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Paper 11
Entered: June 13, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESMED CORP.,
Petitioner,

v.

CLEVELAND MEDICAL DEVICES, INC.,
Patent Owner.

IPR2025-00160
Patent 11,786,680 B1

Before SHERIDAN K. SNEDDEN, NEIL T. POWELL, and CYNTHIA M. HARDMAN, *Administrative Patent Judges.*

SNEDDEN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

ResMed Corp. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–5, 7, 8, 10–13, 15–18, and 20–31 of U.S. Patent No. 11,786,680 B1 ("the '680 patent," Ex. 1001). Paper 1 ("Pet."). Cleveland Medical Devices, Inc. ("Patent Owner") filed a Preliminary Response to the Petition. Paper 7 ("Prelim. Resp."). With our authorization, Petitioner filed a Preliminary Reply, and Patent Owner filed a Preliminary Sur-reply, addressing discretionary denial issues. Paper 8 ("Prelim. Reply"); Paper 9 ("Prelim. Sur-reply").

To institute an *inter partes* review, we must determine that the information presented in the Petition shows "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) (2018). The Supreme Court has held that a decision to institute under 35 U.S.C. § 314 may not institute on less than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 584 U.S. 357, 370–71 (2018). After considering the information presented by the parties, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one of claims 1–5, 7, 8, 10–13, 15–18, and 20–31 of the '680 patent is unpatentable.

B. Real Parties in Interest

Petitioner identifies ResMed Corp. as the real party in interest for Petitioner. Pet. 76. Patent Owner identifies Cleveland Medical Devices, Inc. as the real party in interest for Patent Owner. Paper 5, 1.

C. Related Matters

The parties indicate that the '680 patent is involved in *ResMed Corp. v. Cleveland Medical Devices, Inc.*, Case No. 1:23-cv-02221-BMB (N.D. Ohio) (the "Ohio case"). Pet. 76; Paper 5, 1.

Petitioner has filed a request for *ex parte* reexamination of the '680 patent (90/019,705). Paper 5, 1.

Petitioner has also filed petitions for *inter partes* review of the following patents owned by Patent Owner: IPR2025-00157 against U.S. Patent No. 11,602,284; IPR2025-00158 against U.S. Patent No. 11,690,512; IPR2025-00159 against U.S. Patent No. 11,375,921; IPR2025-00246 against U.S. Patent No. 11,857,333; and IPR2025-00247 against U.S. Patent No. 11,872,029. Pet. 76.

D. The '680 patent (Ex. 1001)

The '680 patent is titled "Integrated Diagnostic and Therapeutic System and Method for Improving Treatment of Subject with Complex and Central Sleep Apnea." Ex. 1001, code (54). The '680 patent describes "an integrated [sleep] diagnosis and treatment device." *Id.* at 3:7–9. According to the '680 patent, none of the devices on the market (1) "can be used to adjust the air flow delivered to a subject based on the subject's current physiological state or the subject's current symptoms"; (2) "can use a rich data set to predict or detect apnea and provide appropriate treatment"; (3) "use a rich set of data over single or multiple nights to set the optimal pressure and other parameters"; (4) "can be used to automatically adjust a treatment device based on a comprehensive evaluation of the subject's physiological signals"; or (5) "can be used in the subject's home". *Id.* at 2:40–52. The '680 patent aims to accomplish these tasks. *Id.* at 2:53–3:3.

Figure 9 of the '680 patent is reproduced below.

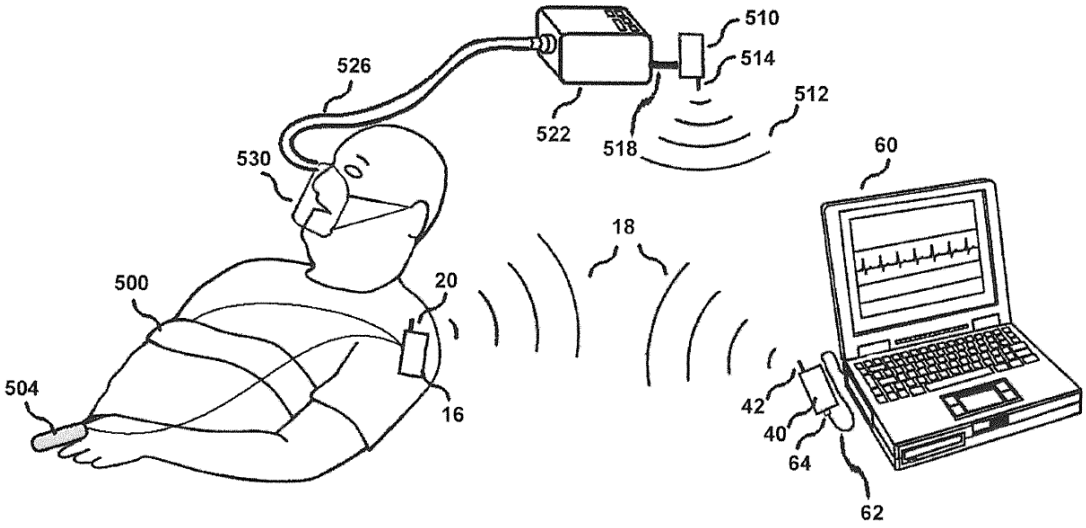

Fig. 9

Figure 9 depicts a schematic representation of an embodiment of the '680 patent's system "used with a subject to acquire EEG signals from the subject and then transmit them to the receiver and attached computer." Ex. 1001, 13:50–53. The system includes patient interface box 16, treatment device 522 (such as continuous positive air pressure device, "CPAP"), treatment device interface 518, base station 40, and external programming means 60. *Id.* at 54:30–56, 55:30–34. "[P]atient interface box 16 receives signals (not shown) from a respiratory belt 500 and a pulse oximeter 504 placed on the subject" and "generates a wireless signal 18 encoded with data corresponding to the signals from the respiratory belt 500 and a pulse oximeter 504. The patient interface box 16 transmits the wireless signal 18 to base station 40" through module antenna 20. *Id.* at 54:31–44. "[B]ase station 40 receives the radio frequency signal 18 through base antenna 42, demodulates the radio frequency signal 18, and decodes the data." *Id.* at 54:44–47. "[D]ata processing and calculation can be performed by the base station 40", external programming means 60, or "can be distributed between

the patient interface box 16, the base station 40, and the external programming means 60." *Id.* at 55:25–29; *see also id.* at 55:4–7.

External programming means 60 "contains software that is used to program the patient interface box 16 and the base station 40 through data interface cable 62" or through "radio frequency (or other type) of signals transmitted between an external programming means 60 and a base station 40 and the patient interface box 16 or to another base station 40." Ex. 1001, 54:53–63. External programming means 60 can monitor, analyze, and display data received by base station 40 from patient interface box 16 and can "calculate the next appropriate gas flow level to be delivered to the subject" by "us[ing] data originally collected from the respiratory belt 500 and the pulse 20 oximeter 504 to calculate the appropriate flow level." *Id.* at 55:16–21; *see also id.* at 55:4–7. "After the appropriate flow level has been calculated, the external programming means 60 transmits a command signal to the treatment device interface 518, which then relays the command signal to the treatment device 522 via a connection 518." *Id.* at 55:30–34. "Once the treatment device 522 receives the command signal the treatment device performs the command and changes the treatment provided to the subject." *Id.* at 55:58–61.

E. The Challenged Claims

Petitioner challenges claims 1–5, 7, 8, 10–13, 15–18, and 20–31 of the '680 patent. Claim 1, the only independent claim, is reproduced below with bracketed notations added:[1]

[1] For ease of reference, we use the same bracketed notations Petitioner uses in the Petition. *See, e.g.*, Pet. 78–80.

