., pump or valve.” *Id.* (citing Ex. 2009 ¶ 79).

Patent Owner contends that Petitioner’s citations to Kahn do not support Petitioner’s argument as to “remote control” and instead refer to “a communications unit that initiates on-site alerts” and “can be interfaced to a control valve that locally controls shut off of fluid upon the detection of emergency events.” *Id.* As opposed to disclosing remote control, Patent Owner contends these portions of Kahn teach “local indicators (i.e., ‘on-site alerts[’]) and, at most, ‘interfacing’ these alerts with a local control valve. There is no disclosure, teaching or suggestion of a ‘remote control.’” *Id.* at 7 (citing Ex. 2009 ¶ 79).

Additionally, Patent Owner contests Petitioner’s assertion—that “Kahn discloses remote control since controllers are used in remote oil fields and fluid-handling management systems to control fluid-handling devices such as pumps, valves, filters, tanks, motor drive systems, and pump systems including actuators”—because it is “not supported by Kahn’s disclosure.” Prelim. Resp. 7. Rather, Patent Owner contends “[t]here is just no suggestion that this is accomplished through ‘remote control,’ much less through remote control of a first pump or first valve.” *Id.* (citing Ex. 2009 ¶ 80).

We agree with Patent Owner that the Petition fails to demonstrate that Kahn discloses element [1.2] because the evidence cited does not disclose a “first computer system being configured to provide remote control of the first pump or first valve” (i.e., a fluid-handling device). Kahn is directed to providing access to fluid sensing data and analyzing and providing visual information on that data, but Petitioner has not identified any disclosure of the capability to remotely control fluid-handling devices. *See, e.g.*, Ex. 1005, code (54), 1:27–36, 2:50–3:2. More specifically, Kahn’s

disclosures that Petitioner relies on for allegedly teaching remote control are deficient. We discuss each.

First, Petitioner points to the following, “[f]or instance, as illustrated in FIG. 1C, a fluid control device such as a valve 15A is located on the input side of a sen[s]or unit 110.” Ex. 1005, 8:19–21, *cited in* Pet. 13. This portion of Kahn, however, does not disclose remote control.

Second, Petitioner cites to the following:

Finally, or in addition to, the communication unit 112B can include on-site alerts such as optical (indicator lights), audible alerts (e.g., alarm sounds), tactile (e.g., vibration of the unit) or can be interfaced to an appropriate control valve for simply shutting off the supply of fluid upon the detection of emergency events, for instance.

Pet. 13 (citing Ex. 1005, 10:62–67). We agree with Patent Owner that this portion of Kahn teaches on-site alerts and local control of the fluid-handling device. *See* Prelim. Resp. 7. This portion of Kahn does not disclose remote control.

Third, Petitioner points to the following from Kahn:

As noted above, a mechanism for selectively exposing individual sensors 111 to the fluid can be provided. For example, as illustrated in FIGS. 1D, 1H and 1I, a cover membrane 120 (or multiple cover membranes, one for each sensor 111) can be attached to a surface of a substrate 116, 122, the cover membrane 120 covering the plurality of sensors 111, in the recesses 116A, or below the apertures 122A. A plurality of heating elements 121, for example, can be attached to the membrane 120 at positions proximate to respective sensors 111. Each heating element 121 can be selectively operable to generate an opening in the membrane 120 thereby allowing a particular sensor 111 positioned proximate to a recess 116A or aperture 122A to be exposed to the fluid. As an alternative to using heating elements 121 to selectively expose a sensor 111,

any suitable mechanisms which serve to dissolve the membrane or physically remove or tear of at least a portion of the membrane 120 can be used, such as shown in FIG. 1J by a conceptually illustrated mechanical perforator 124 or FIG. 1K by a conceptually illustrated mechanical gripper or scraper 125. The embodiments of FIGS. 1J and 1K illustrate in a generic way any number of mechanical means for selectively removing the membrane 120. In addition, any suitable actuation mechanism(s) can be used enable [sic] the mechanical perforator 124 or the mechanical gripper or scraper 125 to be positioned adjacent to a given sensor 111 and to selectively expose that sensor 111. For example, the sensors can be configured along a line or in a two-dimensional array on the substrate 116, and one or more actuators can be used to provide relative linear motion in one or two directions between the substrate 116 and the mechanical member 125 [sic], 125. As another example, the sensors 111 can be arranged along the circumference of a circle, and one or more actuators can be used to provide relative rotational motion between the substrate 116 and the mechanical member 124, 125.

