

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESMED CORP.,
Petitioner,

v.

CLEVELAND MEDICAL DEVICES, INC.,
Patent Owner.

IPR2025-00159
Patent 11,375,921 B1

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

HARDMAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner ResMed Corp. requests *inter partes* review of claims 1, 2, 4, 5, 7–9, 11–14, and 16 of U.S. Patent No. 11,375,921 B1 (“the ’921 patent,” Ex. 1001). Paper 1 (“Pet.”). Patent Owner Cleveland Medical Devices, Inc. filed a Preliminary Response. 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”).

We have authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the briefing and cited evidence of record, we institute an *inter partes* review.

The following preliminary findings of fact and conclusions of law are made solely for determining whether to institute review. Any final decision will be based on the full trial record.

A. Real Parties in Interest

Petitioner and Patent Owner each identify only themselves as the real party in interest. Pet. 74; Paper 5 (Patent Owner Mandatory Notices), 1.

B. Related Matters

The parties identify *ResMed Corp. v. Cleveland Medical Devices, Inc.*, 1:23-cv-02221-BMB (N.D. Ohio) (the “Ohio case”) as a related matter involving the ’921 patent. Pet. 75; Paper 3, 1.

Petitioner identifies *inter partes* reviews for U.S. Patent No. 11,602,284 (IPR2025-00157), U.S. Patent No. 11,690,512 (IPR2025-00158), U.S. Patent No. 11,786,680 (IPR2025-00160), U.S. Patent

No. 11,857,333 (IPR2025-00246), and U.S. Patent No. 11,872,029 (IPR2025-00247). Pet. 75.

The parties identify an *ex parte* reexamination of the '921 patent (90/019,700, filed by Petitioner), and Petitioner further states that it requested *ex parte* reexamination of U.S. Patent No. 11,786,680 (90/019,705). *Id.*; Paper 5, 1.

C. The '921 Patent (Ex. 1001)

The '921 patent, titled “Devices and Methods for Sleep Disorder Diagnosis and Treatment,” issued on July 5, 2022 from U.S. Application 16/057,963, filed on August 8, 2018, and claims priority as a continuation to several utility applications, the earliest of which was filed on November 4, 2005. Ex. 1001, codes (21), (22), (45), (54), (63).

The '921 patent “relates to an integrated sleep diagnosis and treatment device.” *Id.* at 1:14–18. One embodiment of such a device is depicted in Figure 1 of the '921 patent, reproduced below.

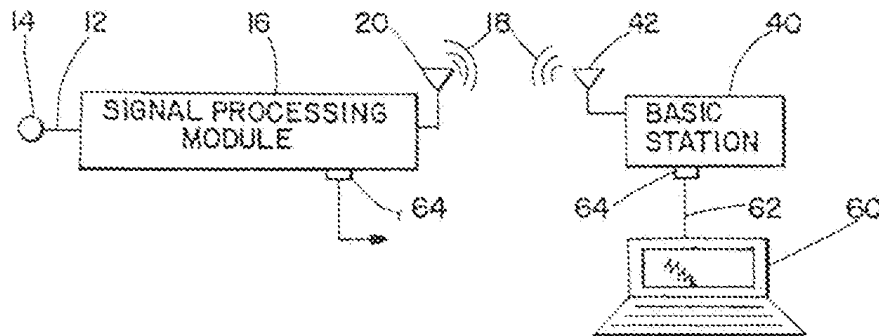


Fig. 1

Figure 1 of the '921 patent is a block diagram of part of a sleep diagnosis and treatment system, wherein external input 12 from sensor 14 is input to signal processing module 60. *Id.* at 8:57–60. Signal processing module 16

generates signal 18, which is “encoded with data corresponding to the external input 12” and transmitted “by wireless means to a base station 40.”

Id. at 8:63–66.

Figure 7 of the '921 patent is reproduced below.