1. A system for remote internet server-based diagnostic monitoring with one or more positive airway pressure (PAP) device(s) for sleep disorder treatment comprising

[a] A. one or more PAP device(s);

[b] B. a first non-transitory computer readable medium comprising a first software stored on the first non-transitory computer readable medium, the first software adapted to be executed by a first processor when the first software is downloaded to a cell phone of a subject(s) receiving treatment, the cell phone requiring:

[b.i] 1) at least one first radio frequency wireless transceiver,

[b.ii] 2) the first processor,

[b.iii] 3) the first software, and

[b.iv] 4) a display,

[b.v] the first software further adapted for:

[b.v.A] i) receiving a PAP therapy efficacy data or a modified PAP therapy efficacy data based in part on the PAP therapy efficacy data both based on treatment of the subject and its efficacy in whole or in part, and

[b.v.B] ii) outputting one or more PAP therapy efficacy measures(s) on the display of the cell phone for viewing by the subject based in whole or in part on the data received by the first software; and

[c] C. a second non-transitory computer readable medium comprising at least one second software for *a remote internet site and a database, the remote internet site and the database stored on a non-transitory computer readable medium and adapted to:*

[c.i] 1) *Be hosted on at least one server*, and

[c.ii] 2) be used for remote monitoring of multiple subjects receiving PAP therapy;

[d] wherein the one or more PAP device(s) that is each used for treating the sleeping disorder of the subject(s) or their symptoms, and further comprises:

[d.i] a blower having an air output,

[d.ii] a sensor for providing a sensor data to determine airflow, the sensor internal to the PAP device adapted for measuring or deriving the respiratory airflow of the subject while using the PAP,

[d.iii] a second processor adapted for generating the PAP therapy efficacy data based on a first data and a second data by receiving the sensor data, and calculating both i) the first data related to a quantitative measure of symptom severity during use of the PAP device and ii) the second data related to a usage of the PAP device by the subject,

[d.iv] *at least one second radio frequency wireless transceiver for transmitting the PAP therapy efficacy data*, and

[d.v] a mask or a nasal cannula; and

[e] the at least one second software for the remote internet site and the database is further adapted to receive the PAP therapy efficacy data, in whole or in part, generated by the PAP device and transmitted via the at least one second radio frequency wireless transceiver.

Ex. 1001, 62:56–63:42 (emphasis added). Challenged claims 2–5, 7, 8, 10–13, 15–18, and 20–31 depend from claim 1, either directly or indirectly, and recite additional features of the sleeping disorder treatment systems. *Id.* at 63:43–57; 63:62–64:11; 64:15–39; 64:43–65:3; 65:7–66:32.

F. Evidence

Petitioner relies upon information that includes the following.

Ex. 1044, Toge, P2002-291889A, published October 8, 2002 ("Toge").[2]

Ex. 1008, Kumar et al., US 2002/0198473 A1, published December 26, 2002 ("Kumar").

Ex. 1050, Burton et al., WO 2004/032719 A2, published April 22, 2004 ("Burton").

Ex. 1051, Kisner et al., US 5,309,921, issued May 10, 1994 ("Kisner").

Petitioner also relies on the Declaration of Jason Kirkness, Ph.D. (Ex. 1003) and the Declaration of Dr. Sandeep Chatterjee (Ex. 1005) to support its contentions.

G. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–5, 7, 8, 10–13, 15–18, and 20–31 would have been unpatentable on the following grounds (Pet. 2):

Ground	Claim(s) Challenged	35 U.S.C. §[3]	Reference(s)/Basis
1	1–5, 7, 8, 10–13, 15–18, 20–31	103(a)	Toge, Kumar, Burton
2	10, 15, 20	103(a)	Toge, Kumar, Burton, Kisner

[2] Ex. 1044 includes an English translation of Toge, the original Japanese version of Toge, and a Translation Certification for the English translation. *See generally* Ex. 1044. We cite to the English translation herein.

[3] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA") included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Here, Petitioner applies "an effective filing date of no earlier than November 4, 2005." Pet. 6. Accordingly, we apply the pre-AIA version of § 103; however, our decision would be no different under the AIA version of the statute.

II. DISCRETIONARY DENIAL

Institution of an *inter partes* review is discretionary, not mandatory. *See Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) ("[T]he agency's decision to deny a petition is a matter committed to the Patent Office's discretion."); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) ("[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.").

The parties address whether institution should be discretionarily denied (1) in view of the pending *ex parte* reexamination of the '680 patent (90/019,705) (filed by Petitioner); or (2) under *Fintiv*[4] in view of the Ohio case. *See generally* Pet. 74; Prelim. Resp. 6–27; Prelim. Reply; Prelim. Sur-Reply. We address each argument in turn.

A. Discretionary Denial in View of the Ex Parte Reexamination

Patent Owner argues that "[f]undamental fairness and due process support denial of the Petition because the Central Reexamination Unit ('CRU') already ordered reexamination of the '680 Patent at Petitioner's request several weeks before Petitioner submitted this Petition." Prelim. Resp. 6 (citing Ex. 1053 (Decision Ordering Reexamination, Control No. 90/019,705) (dated December 3, 2024)). Patent Owner argues that "Petitioner's overlapping challenges before multiple branches of the Office," and the fact that Petitioner successfully obtained a stay of the Ohio case based on the Office proceedings, "constitute an abuse of the patent system for the improper purpose of nullifying the term of the patent by tying it up in duplicative proceedings." *Id.* at 6–7. Patent Owner further argues that "the

[4] *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 11, 2020) (precedential).

Office cannot, without violating due process rights, require a party to undergo multiple rounds of the same or overlapping invalidity challenges before different branches of the same government office." *Id.* at 8.

We are not persuaded by these arguments. We are aware of no regulation, rule, case law, or Office guidance that prohibits a party from filing both an *ex parte* reexamination and an *inter partes* review, or deems doing so "an abuse of the patent system" or a due process violation. Prelim. Resp. 7–8. Indeed, the Office has previously permitted parallel reexaminations and *inter partes* reviews, even when filed by the same party. *See, e.g.*, *CBS Interactive et al. v. Helferich Patent Licensing*, IPR2013-00033, Paper 15, 2 (PTAB Nov. 6, 2012) ("four of the five Petitioners [in the *inter partes*] are also the third-party requesters who filed the request for reexamination"); *Arctic Cat, Inc. v. Polaris Indus. Inc.*, IPR2015-01781, Paper 78, 2 (PTAB Sept. 25, 2018) (denying patent owner's motion to stay or terminate *ex parte* reexamination 90/013,999, which was filed by same petitioner in the related *inter partes* review); *Emerson Electric Co. v. Sipco, LLC*, IPR2017-00359, Paper 62, 5, 19 (PTAB Mar. 21, 2019) (declining to terminate two *ex parte* reexaminations filed by a party who previously filed an *inter partes* review on the same patent).

The Office's April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding* provides information as to how the Office may handle parallel reexamination and AIA proceedings involving the same patent. *See* 84 Fed. Reg. 16,654, 16656–58 (Apr. 22, 2019). The existence of this Notice indicates that there is nothing *per se* improper about parallel *ex parte* reexaminations and *inter partes* reviews. Accordingly, on this record, we are not persuaded to discretionarily deny this Petition based on

"[f]undamental fairness and due process" due to the pending *ex parte* reexamination. Prelim. Resp. 6.

Patent Owner further argues that a stay of the reexamination would "extend[] the amount of time that validity proceedings cast a cloud over a given patent and prevent effective enforcement," and "would transform inappropriate co-pending challenges into inappropriate serial challenges, when in fact, the District Court is available as a single forum to efficiently address all invalidity and enforceability challenges." *Id.* at 9. Patent Owner argues that "the only remedy to prevent the weaponization of the Office's various administrative procedures is denial of attempts to bring iterative challenges." *Id.*

Again we are not persuaded, for three reasons. First, we do not here stay the reexamination.[5] Second, as discussed above, there is nothing *per se* "inappropriate" about parallel challenges. Nor is there anything *per se* inappropriate about serial challenges. *See, e.g.*, *Geneoscopy, Inc. v. Exact Sci. Corp.*, IPR2024-00459, Paper 9, 30–32 (PTAB July 26, 2024) (declining to exercise discretion to deny institution of *inter partes* review in view of a completed *ex parte* reexamination filed by the same petitioner on the same claims of the same patent). Third, Patent Owner's argument that "the District Court is available as a single forum to efficiently address all invalidity and enforceability challenges" is contradicted by the fact that the district court has stayed the case pending completion of this and other Office proceedings. Prelim. Resp. 9; *see also ResMed Corp. v. Cleveland Med. Devices, Inc.*, No. 1:23-cv-02221-BMB, 2025 WL 744610, at *1, 4 (N.D.

[5] Should a party wish to request authorization to file a motion to stay the reexamination pending completion of this *inter partes* review, the parties shall meet and confer on a briefing schedule and jointly contact the Board.

Ohio Mar. 7, 2025) (granting stay pending the conclusion of two *ex parte* reexamination and six *inter partes* review petitions on six patents). Patent Owner does not persuade us, let alone allege, that the district court would lift the stay were we to deny institution of this Petition. Accordingly, on this record Patent Owner does not demonstrate that the district court is an "available" forum.