Ex. 1005, 14:35–15:2, *cited in* Pet. 13. The above disclosure from Kahn describes different aspects of sensors and particularly for selectively exposing individual sensors to fluid. But this portion of Kahn does not disclose remote control.

Lastly, Petitioner cites to the following teaching of Kahn:

An actuator 119D moves the backing plate 119A and the substrate 116 to selectively locate an individual sensor 111 to a region of the aperture such that the particular sensor 111 is exposed to the fluid. The substrate 116 is preferably flat to allow for a good seal, but the invention is not so limited. As discussed previously, sensors 111 can be formed on a recessed or non-recessed surface of the substrate 116. To minimize the potential for fluid leakage into the sensor cavity 119', the valves 115A and 115B can be actuated to partially or substantially drain the fluid cavity 119" before selectively exposing a new sensor 111 with the actuator 19D [sic].

The sensors 111 can be lithographically produced, deposited or screen printed on a recessed or non-recessed surface of the substrate 116, and might be formed at the circumference of a circle so as to allow the actuator 119D to be a simple carousel mechanism using rotational motion as shown in FIG. 1M, or can be formed in a staggered or straight line as shown in FIG. 1N, or in a two-dimensional array, for instance, and the actuator 119D can provide for a linear motion in one or more dimensions. The substrate can be in the form of substrate 116 with recesses 116A as shown in FIGS. 1N and 1E, or can be in the form of the flip-chip bonded substrate 122, 123 shown in FIG. 1F.

In view of the above, it will be apparent that carousel or linear motion embodiments can be used in conjunction with sensors 111 covered by at least one membrane 120 attached to a surface of the substrate 116 (e.g., FIGS. 1J and 1K), in which case a mechanical member 124, 125 selectively displaces or perforates the at least one membrane 120 in a region proximate to an individual sensor 111 to allow the particular sensor 111 to be exposed to a fluid. In this regard, a configuration similar to that illustrated in FIGS. 1L and 1M (or 1N) can be used. The actuator 119D can provide relative motion between the substrate 116 (mounted on backing plate 119A) and the mechanical member 124, 125 to allow the mechanical member 124, 125 to selectively displace the at least one membrane 120. The seal 119C and housing 119 may not be necessary in embodiments involving a membrane 120.

Ex. 1005, 15:62–16:32, *cited in* Pet. 13. The above disclosure from Kahn describes different aspects of Kahn’s actuators and sensors but does not disclose remote control.

Dr. Wooley’s testimony mirrors Petitioner’s argument as set forth in the Petition and relies on the same portions of Kahn reproduced above. *See* Ex. 1002 ¶¶ 41–42 (citing Ex. 1005, 8:19–21, 10:62–67, 14:35–15:2, 15:62–16:32). As discussed above, however, those portions of Kahn do not

disclose remote control. *See* Ex. 2009 ¶¶ 78–79 (referring to the same portions of Kahn and opining that Kahn does not disclose remote control and that Dr. Wooley’s testimony is unsupported).

Accordingly, on the present record, Petitioner has not established that Kahn discloses “the first computer system being configured to provide remote control of the first pump or the first valve” as recited in element [1.2], and, therefore, has not established a reasonable likelihood of showing that Kahn anticipates claim 1.

Additionally, although Petitioner characterizes its challenge as one based on anticipation “or” obviousness, neither Petitioner nor Dr. Wooley makes any attempt to show that element [1.2] (or any other element of claim 1) would have been obvious to one of ordinary skill in the art based on Almadi. *See* Pet. 10–20⁹; Ex. 1002 ¶¶ 37–63. Accordingly, on the present record, Petitioner has not established a reasonable likelihood of showing that Kahn would have rendered claim 1 obvious.

3. *Claims 2, 4, 5, and 7*

Claims 2, 4, 5, and 7 depend from claim 1. Petitioner does not address the deficiency identified above in its discussion of these dependent claims. *See* Pet. 21–25. Thus, we find Petitioner’s analysis of these dependent claims deficient for the same reasons discussed above in the context of claim 1. Accordingly, on the present record, Petitioner has not

⁹ As noted above, the only mention of obviousness in Petitioner’s entire discussion of claim 1 is a single, conclusory sentence after the discussion of element [1.9] in which Petitioner states “Claim 1 is anticipated by Kahn, or would be obvious to a [person of ordinary skill in the art] in view of Kahn.” Pet. 20.

established a reasonable likelihood of showing that Kahn anticipates or renders obvious claims 2, 4, 5, and 7.