Patent Owner next argues that Petitioner "fail[ed] to justify its alleged need for two parallel proceedings challenging every claim of the '680 Patent before two different branches of the Office." Prelim. Resp. 9–10. In making this argument, Patent Owner cites procedures in the Board's Trial Practice Guide for a petitioner to explain the need for more than one AIA petition. *See id.* (citing Consolidated Trial Practice Guide ("CTPG") Nov. 2019,[6] 60). As Patent Owner concedes, however, the "CTPG facially applies only to parallel IPR and PGR petitions." *Id.* at 11. Thus, we agree with Petitioner that "the CTPG guidance on multiple petitions does not apply here," and we decline to extend that guidance to these circumstances. Prelim. Reply 3.

Patent Owner also argues that because the reexamination involves all claims of the '680 patent and three of the four references raised in this Petition (Toge, Kisner, and Kumar), instituting this IPR is "inefficient" and "heighten[s] the risk of inconsistent decisions." Prelim. Resp. 11–12. This is not persuasive. Although Toge, Kisner, and Kumar are cited in the reexamination request (*see, e.g.*, Ex. 1053, 4), as Petitioner correctly notes, "the instant Petition does not rely on any of the same combinations as the pending EPR [ex parte reexamination]." Prelim. Reply 1–2; *compare* Pet. 2 (Identification of the Challenges), *with* Ex. 1053, 7 (Proposed Grounds of

[6] *Available at https://www.uspto.gov/TrialPracticeGuideConsolidated.*

Rejection). That differences exist between the prior art and unpatentability arguments here and in the *ex parte* reexamination is underscored by the fact that Patent Owner "chose not to perform an *Advanced Bionics* analysis" in this proceeding. Prelim. Reply 1–2.

For the above reasons, we decline to exercise discretion to deny institution based on the pending *ex parte* reexamination.

B. Discretionary Denial Under Fintiv

The parties dispute whether the Board should exercise discretion to deny institution in view of the Ohio case, which is an action initiated by Petitioner seeking a declaratory judgment of non-infringement of the '680 patent (and at least one other patent).[7] Prelim. Resp. 12–13. In the Ohio case, Patent Owner asserted counterclaims of infringement of the '680 patent and additional patents. *Id.* at 13–14. Petitioner responded to Patent Owner's counterclaims by asserting invalidity of the '680 patent and the other asserted patents. *Id.*

When determining whether to exercise discretion to deny institution in view of a parallel litigation, we consider the six factors set forth in the Board's precedential *Fintiv* case. *See Fintiv*, Paper 11, 6. We address each factor in turn below.

1. *Whether the Court Granted a Stay or Evidence Exists that One May Be Granted if a Proceeding is Instituted*

There is no dispute that Petitioner sought and obtained a stay of the Ohio case pending completion of Office proceedings (various *inter partes* reviews and *ex parte* reexaminations) concerning the '680 patent and the other asserted patents. *See, e.g.*, Prelim. Resp. 7, 15; Prelim. Reply 4–5.

[7] Petitioner filed the initial complaint in a different court; the case was subsequently transferred to Ohio. *See* Prelim. Resp. 13.

Because "[a] district court stay of the litigation pending resolution of the PTAB trial allays concern about inefficiency and duplication of efforts" (*Fintiv*, Paper 11, 6), this factor weighs against exercising our discretion to deny institution.

2. *Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline for a Final Written Decision*

There is no dispute that no trial date has been set in the Ohio case, and the case is currently stayed. *See, e.g.*, Prelim. Resp. 7, 15; Prelim. Reply 5. Accordingly, this factor weighs against exercising discretion to deny institution.

3. *Investment in the Parallel Proceeding by the Court and the Parties*

Patent Owner asserts that before the Ohio case was stayed, the parties had served interrogatories and requests for production and exchanged some documents. Prelim. Resp. 21–22. The parties had also completed claim construction briefing and submitted a joint prehearing statement, although the case was stayed before the district court held a claim construction hearing. *Id.*; Prelim. Reply 5.

We find that although the parties engaged in some discovery and briefing in the Ohio case, the bulk of the work remains, including the completion of fact discovery, expert discovery, motion practice, trial preparation, and trial. Additionally, prior to the stay, the district court had not issued orders related to claim construction or the validity of the '680 patent. Accordingly, the relatively minimal investment in the Ohio case weighs against exercising discretion to deny institution. *Fintiv*, Paper 11, 10.

This *Fintiv* factor also looks at diligence of the petitioner in filing the petition. *See id.* at 11. Patent Owner argues that Petitioner knew of the prior art references cited in the Petition "for months or years, [but] Petitioner nonetheless delayed filing this Petition until December 6, 2024, the last business day of the period within which it could petition for IPR against the '680 Patent." Prelim. Resp. 17–18 (citing 35 U.S.C. § 315(b) (permitting IPR petitions only within 1 year of service of a complaint alleging infringement)).

Petitioner responds that it "waited until after participating in good faith in mediation [on October 21, 2024] to determine whether [Patent Owner] would drop its infringement claims, which reasonably conserved Board and party resources." Prelim. Reply 6. Petitioner states that "[a]fter meditation failed, Petitioner filed the instant Petition less than two months later on December 6, 2024." *Id.*

A petitioner's diligence in filing a petition is a concern because, "notwithstanding that a [challenger] has one year to file a petition, it may impose unfair costs to a patent owner if the petitioner, faced with the prospect of a looming trial date, waits until the district court trial has progressed significantly before filing a petition at the Office." *Fintiv*, Paper 11, 11 (footnote omitted).

Here, regardless of Petitioner's reasons for timing of Petition filing, "[i]n view of our finding that the [Ohio case] was in an early stage prior to the stay, the timing of the filing of the Petition does not weigh in favor of exercising discretion to deny institution." *Snap, Inc. v. SRK Tech. LLC*, IPR2020-00820, Paper 15, 12–13 (PTAB Oct. 21, 2020) (precedential as to Section II.A).

Patent Owner also argues that we should not limit our *Fintiv* analysis to the Ohio Case, but should instead more holistically consider other proceedings between the parties concerning related patents, including a stayed litigation in Delaware between Patent Owner and Petitioner's parent company on a related patent, and Petitioner's various IPRs on related patents. Prelim. Resp. 14, 16–17. The *Fintiv* analysis, however, is concerned with "parallel, co-pending proceeding[s]" on the same patent. *Fintiv*, Paper 11, 5 (title case removed). Patent Owner cites no authority that permits us to consider investments in other litigation between the parties involving patents other than the challenged patent. *See generally* Prelim. Resp. 16–17; *see also* Prelim. Reply 6.

After considering all of the above reasons together, we find that this factor weighs against exercising discretion to deny institution.

4. *Overlap Between Issues Raised in the Petition and in the Parallel Litigation*

Patent Owner asserts that the Petition and the Ohio case involve "overlapping arguments and art," and that Petitioner has conceded as much. Prelim. Resp. 23–24 (citing Ex. 2009, 9) (In arguing for a stay of the Ohio case, Petitioner asserted that its "validity challenges before the Patent Office and in [the Ohio case] 'involve overlapping . . . arguments' and 'overlapping art.'"); *see also* Ex. 2004, 12, 52 (Petitioner's invalidity contentions in the Ohio case cite references (Toge, Burton) which are also cited in the Petition.). Patent Owner further argues that "Petitioner has made no case-narrowing stipulations (*e.g.*, a *Sotera*-type stipulation)," such that "when the Ohio Case resumes there will still be a risk of duplicative efforts and conflicting results." Prelim. Resp. 24–25.

We are not persuaded that there is substantial overlap between the art and arguments in the Ohio case and here. First, the current record shows that only two of the four references used in the Petition are at issue in the Ohio case. *See* Ex. 2004, 51–52 (Petitioner's invalidity contentions in the Ohio case citing Toge and Burton, but not Kumar or Kisner). As to Toge and Burton, the excerpt of the invalidity contentions provided in the record lists these references but does not indicate how Petitioner uses it. *See* Ex. 2004, 51–52. Accordingly, on this record, we are not persuaded that there is substantial overlap between the art and arguments in the Ohio case and here.

In any event, we agree with Petitioner that because the Ohio case is stayed, "there is no danger of overlap," and "if any challenged claims were to survive, Petitioner would be estopped under 35 U.S.C. § 315 from bringing any invalidity challenge that was raised or reasonably could have been raised during the IPR." Prelim. Reply 7.

Patent Owner argues that "the [Ohio] Court very well may lift its stay in other circumstances, including if the Board denies institution in this case or for any other related patents that Petitioner has challenged." Prelim. Sur-reply 6–7. This argument is not persuasive because it "amounts to unfounded speculation as to how the court might proceed." *Snap*, Paper 15, 9 (internal quotation marks omitted).

In view of the above, we find that this factor weighs against exercising discretion to deny institution.

5. *Whether the Petitioner and the Defendant in the Parallel Litigation are the Same Party*

The parties are the same in this IPR and the Ohio case. Thus, this factor supports denying institution. *See Sotera Wireless, Inc. v. Masimo*

Corp., IPR2020-01019, Paper 12, 19 (PTAB Dec. 1, 2020) (precedential as to Section II.A).

Patent Owner argues that "[t]he Board should accord extra weight to this factor because Petitioner is not only the same party in the litigation; rather, Petitioner is the plaintiff that ***initiated*** the litigation with a declaratory judgment action of non-infringement against the '284 Patent." Prelim. Resp. 25. Patent Owner, however, cites no authority that permits us to "accord extra weight to this factor because Petitioner . . . ***initiated*** the litigation." *Id.*

6. *Other Circumstances that Impact the Board's Exercise of Discretion, Including the Merits*

The parties dispute whether the merits favor institution or discretionary denial. Prelim. Resp. 26; Prelim. Reply 8. "[I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution." *Fintiv*, Paper 11, 14–15. "By contrast, if the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present." *Id.*

As discussed below, we determine that Petitioner has shown a reasonable likelihood of demonstrating unpatentability of the challenged claims. And as discussed above, none of the other *Fintiv* factors favors discretionary denial. Thus, we find that the merits weigh neutrally in our analysis.

Patent Owner further argues that "equitable considerations" favor denying institution. Prelim. Resp. 26. In particular, Patent Owner argues that "Petitioner derailed litigation with its motion to stay the Ohio case because of its IPR challenges and *ex parte* reexamination requests, which

should be rejected as harassing and a misuse of the patent system." Prelim. Sur-reply 7. Patent Owner further alleges that "the stay was gained via gamesmanship." *Id.* at 8.

The Ohio court granted the stay, and the record here nowhere reflects that the judge identified any gamesmanship concerns in deciding to stay the Ohio case. Additionally, like our colleagues in *Dolby Labs., Inc. v. Intertrust Techs. Corp.*, we are not persuaded by Patent Owner's suggestion that "the equities weigh against permitting a petitioner who filed a declaratory judgment action of non-infringement [and who obtained an available stay] to also file a petition challenging the patentability of the claims." IPR2020-00662, Paper 13, 16 (PTAB Oct. 15, 2020) (declining to exercise our discretion under § 314(a) to deny institution of *inter partes* review).

For the above reasons, we find that this factor is neutral.

7. *Conclusion*

As discussed above, we find that *Fintiv* factors 1–4 weigh against exercising our discretion to deny institution, while factor 5 supports denying institution, and factor 6 is neutral. In view of these factors and taking "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review" (*Fintiv*, Paper 11, 6), we are not persuaded that the interests of efficiency and integrity of the system would be best served by invoking 35 U.S.C. § 314(a) to deny institution of a potentially meritorious Petition. Based on the record before us, we determine the facts of this case do not warrant discretionary denial.

III. UNPATENTABILITY ARGUMENTS

A. Principles of Law

"In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")). This burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Moreover, a petitioner should not "place the burden on [the Board] to sift through information presented by the Petitioners, determine where each element [of the challenged claims] is found in [the cited references], and identify any differences between the claimed subject matter and the teachings of [the cited references.]" *Google Inc. v. EveryMD.com LLC*, IPR2014-00347, Paper 9 at 25 (PTAB May 22, 2014).

A patent claim is unpatentable for obviousness 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). In *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness that requires consideration of four factors: (1) the "level of ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the claims at issue," and (4) "secondary considerations" of nonobviousness such as "commercial success, long felt but unsolved needs,

failure of others, etc." *Id.* at 17–18; *KSR*, 550 U.S. at 407. An obviousness determination requires finding a reason to combine accompanied by a reasonable expectation of achieving what is claimed in the challenged patent. *See Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016). "[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *KSR*, 550 U.S. at 419–20.

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish a reasonable likelihood of success at trial.

B. Claim Construction

The challenged claims should be read in light of the Specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) ("The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question." (internal quotation marks omitted)); *see also* 37 C.F.R. § 42.100(b) (stating that claims are construed in IPRs according to the same standard as used in federal court).

Petitioner does not propose construction of any terms. Petitioner states that the Board need not construe any terms, and that the "Petition establishes the prior art meets each of the claim limitation[s] under any reasonable construction." Pet. 18.

Patent Owner contends that "no express construction is necessary for the Board to resolve the instant dispute and affirm patentability." Prelim. Resp. 28.

We determine that no express construction of any claim term is necessary to determine whether to institute *inter partes* review. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe 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))). To the extent further discussion of the meaning of any claim term is necessary to our decision, we provide that discussion below in our analysis of the asserted grounds of unpatentability.

C. Level of Ordinary Skill in the Art

Petitioner proposes that a person of ordinary skill in the art ("POSITA") at the time of the invention

> would have had at least a bachelor's degree in mechanical engineering, electrical engineering, computer science, biomedical engineering, or a similar technical field, with at least two years of relevant product design experience working with diagnostic sensor systems and network data systems, such as networked PAP machines. Additional experience could substitute for less education, and additional education could likewise substitute for less experience.

Pet. 17. Patent Owner "applies Petitioner's proposed definition of POSITA in 2005." Prelim. Resp. 27.

Because the proposed level of ordinary skill in the art appears to be consistent with the cited prior art and is undisputed on this record, we adopt it for purposes of this Decision. *See Okajima v. Bourdeau*, 261 F.3d 1350,

1355 (Fed. Cir. 2001) (indicating that the prior art itself may reflect an appropriate skill level).

D. Summary of the Asserted Prior Art

1. *Toge (Ex. 1044)*

Toge, titled "Remote monitoring method for a medical device," is the October 8, 2002 publication of Japanese application P2001-96730.[8] Ex. 1044, codes (21), (43), (54).

Toge "pertains to a remote monitoring method for monitoring the condition of a patient using a positive pressure artificial respiration assisting device remotely." *Id.* ¶ 1. Toge aims to "[e]nabl[e] remote monitoring of the patient's condition during the use of a positive pressure artificial respiration assisting device, or the condition of the positive pressure artificial respiration assisting device." *Id.* at code (57); *see also id.* ¶ 5. According to Toge, its invention accomplishes this because it includes

> a positive pressure artificial respiration assisting device . . . connected to a relay device and a physician-side terminal device via a wireless or wired communication network to conduct remote monitoring of the positive pressure artificial respiration assisting device via the communication network, wherein the positive pressure artificial respiration assisting device requests treatment data from a patient using the device, it transmits the requested treatment data to the relay device via the communication network, the relay device receives treatment data transmitted from the positive pressure artificial respiration assisting device, it transmits all or part of the received treatment data to the physician-side terminal device via the communication network, and the physician-side terminal device is configured to receive all or part of the treatment data transmitted from the relay device.

[8] As noted above (*see supra* n.3), Toge appears to be a translation of a Japanese-language document that does not appear to be of record.

Id. ¶ 6. Toge explains further that the positive pressure artificial respiration assisting device it describes comprises

> a treatment data acquisition means for requesting treatment data on a patient using the device, a memory means for storing treatment data obtained by the treatment data acquisition means, and a transmitting means connected to a wireless or wired communication network for transmitting treatment data stored in the memory means via the communication network.

Id. ¶ 7.

Toge's Figure 1 is reproduced below.