4. *Summary of Ground 1*

For the reasons discussed above, Petitioner has not established, on the present record, a reasonable likelihood that it would prevail in showing that Kahn anticipates or renders obvious claims 1, 2, 4, 5, and 7.

E. Ground 2: Obvious over Kahn, Almadi, and Gutierrez

Petitioner, relying on the testimony of Dr. Wooley, contends that claims 1–3, 6, 8–23, and 25–30 are obvious over Kahn, Almadi, and Gutierrez. Pet. 25–26; *see id.* at 25–66 (Petitioner’s challenge based on Kahn, Almadi, and Gutierrez). We initially note that Petitioner refers to this ground in at least three different ways. In the heading for this ground, Petitioner refers to “Kahn in view of Almadi and Gutierrez,” indicating the challenge is based on a combination of the three references. Pet. 25 (emphasis omitted). Then, in the first sentence under the heading, Petitioner refers to the ground as “Kahn in view of . . . Almadi,” omitting any reference to Gutierrez. *Id.* at 25–26. And, finally, in the discussion of motivation to combine, Petitioner repeatedly refers to the combination of “Kahn and Almadi *or* Gutierrez.” *See id.* at 26–28 (emphasis added). Patent Owner, however, understands the combination presented by the Petition as “Kahn in view of Almadi and Gutierrez.” *See* Prelim. Resp. 11 (“Petitioner asserts a combination of ‘Kahn in view of Almadi and Gutierrez’ . . .”). Adding to the confusion is that the Petition includes a summary sentence at the end of the discussion of each claim, which specifically asserts obviousness over “Kahn in view of Almadi” even when the Petition relies, at least in part, on Gutierrez. *See, e.g.,* 40–42 (relying in part on Gutierrez to address claim 3,

yet omitting Gutierrez from the concluding sentence asserting a combination of “Kahn in view of Almadi”), 58–59 (similarly relying in part on Gutierrez to address claim 25 but asserting in the concluding sentence a combination of “Kahn in view of Almadi”).

Ultimately, for purposes of our discussion herein, it does not matter whether Petitioner’s proposed combination is all three references—Kahn, Almadi, and Gutierrez—or a combination of just two of the references, relying on Almadi and Gutierrez as alternatives—Kahn and Almadi or Gutierrez. This is because we find the Petition’s discussion of elements [1.5] and [1.6] dispositive and Petitioner *only* relies on Almadi for disclosure or teaching of those limitations in its discussion of claim 1. And, for independent claim 30, despite Petitioner’s reference to “Kahn and Almadi” when addressing elements [30.5] and [30.6], Petitioner solely relies on its discussion of elements [1.5] and [1.6], which, in turn, solely rely on Almadi. Thus, as discussed below, our consideration of elements [1.5] and [1.6] and Almadi resolve the issues before us.¹⁰

1. Scope and Content of the Prior Art

a. Almadi (Ex. 1006)

Almadi is directed to “automated industrial processes” and more particularly “to the control of, and acquisition of data from, remote and in-plant subsystems in automated industrial processes.” Ex. 1006, 1:18–22. Almadi explains that it

¹⁰ In light of our determination regarding elements [1.5] and [1.6], we need not consider whether Gutierrez is prior art to the ’403 patent. *See, e.g.*, Prelim. Resp. 27–31 (asserting Gutierrez is not prior art to the ’403 patent).

provide[s] an integrated node used to interface between a remote host server and the plurality of remote subsystems in a process automation environment to provide, in turn, for a single point of control for data collection, monitoring, and restoration responsive to timestamps being synchronized to a single timing source, thereby enabling a more uniform basis for collection and restoration of data.

Id. at 2:64–3:4. Almadi’s “integrated node . . . integrates the functions of controller units, communications networking devices, and data storage servers into one unit.” *Id.* at 3:10–13. Almadi further explains that “[e]mbodiments of an integrated node can also, for example, employ an Ethernet switch to support networking over multiple communication interfaces and transmit process data to a remote host se[r]ver over TCP/IP . . . thereby beneficially reducing the number of hardware components needed and allowing a simpler support model.” *Id.* at 3:13–20.

2. *Claim 1*

Petitioner contends that Almadi discloses each element of claim 1 ([1.1]–[1.9]). *See* Pet. 28–38 (repeating that “Almadi discloses”). Petitioner does not rely on Kahn or Gutierrez in addressing claim 1 despite concluding that “Claim 1 would be obvious to a [person of ordinary skill in the art] over Kahn in view of Almadi.” *Id.* at 38; *see id.* at 28–38 (relying only on Almadi).