[Figure 1]

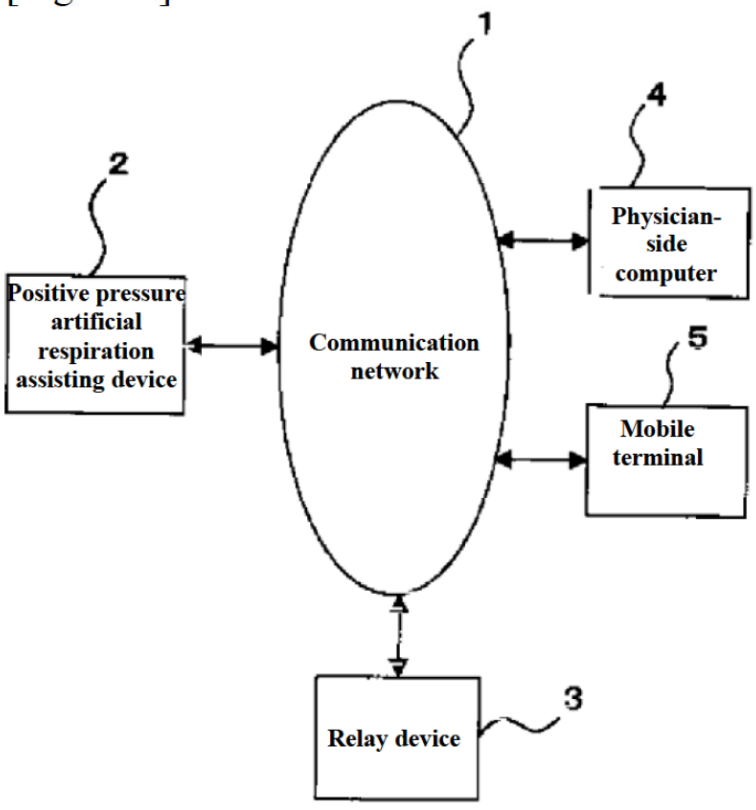

Figure 1 depicts "a block diagram illustrating the overall configuration of a remote medical (telemedicine) system" according to Toge's invention. Ex. 1044 ¶ 8. The "telemedicine system comprises a positive pressure artificial respiration assisting device 2, a relay device 3, and physician-side terminal devices, namely a physician-side computer 4 and a mobile terminal

5, all connected to communication network 1." *Id.* Positive pressure artificial respiration assisting device 2 is a home medical device "designed to deliver positive pressure air to the nasal mask of a patient receiving home medical care (hereinafter referred to simply as 'the patient') to assist the patient's breathing." *Id.* ¶ 10.

Figure 1's "relay device 3 is installed within the company providing the positive pressure artificial respiration assisting device or in a visiting nursing station" and "receives data . . . transmitted from the positive pressure artificial respiration assisting device 2, transmitting all or part of said data to the physician-side computer 4." Ex. 1044 ¶ 16. In some embodiments, the functionality of "relay device 3 can be incorporated into the positive pressure artificial respiration assisting device 2 (the control unit [] of the control device 25), allowing it to be configured as an integrated unit with the positive pressure artificial respiration assisting device 2", which "directly transmits all or part of the treatment data to the physician-side computer 4 or mobile terminal 5 via the communication network 1." *Id.* ¶¶ 60–61.

Figure 1's "physician-side computer 4 is a computer installed at a medical institution (hospital, clinic, medical office, etc.) that receives data from a relay device 3 (namely, all or part of the data transmitted from the positive pressure artificial respiration assisting device 2 to the relay device 3)" and allows medical institution personnel to download and access the transmitted data and to "set the necessary data . . . for the positive pressure artificial respiration assisting device 2." Ex. 1044 ¶¶ 17–18. Mobile terminal 5 may be a mobile phone, PHS, PDA, PocketBell, etc. and "is capable of being mobilized in emergencies by the physician-side computer 4, relay device 3, or other mobile terminals possessed by hospital personnel"

in order "to set the necessary data . . . for the positive pressure artificial respiration assisting device 2." *Id.* ¶ 19.

2. *Kumar (Ex. 1008)*

Kumar, titled "System and Method for Real-Time Monitoring, Assessment, Analysis, Retrieval, and Storage of Physiological Data Over a Wide Area Network," is the December 26, 2002 publication of U.S. Application 10/109,958. Ex. 1008, codes (21), (43), (54).

Kumar "relates to remote monitoring of device over a wide area network," and "to network-based transmission of data from a physiological collecting device." *Id.* ¶ 2. We reproduce Kumar's Figure 1A below.

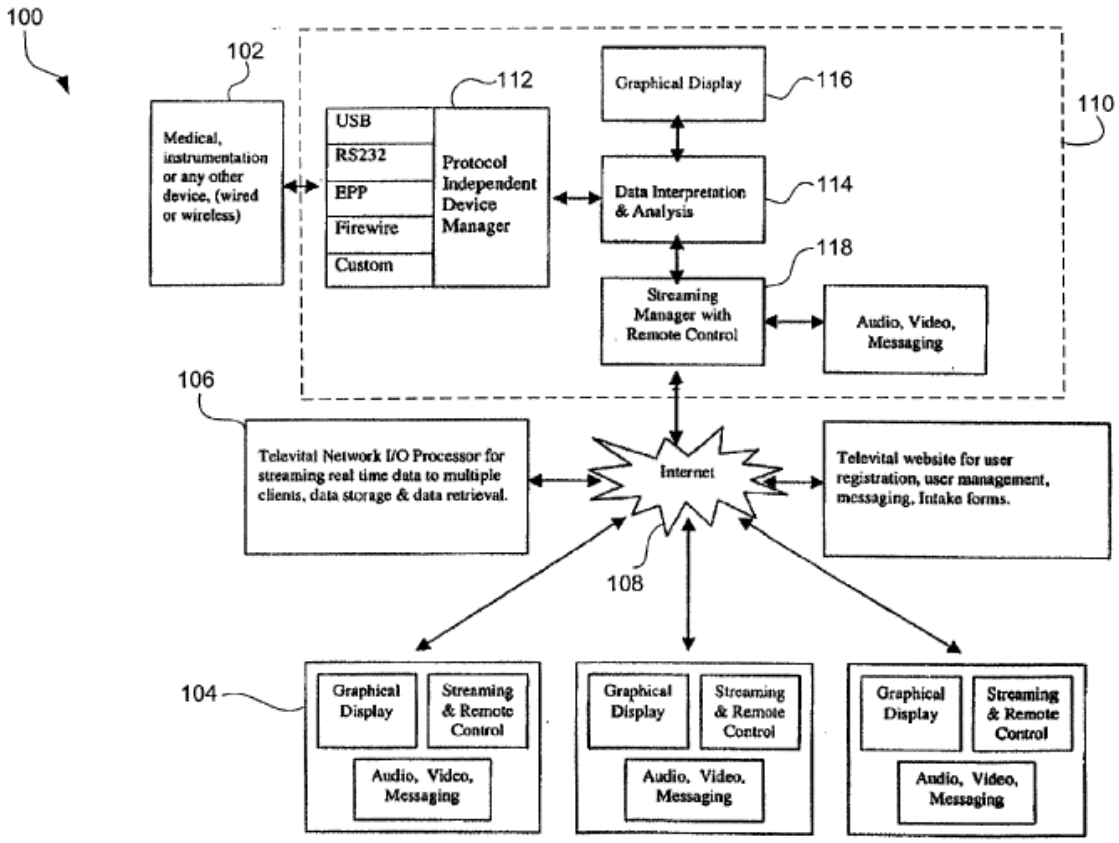

Fig. 1A

Figure 1A shows "a diagram of an exemplary system architecture for network-based monitoring of data from a patient-side physiological collecting device." *Id.* ¶ 22. Architecture 100 includes patient-side devices 102 for collecting data from a patient/client, provider-side devices 104, and central server 106 that implements an engine. *Id.* ¶ 67. "The devices and engine are connected to a wide area network (WAN) 108 such as the Internet, intranet, or extranet," and "[t]he system allows for the real-time Streaming of raw, interpreted, and/or processed physiological data as well as textual/audio/video data from a patient to a health care provider." *Id.*

Patient-side devices 102 may "be connected via a computing device 110, such as a computer, handheld devices such as personal digital assistants (PDAs) and pocket PCs such as IPAQ with Windows CE operating System and Palm devices based on Palm OS[], wireless telephone, or any other computing device, to the WAN." *Id.* ¶ 72. "A protocol independent device manager 112 running on the computing device establishes a two-way communication with a vast array of client-side devices." *Id.*

Kumar teaches "a modular architecture in which the patient-side device and/or the computing device coupled to the patient-side device can send a request to the engine with an identifier of the patient-side device, and the engine will send the appropriate plug-in which allows the computing device to communicate with the patient-side device." *Id.* ¶ 74. Therefore, Kumar's system "may support both plug-and-play web device drivers and customized graphical user interfaces (GUIs) for the various devices." *Id.*

"The system may be implemented using Apache [W]eb Server, MySql on Linux, Oracle on Linux, Java servlets, Applets, HTML, JavaScript, Java,

C#, Microsoft's .NET etc." and "the server may be implemented on the Internet, intranet, or an extranet." *Id.* ¶ 87.

3. *Burton (Ex. 1050)*

Burton, titled "Method and Apparatus for Maintaining and Monitoring Sleep Quality During Therapeutic Treatments," published on April 22, 2004, from PCT Application PCT/US2003/032170. Ex. 1050, codes (21), (43), (54).

Burton relates to "a method and apparatus for delivering therapeutic treatments to patients without adversely affecting their sleep." *Id.* at 1:4–6. We reproduce Burton's Figure 1 below.