As noted above, we focus on elements [1.5] and [1.6] because we find them dispositive of the issues before us. Element [1.5] recites “obtaining, with the server system, credentials from a first client computing device.” Ex. 1001, 16:56–57. Element [1.6] recites “determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid-handling site, wherein the

server system hosts data about other fluid-handling sites the user is not authorized to interact.” *Id.* at 16:58–63; *see* Ex. 3001, 1.

Petitioner asserts the following regarding element [1.5]:

Almadi discloses obtaining, with the server system, credentials from a first client computing device through its disclosure of an embodiment of an integrated node 100 can be shown, as illustrated in Figures 1A, 1B, having a central processing unit 105 and a memory 160 to allow a remote host 110 to interface with a plurality of remote subsystems 120. EX1006, 11:18-21.

Almadi discloses a system intended to serve in various networking operating environments, including, for example, intelligent fields for oil and gas, substations/power grid, and remote security, and can be utilized and can be extended for enterprise applications. EX1006, 12:48-59, 13:20-25. Almadi further discloses “[t]hose having skill in the art will appreciate various techniques to ensure no file access violations during the process of accessing the file, for example, by the remote host 300.” EX1006, 16:65-67.

A [person of ordinary skill in the art] would understand that Almadi discloses the obtaining credentials from a first client computing device of the ‘403 Patent through its disclosure of the integration node’s application in secure enterprise network environments ensuring that no file access violations occur. EX1002, ¶ 90. Thus, Almadi discloses this claim element.

Pet. 34. Similarly, Petitioner contends the following regarding element [1.6]:

Almadi discloses determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid handling site through its disclosure that an embodiment of an integrated node 100 can be shown, as illustrated in FIGS. 1A-1B, having a central processing unit 105 and a memory 160 to allow a

remote host 110 to interface with a plurality of remote subsystems 120. EX1006, 11:18-21. Integrated node is a server system. *Id.*

Almadi discloses a system intended to serve in various networking operating environments, including, for example, intelligent fields for oil and gas and can be utilized and can be extended for enterprise applications. EX1006, 12:48-59, 13:20-25. Almadi discloses that “those having skill in the art will appreciate various techniques to ensure no file access violations during the process of accessing the file, for example, by the remote host 300.” EX1006, 16:65-67.

A POSITA would understand that Almadi discloses determining whether a user is authorized to interact with the fluid-handling device of the ‘403 Patent through its disclosure of the integrated node 100 and the various techniques to ensure no file access violations during the process of accessing the file by the remote host. EX1002, ¶ 91. Thus, Almadi discloses this element.

Pet. 35.

Patent Owner contests Petitioner’s characterization of Almadi:

Petitioner fails to make a proper showing that limitation [1.5] is taught, suggested, or rendered obvious by the Combination. Petitioner contends that in Almadi’s disclosure the integrated node 100 (mapped to the claimed “*server system*”) allows remote host 110 to interface with a plurality of remote subsystems 120 and thereby obtain credentials of a client computer. Petition, 34. This is incorrect. Almadi does not disclose any type of credentials exchange between the first client computing device and the server system. There is no mention of the term “credential” in Almadi, or anything that could be reasonably interpreted as an exchange of credentials, such as “username” or “password.” *See* Ex. 2009, ¶112. Thus, there is no support that the Combination teaches, suggests, or renders obvious limitation [1.5].

Prelim. Resp. 15–16. Additionally, Patent Owner asserts that “Almadi does not disclose ‘*credentials*,’ so Almadi’s system therefore cannot implement the features recited in limitation [1.6], including determining that a user of the first client computing device is authorized to interact with the first fluid handling site.” *Id.* at 16 (citing Ex. 2009 ¶ 114).

As reflected above, Petitioner effectively relies on two aspects of Almadi in its assertions regarding credentials—(1) that Almadi’s system involves a remote host interfacing with a plurality of remote subsystems and (2) that Almadi expressly discloses that “[t]hose having skill in the art will appreciate various techniques to ensure no file access violations during the process of accessing the file, for example, by the remote host 300.”

Ex. 1006, 16:65–67. Neither of these aspects of Almadi, however, disclose obtaining credentials from a first client computing device with the server system, as recited in element [1.5], or determining, with a server system, that a user of the first client computing device is authorized to interact with the first fluid-handling site based on the credentials, as recited in element [1.6].

Dr. Wooley’s complete testimony as to element [1.5] is as follows:

A [person of ordinary skill in the art] would readily understand that Almadi discloses the obtaining credentials from a first client computing device of the ‘403 Patent through its disclosure of the integration [sic] node’s ability to interface with a plurality of remote sub-systems by interfering [sic] with a remote sub-system, a user can obtain credentials from that remote sub-system which is first client computing computer. Thus, Almadi discloses obtaining, with the server system, credentials from a first client computing device.