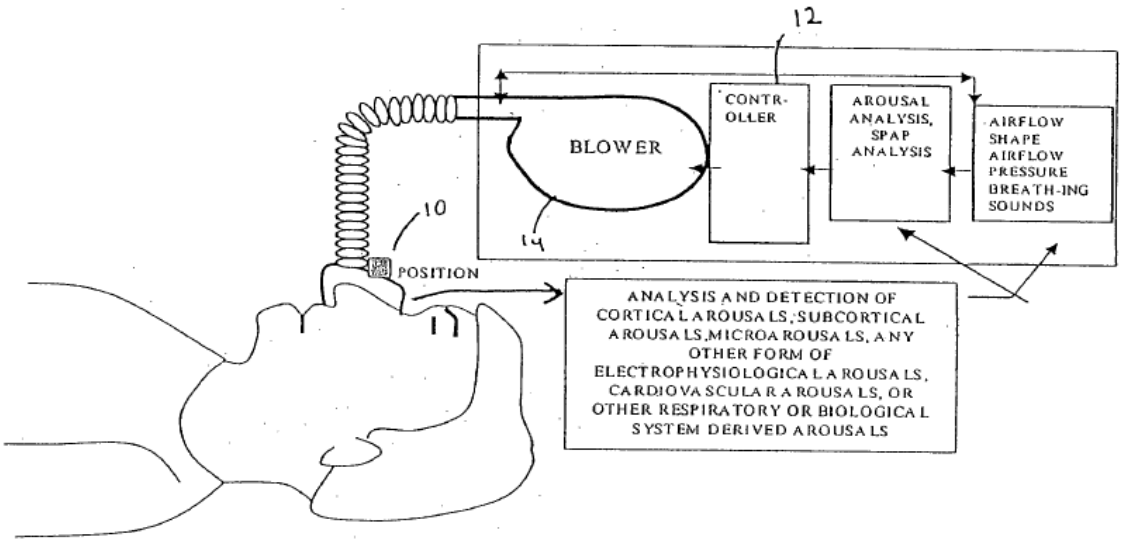

FIG. 1

Figure 1 shows Burton's system, which "includes one or more sensors 10 which detect a patient's physiological parameters, a controller 12 which monitors and determines arousal based on the physiological variables received from the sensor, and a gas delivery apparatus 14 which is controlled by the controller 12." *Id.* at 6:12–15. Burton states that the system "is

capable of maintaining the sleep quality of a patient undergoing a therapeutic treatment by sensitizing the therapeutic device to various physiological indicators which predict the onset of arousal and using an adaptive algorithm to modify a patient's therapeutic treatment." *Id.* at 3:21–24. The algorithm "has the capability to be adapted during real-time operation based on any combination of a) empirical clinical data, b) individual patient collected or alternative (to laboratory) collected data (from diagnostic study within sleep laboratory or other alternative site) or c) real-time monitored and analyzed data." *Id.* at 3:25–28.

Burton describes "an algorithm for detecting variation in airflow shape that could be indicative of the incidence or probable onset of upper airway resistance (UAR) or variations of UAR, respiratory event related arousals (RERA) or treatment event related arousals (TERA)." *Id.* at 4:24–27. For instance, Burton explains that the system "would record and note the likelihood of arousal or upper airway flow limitation by way of the shape characteristics of the airflow signal (as derived from a breathing mask circuit)." *Id.* at 4:18–20. According to Burton, "[t]his detection of waveshape characteristics could be achieved by detecting changes in the sequence (1 or more) breathing waveform shapes and then associating these changes with the onset probability or actual incidence of hypopnea, shallow breathing or UAR." *Id.* at 4:20–23.

Burton teaches that a system using the techniques it describes "can predict the UAR, RERA and TERA events or the onset of such events and adjust the treatment to avoid such events." *Id.* at 5:10–12. Burton further teaches that "[a]pnea events, shallow breathing, upper airway resistance and hypopnea events can also be detected and pre-empted by analysis of the

change in shape of the high bandwidth monitoring of the airflow waveforms and pressure waveforms." *Id.* at 13:23–26.

4. *Kisner (Ex. 1051)*

Kisner, titled "Apparatus and Method for Respiratory Monitoring," issued on May 10, 1994, and is directed to "[a] passive, non-invasive, non-contacting apparatus and method for monitoring the respiration of a subject within a monitored environment." Ex. 1051, codes (45), (54), (57).

We reproduce Kisner's Figure 11 below.

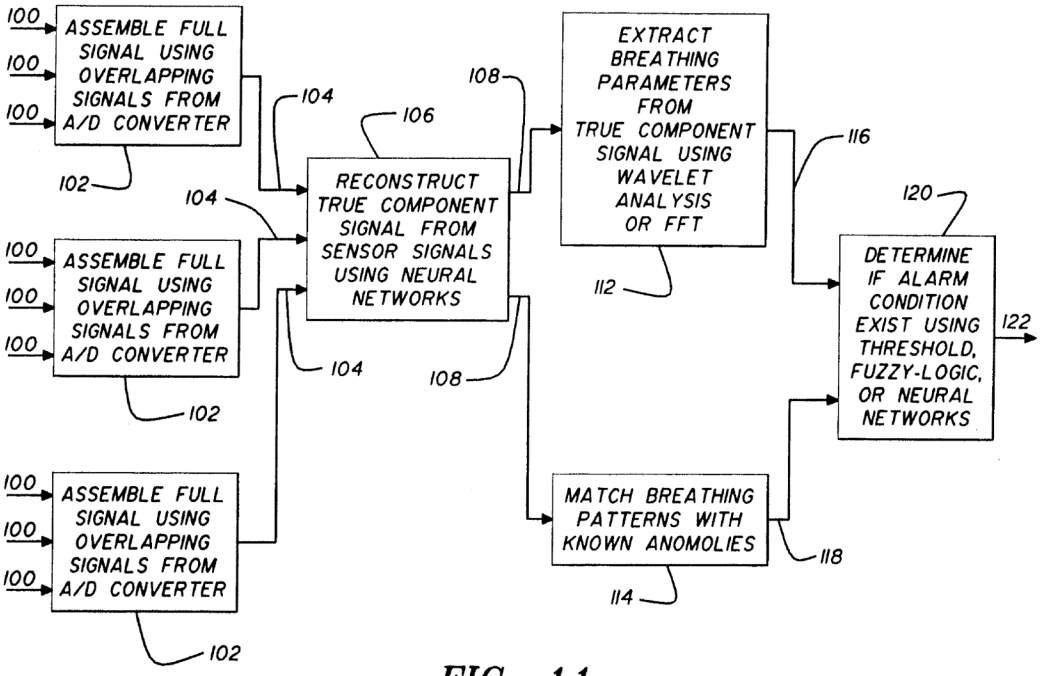

FIG. 11

Figure 11 depicts steps for signal processing conducted within Kisner's microprocessor system. *Id.* at 7:67–8:2. Kisner explains that overlapping signals 100 "are assembled into a full signal at 102, generating sensor signal 104." *Id.* at 13:40–45. "Sensor signals 104 are reconstructed using neural networks or other processing algorithms to form true component signals 108 at 106." *Id.* Kisner further explains:

> Breathing parameters are extracted from true component signals 108 using wavelet analysis or similar means at 112 to generate signal 116. Breathing patterns from signal 108 are matched with known anomalies at 114 to generate signals 118. Signals 116 and 118 are processed using threshold, fuzz-logic, neural networks or similar processing technique at 120 to determine if an alarm or other desired output condition exists which is expressed and communicated by signal 122.

Id. at 13:45–53.

E. Ground 1: Obviousness over Toge, Kumar, and Burton

Petitioner contends that claims 1–5, 7, 8, 10–13, 15–18, and 20–31 are unpatentable as obvious over Toge, Kumar, and Burton. Pet. 18–68. In support of its assertion, Petitioner provides a detailed discussion explaining how each claim limitation of claims 1–5, 7, 8, 10–13, 15–18, and 20–31 is disclosed by Toge, Kumar, and Burton. *Id.* Petitioner supports its contentions with the declarations of Dr. Kirkness (Ex. 1003 ¶¶ 137–290 and Dr. Chatterjee (Ex. 1005 ¶¶ 70–205).

Petitioner contends that a person of ordinary skill in the art would have been motivated to "improve[] the physician-side computer of Toge by implementing it with the browser-based engine accessible through web pages as taught by Kumar." Pet. 18. Petitioner further contends that a person of ordinary skill in the art would have "a reasonable expectation of success in implementing the Toge PAP device as a networked system as taught by Kumar and then incorporating Burton's algorithm." *Id.* at 21.

At this stage of the proceeding, Patent Owner disputes whether Petitioner sufficiently demonstrates that the proposed combination teaches or suggests claim limitations [1.c], [1.c.i], and [1.d.iv], and sufficiently demonstrates a motivation to combine to reach claim limitations [1.c], [1.c.i], and [1.d.iv]. *See, e.g.*, Prelim. Resp. 28, 37.

After considering all of the arguments and cited evidence of record, we determine that, for purposes of institution, Petitioner sufficiently shows that the combination of Toge, Burton, and Kumar teaches or suggests each limitation of the challenged claims, and that a person of ordinary skill in the art would have had a reason to combine the teachings of the cited references with a reasonable expectation of success, for the reasons asserted in the Petition. *See, e.g.*, Pet. 15–66. Accordingly, on this record, Petitioner shows a reasonable likelihood of prevailing on Ground 1. At this early stage, we offer the following observations on Patent Owner's arguments.

1. *Claim Limitations [1.c] and [1.c.1]*

Claim limitation [1.c] recites "a second non-transitory computer readable medium comprising at least one second software for ***a remote internet site and a database***" stored on a non-transitory computer readable medium. Ex. 1001, 63:12–16. Claim limitation [1.c.1] requires the remote internet site and the database to be adapted to "[b]e hosted on at least one server." *Id.* at 63:17.

In arguing limitation [1.c], Petitioner cites Kumar's disclosure of a system architecture for network-based monitoring of medical data using a browser-based engine ("remote internet site") that supports real-time streaming of information over a wide area network, where the data is stored in a secured storage device at a central server ("database"). Pet. 45–46 (citing Ex. 1008 ¶¶ 10, 18, 20, 67, 72, 83, 87). For limitation [1.c.1], Petitioner cites Kumar's disclosure that the browser-based engine is "implemented on a central server 106" (Ex. 1008 ¶ 67) and that the "secured storage device [is] at the central server" (*id.* ¶ 83). Pet. 46 (citing Ex 1003 ¶ 216; Ex. 1005 ¶ 133).

Petitioner argues that in light of those disclosures, it would have been obvious to a person of ordinary skill in the art "to combine the teachings of Toge and Kumar to implement a networked PAP treatment system." *Id.* at 18 (citing Ex. 1003 ¶ 137; Ex. 1005 ¶ 70–81). Petitioner asserts that a person of ordinary skill in the art "would have improved the physician-side computer of Toge by implementing it with the browser-based engine accessible through web pages as taught by Kumar" for various reasons, including convenience and efficacy, to provide health access for more people, to leverage advances in mobile computing and wireless communications, and in view of the general market trend to implement consumer devices into intelligent systems. *Id.* at 18–19 (citing Ex. 1003 ¶¶ 137–41; Ex. 1005 ¶¶ 70–81). Petitioner also asserts that a person of ordinary skill in the art would have been motivated to use Kumar's browser-based engine with Toge's PAP device because it would enable data storage in a secure device at a central server for later access and/or analysis. *Id.* at 29 (citing Ex. 1008 ¶¶ 83–84; Ex. 1003 ¶ 165).

According to Dr. Kirkness, a person of ordinary skill in the art "looking to improve the physician-side computer of Toge would have looked at known ways to improve a telemedicine system by providing better data access by implementing browser-based engine accessible through web pages as taught by Kumar." Ex. 1003 ¶ 137. Here, a person of ordinary skill in the art "would have understood that the sensors of Toge would have been ideal to combine with the advances [in telemedicine systems disclosed by Kumar] in order to improve a patient's treatment." Ex. 1003 ¶ 141.

On this record, and after consideration of Patent Owner's arguments (discussed below), we find that Petitioner has demonstrated a reasonable likelihood that Toge in view of Kumar, discloses limitations [1.c] and [1.c.1]

for the reasons in the Petition. Pet. 18–30, 45–46. We now turn to addressing Patent Owner's two arguments regarding claim limitations [1.c] and [1.c.1].

a) Whether Toge Discloses a Remote Internet Site and Database That is Hosted on a Server

Patent Owner disputes whether Toge discloses a remote internet site and database that is hosted on a server and receives treatment data. Prelim. Resp. 29–31. According to Patent Owner, the mere fact that Toge's system employs the internet does not mean that Toge suggests sending data to a remote internet site. *Id.* Instead, "Toge's system directly transmits treatment data from the PAP device to the physician-side client devices," not to a remote internet site. *Id.* at 29–30 (citing, e.g., Ex. 1044 (Toge) ¶¶ 79–82). Patent Owner argues that because "Toge's PAP device 'already' includes functionality that stores and transmits data, a [person of ordinary skill in the art] would have found it 'unnecessary' to utilize a browser-based engine/web server that 'would do little more than add' unwanted complexity to how data is transferred in Toge's system." *Id.* at 31 (quoting *In re Schweickert*, 676 F. App'x 988, 996 (Fed. Cir. 2017)).

On this record, Patent Owner's argument is unavailing. Toge is not limited to systems wherein the PAP transmits treatment data directly to the physician-side client devices. Instead, Toge also teaches embodiments wherein the PAP transmits treatment data to the physician-side client devices via a "relay device." *See, e.g.*, Ex. 1044 ¶ 80; Pet. 9, 22–25, 49. The PAP, relay device, and physician-side client devices can be connected via the internet. *See, e.g.*, Ex. 1044 ¶ 9; Pet. 49–50; Ex. 1003 ¶ 108. Furthermore, Petitioner relies on the combination of Toge and Kumar to meet these claim limitations. Here, Dr. Kirkness testifies that, while "Toge

does not expressly disclose [its] system is 'remote internet server-based,'" a person of ordinary skill in the art would have found it obvious to implement a "remote internet server-based" system in view of Kumar. Ex. 1003 ¶ 157. Dr. Kirkness demonstrates that adding Kumar's "remote internet server-based" features, including a browser-based engine implemented on an Internet web server, would enable Toge's "PAP device to wirelessly transmit to the remote engine, e.g., data associated [with] the patient's treatment." *Id.* ¶ 164. Dr. Kirkness further demonstrates that, "[s]uch a feature would have been beneficial as ***Kumar explains that 'the data may be stored in a secured storage device at the central server for later access, replay, and/or analysis***.'" *Id.* ¶ 165 (quoting Ex. 1008 ¶ 83).

In view of the above, Petitioner adequately demonstrates for purposes of institution that the combination of Toge and Kumar discloses claim limitations [1.c] and [1.c.1].

b) Whether Petitioner Demonstrates a Motivation to Combine Toge With Kumar to Reach Claim Limitations [1.c] and [1.c.1]

Patent Owner disputes Petitioner's argument (*see* Pet. 18) that a person of ordinary skill in the art would have been motivated to improve the physician-side computer of Toge by implementing it with the browser-based engine accessible through web pages as taught by Kumar. Prelim. Resp. 31–37. Patent Owner argues that "Petitioner's proposed combination introduces unnecessary redundancy, complexity, and cost" (Prelim. Resp. 33) for two reasons: (1) Toge's PAP pushes data to the physician-side client devices, but in the Toge-Kumar system, those devices would now have to request data from a web server (*see id.* at 33–34); and (2) Toge's system "already

provides for storage and transmission of data," obviating the need for a web server that hosts a browser-based engine (*id.* at 35).

On this record, these arguments are unavailing. "[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate a motivation to combine." *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006). Thus, even if Patent Owner is correct that the proposed combination would no longer have the ability to push information directly to physician-side client devices, or would have duplicative storage, this does not necessarily obviate Petitioner's proffered motivations to combine, which we find sufficient for purposes of institution.

Patent Owner also asserts that Petitioner's proffered motivation of "[providing] health access to more people" (Pet. 19) is insufficient because Toge only allows medical professionals to access the treatment data. Prelim. Resp. 36–37 (citing Ex. 1044 ¶¶ 18, 61). This is unavailing on this record, because it ignores Petitioner's argument that adding Kumar's remote internet site to Toge's system "would allow anyone with an Internet browser to access the data," thereby permitting doctors to "provide assessment and treatment to remote areas" and permitting "any doctor to review data during any downtime in their schedule, and not just doctors with specific software to view the data." Pet. 19; Ex. 1003 ¶ 139; *see also* Ex. 1005 ¶ 72 ("Kumar provided a way for patients, physicians, and providers to access this data anywhere by providing a browser-based engine that allowed access to this data through webpages."); Ex. 1008 ¶ 78 (discussing ability to provide care even when patient or physician is not physically available or accessible).