Id. ¶ 90. As reflected above, however, Dr. Wooley does not explain why Almadi’s teaching of a remote host interfacing with a plurality of remote subsystems necessarily discloses obtaining credentials by the server system.

Dr. Wooley's testimony as to element [1.6], reproduced below, is similarly deficient in explaining how Almadi discloses credentials.

Dr. Wooley opines:

A [person of ordinary skill in the art] would readily understand that Almadi discloses determining whether a user is authorized to interact with the fluid-handling device of the '403 Patent through its disclosure of the integrated node 100 and the various techniques to ensure no file access violations during the process of accessing the file by the remote host. Thus, Almadi discloses the determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid handling site, wherein the server system hosts data about other fluid handling sites the user is not authorized to interact.

Ex. 1002 ¶ 91. As reflected above, Dr. Wooley does not explain what techniques one of ordinary skill in art would understand Almadi to refer to or why Almadi's teaching regarding file access violations necessarily means that credentials are obtained by Almadi's server system and that the server system determines a user of the first client computing device is authorized to interact with the first fluid-handling site based on those credentials.

Accordingly, on the present record, Petitioner has not established that Almadi discloses elements [1.5] and [1.6] of claim 1, and, therefore, has not established a reasonable likelihood of showing that the combination of Kahn, Almadi, and Gutierrez would have rendered claim 1 obvious to one of ordinary skill in the art.

3. Claims 2, 3, 6, 8–23, and 25–29

Claims 2, 3, 6, 8–23, and 25–29 depend from claim 1. Petitioner relies on its analysis of claim 1 when addressing each of these dependent claims. *See* Pet. 38–65 (addressing the dependent claims without any

alternative analysis of claim 1). Thus, we find Petitioner’s analysis of these dependent claims deficient for the same reasons discussed above in the context of claim 1. Accordingly, on the present record, Petitioner has not established a reasonable likelihood of showing that the combination of Kahn, Almadi, and Gutierrez would have rendered claims 2, 3, 6, 8–23, and 25–29 obvious to one of ordinary skill in the art.

4. Claim 30

Independent claim 30 recites limitations substantially the same as claim 1.¹¹ Compare Ex. 1001, 19:25–20:40 (claim 30), with *id.* at 16:40–17:10 (claim 1); see Ex. 3001, 1–2. Recognizing this similarity, Petitioner’s analysis of claim 30 relies almost entirely on its analysis of claim 1. See, e.g., Pet. 65–66 (equating elements of claim 30 to elements of claim 1). For example, Petitioner states “Kahn and Almadi disclose claim element 30.5 for the reasons discussed above in Claim 1.5 and incorporated herein. Kahn and Almadi disclose claim element 30.6 for the reasons discussed above in Claim 1.6 and incorporated herein.” *Id.* at 65. As discussed above, Petitioner relies solely on Almadi when addressing claim 1 despite Petitioner’s repeated references to “Kahn and Almadi” when referring to claim 1. Dr. Wooley similarly relies on claim 1 when addressing claim 30. See Ex. 1002 ¶ 140 (“limitation 30.5 is analogous to limitation 1.5,

¹¹ Of particular note, element [30.5] recites “obtaining, with the server system, credentials from a first client computing device” and element [30.6] recites “determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid-handling site, wherein the server system hosts data about other fluid-handling sites the user is not authorized to interact.” Ex. 1001, 19:41–20:6; see Ex. 3001, 2.

limitation 30.6 is analogous to limitation 1.6”). Thus, we find Petitioner’s analysis of elements [30.5] and [30.6] deficient for the same reasons discussed above in the context of claim 1. Accordingly, on the present record, Petitioner has not established a reasonable likelihood of showing that the combination of Kahn, Almadi, and Gutierrez would have rendered claim 30 obvious to one of ordinary skill in the art.

5. *Summary of Ground 2*

For the reasons discussed above, Petitioner has not established, on the present record, a reasonable likelihood that it would prevail in showing that the combination of Kahn, Almadi, and Gutierrez would have rendered claims 1–3, 6, 8–23, and 25–30 obvious to one of ordinary skill in the art.

III. CONCLUSION

For the reasons discussed above, we find that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any of the Challenged Claims of the ’403 patent is unpatentable.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is *denied* as to the Challenged Claims of the ’403 patent; and

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

IPR2025-00652
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