Finally, Patent Owner argues that Petitioner's "argument predicated on the 'general market trend' (Pet. at 19) is 'generic and bears no relation to

any specific combination of the prior art.'" Prelim. Resp. 36–37 (quoting *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012)). While it is true that testimony that is "generic and bears no relation to any specific combination of prior art elements" is unavailing (*see ActiveVideo*, 694 F.3d at 1328), given the fact-intensive nature of the parties' arguments and the fact that Petitioner proffers multiple motivations to combine (i.e., not solely "arguments predicated on 'advances in mobile computing' and 'general market trend'"), we find that Patent Owner's argument does not undermine Petitioner's showing of a reasonable likelihood of prevailing on Ground 1.

2. *Whether the Combination of Toge, Burton, and Kumar Would Have Rendered Obvious Claim Limitation [1.d.iv]*

Patent Owner contends that Toge and Kumar would not have rendered obvious claim limitation [1.d.iv], which relates to software on the claimed cell phone (*see* [1.b]) and remote internet site (*see* [1.c]) that is adapted to retransmit or receive treatment and efficacy data generated by the PAP. Prelim. Resp. 37–47.

Patent Owner first argues that, "[b]ecause Toge in view of Kumar does not teach the 'remote internet site,' it also fails to teach the claimed invention's transmission of PAP efficacy data to the remote internet site." *Id.* at 37. On this record, we find this argument unavailing. As discussed in Section III.E.1.a above, we have already found that Petitioner has adequately demonstrated for purposes of institution that the combination of Toge and Kumar discloses the "remote internet site" recited in claim 1.

Patent Owner argues also that "Petitioner fails to explain why a [person of ordinary skill in the art] would have been motivated to modify Toge's system to have the PAP device transmit data to ***both*** a [patient's cell

phone and a remote internet site] instead of directly to Toge's physician-side devices." Prelim. Resp. 37. More specifically, Patent Owner contends that "[t]he fact [] that medical professionals can access data via their mobile phones does not explain why Toge's system would send the data to a patient's mobile phone, especially where access is meant only for medical professionals." *Id.* at 39–40.

On this record, we find this argument unavailing. At a minimum, Patent Owner overlooks Petitioner's argument that Kumar discloses software downloaded to patient-side devices ("cell phone") that allows the patient to access the patient's data (Pet. 30–33), which "would have been beneficial for the patient to review such information indicating how the patient responded to the treatment and encouraging the patient to comply with the prescribed treatment" (*id.* at 33). *See*, *e.g.*, *id.* at 30 ("Kumar discloses a system that includes a patient-side device 102 (like the Toge PAP device), computing device 110 ('cell phone'), and central server 106 hosting a browser-based engine that is accessed through web pages."); *Id.* at 32 ("A POSITA would have understood that the plug-in allows the patient to access the patient's data on the computing device and display that data on the display of the computing device."); *id.* at 33 ("The cell phone associated features would have allowed the patient to view the treatment data on the patient's personal cell phone and storing such information for later viewing even when away from the PAP device."); Ex. 1003 ¶ 181.

Patent Owner also overlooks Petitioner's argument that a person of ordinary skill in the art would have been motivated to implement in the Toge-Kumar combination the features of claim limitation [1.d.iv] in view of Burton. Pet. 35–45, 48; *see*, *e.g.*, *id.* at 43 ("[A] POSITA would have been motivated to implement [Burton's algorithm] in control unit 250 (e.g., as

disclosed in the Toge-Kumar combination) such that the modified control unit is configured to receive and analyze the sensor data (e.g., data provided by pressure gauge 23 and flow meter 24, either component or collectively being the claimed 'airflow sensor'), determine/calculate the airflow's shape characteristics, patterns indicative of sleep apnea symptoms, indices of a subject's symptoms measured during use of the PAP device, and data of usage of the PAP device, all of which are used to generate data for adjusting the PAP device operation and/or displayed to the user for additional analysis, for example.").

For purposes of institution, we find that Petitioner adequately demonstrates that Toge and Kumar or Toge, Kumar, and Burton teach or suggest this claim limitation. *See* Pet. Pet. 34–45, 48; Ex. 1003 ¶¶ 179, 184, 205; Ex. 1005 ¶¶ 104–12, 142–48. Toge teaches that mobile terminal 5, which is in the possession of a physician or nurse, can be mobilized by the physician-side computer 4 or relay device 3. Ex. 1044 ¶¶ 8–9, 30, 60–61; Ex. 1005 ¶ 144–45. Petitioner's declarant Dr. Chatterjee explains that "a person of ordinary skill in the art would understand a mobile communication network to be a wireless network that allows the devices to be 'mobile.'" Ex. 1005 ¶ 146. Dr. Chatterjee also explains that implementing a radio frequency wireless transceiver in the PAP device

> would have involved a combination of known technologies (known PAP device that monitors the usage and calculates data associated with sleep disorder treatment) according to known methods (known methods of transmitting data from patient-side device to computing device, such as a cell phone or PDA, by using a radio frequency wireless transceiver) to yield the predictable result of a PAP device including a radio frequency wireless transceiver to facilitate wireless communication with the cell phone.

Id. at 148.

Additionally, Kumar discloses a system that includes a patient-side device 102 (like the Toge PAP device), computing device 110 ("cell phone"), and central server 106 hosting a browser-based engine that is accessed through web pages. Ex. 1008 ¶¶ 18, 67, 72, 86–87. To communicate with the patient-side device and the central server, the computing device can download a plug-in ("first software") through wireless protocol. *Id.* at ¶¶ 18, 73–74. Here, Dr. Kirkness testifies that a person of ordinary skill in the art "would have understood that the plug-in allows the patient to access the patient's data on the computing device and display that data on the display of the computing device." Ex. 1003 ¶ 179. Thus, combining Toge's physician-side computer 4 and terminal 5 having software that allows communication and mutual exchange of data received from the PAP with the features of Kumar's telemedicine system "for network-based monitoring of physiological data" (Ex. 1008, Abstract) achieves the claimed requirement of "at least one second radio frequency wireless transceiver [of the PAP device]" that "transmit[s] the PAP therapy efficacy data" and is received by "the first software [of the subject's cell phone]" and "second software for the remote internet site." Ex. 1001, 62:62–65, 63:12–15, 63:35–36. Here, we further credit Dr. Kirkness' testimony discussing why "a [person of ordinary skill in the art] would have been motivated to **transmit 'the PAP therapy efficacy data'** from the PAP device to the patient's cell phone, e.g., to allow the patient to view the associated data" in view of Burton. Ex. 1003 ¶ 225 (citing *id.* at ¶¶ 184–211)

3. *Conclusion – Ground 1*

In sum, after considering the arguments and cited evidence of record, we find for purposes of institution that Petitioner shows a reasonable likelihood of prevailing on Ground 1.

F. Ground 2: Obviousness over Toge, Kumar, Burton, and Kisner

Petitioner asserts that claims 10, 15, and 20 are unpatentable because they are allegedly obvious over Kumar, Burton, and Kisner. Pet. 69–74. At this stage of the proceeding, Patent Owner does not offer any additional arguments for this ground beyond the arguments we already addressed above for Ground 1. *See* Prelim. Resp. 41.

In sum, after considering the arguments and cited evidence of record, we find for purposes of institution that Petitioner shows a reasonable likelihood of prevailing on Ground 2 for the reasons set forth in the Petition. *See* Pet. 69–74.

IV. CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one of the challenged claims of the '680 patent is unpatentable. We therefore institute trial on all challenged claims under the grounds raised in the Petition. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (indicating that a decision whether to institute an *inter partes* review "require[s] a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition"); 37 C.F.R. § 42.108(a).

We emphasize that, at this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims. *See TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1068

(Fed. Cir. 2016) (noting that "there is a significant difference between a petitioner's burden to establish a 'reasonable likelihood of success' at institution, and actually proving invalidity by a preponderance of the evidence at trial"). Any final decision in this proceeding will be based on the full trial record.

Any argument not raised in a timely Patent Owner Response to the Petition, or as permitted in another manner during trial, shall be deemed waived even if asserted in the Preliminary Response. *See In re NuVasive, Inc.*, 842 F.3d 1376, 1380–81 (Fed. Cir. 2016) (holding Patent Owner waived an argument addressed in the Preliminary Response by not raising the same argument in the Patent Owner Response). In addition, nothing in this Decision authorizes Petitioner to supplement information advanced in the Petition in a manner not permitted by the Board's Rules.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to claims 1–5, 7, 8, 10–13, 15–18, and 20–31 of the '680 patent based on the unpatentability challenges presented in the Petition;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this decision.

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