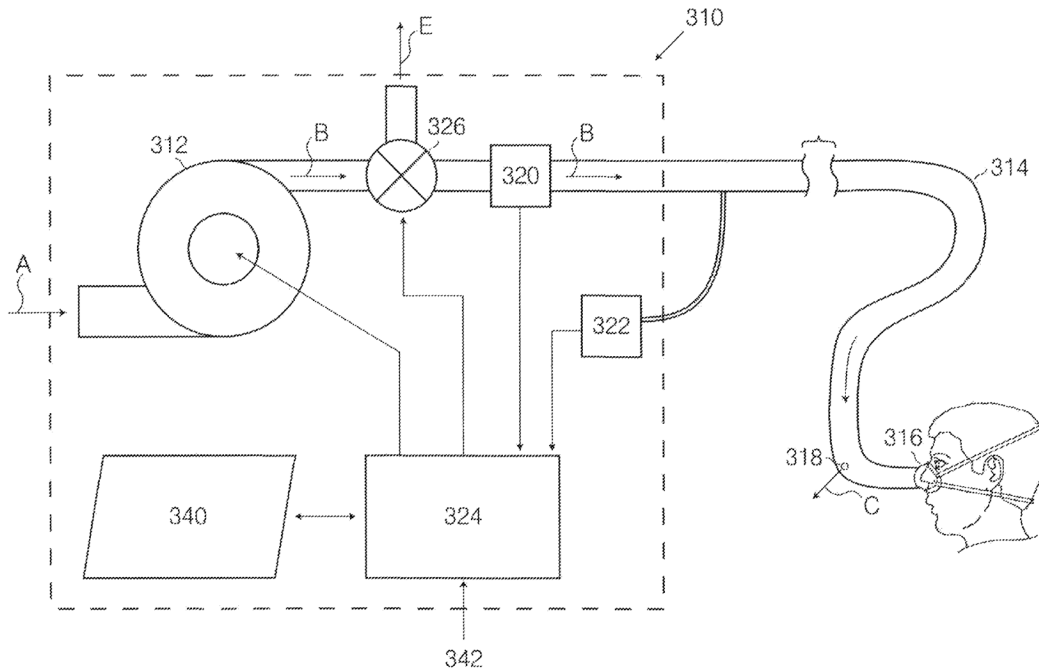


Fig. 7

Figure 7 depicts a continuous positive airway pressure (CPAP) device, which “can be used to physically treat a subject’s sleep disorder, [and] which can be further adjusted using the output of the level of severity of the subject’s sleeping disorder.” *Id.* at 22:41–47. The device includes:

pressure generator 312, a blower, piston or bellows, that receives a supply of gas from a gas source, such as ambient atmosphere, as indicated by arrow A, or pressurized gas tanks (not shown) and creates a flow of breathing gas, as indicated by arrows B, having a pressure greater than the ambient atmospheric pressure.

Id. at 22:48–54. Circuit 314 “delivers the elevated pressure breathing gas to the airway of the subject” such as via patient interface device 316. *Id.* at 22:54–59.

Device 310 may further include flow sensor 320, pressure sensor 322, or both to “monitor the flow and/or pressure of gas passing in the subject circuit 314.” *Id.* at 23:7–10. “The information from the flow sensor 320 and/or pressure sensor 322 is used, for example, to control the pressure or flow of gas provided to the subject, monitor the condition of the subject, monitor the usage of the pressure support device, any combination thereof, or the like.” *Id.* at 23:10–17.

The '921 patent states that “one or more sensors used in the system of the present invention can also be tethered to a computer, base station, cell phone, a PDA or some other form of processor or microprocessor.” *Id.* at 19:4–7. In addition, the '921 patent describes embodiments in which the “invention can be part of a remote communication station or base station.” *Id.* at 19:8–10. For instance, a remote communication system may be “a PDA, computer or cell phone, which receives the physiological data transmission, optionally re-processes the information, and re-transmits the information via cell towers, land phone lines, satellite, radio frequencies or cable to a remote site for analysis.” *Id.* at 19:35–41.

D. The Challenged Claims

Petitioner challenges claims 1, 2, 4, 5, 7–9, 11–14, and 16 of the '921 patent. Claim 1 is reproduced below with bracketed notations added:¹

1. A sleeping disorder treatment system comprising:
 - [a] a PAP device configured to be a single enclosure, the PAP device comprising:
 - [a.i] a blower having an air output;
 - [a.ii] an airflow sensor internal to the PAP device and adapted for measuring the respiratory airflow of a subject while using the PAP device;
 - [a.iii] a first processor adapted for generating and outputting the data related to the subject's treatment and the treatment's efficacy by receiving sensor data from the airflow sensor, and calculating both the quantified symptom data of the severity of the sleeping disorder symptoms and/or an index of a subject's symptoms measured during use of the PAP device, and data of usage of the PAP device;
 - [a.iv] a first radio frequency wireless transceiver;
 - [a.v] a mask or a nasal cannula;
 - [a.vi] wherein the airflow sensor and the first processor are adapted for measuring and calculating a data of a quantitative output of the severity of a subject's sleeping disorder symptoms during a treatment and further providing for a data related the subject's treatment and the treatment's efficacy;
 - [a.vii] wherein the blower, and the mask or the nasal cannula are adapted for physically or chemically treating a subject's sleeping disorder symptoms,

¹ For ease of reference, we use the same bracketed notations Petitioner uses in the Petition. *See, e.g.*, Pet. 78–79.

[a.viii] wherein the first processor is configured to adjust or re-adjust the blower using, in part, the data of the quantitative output of the level of severity of the subject's sleeping disorder symptoms during treatment;

[b] a software stored on a non-transitory computer readable medium and executable by a second processor, the software adapted to be used with and to display the data related to the subject's treatment and the treatment's efficacy to the subject or a care provider by using a base station, a cell phone or a PDA, each comprising a second radio frequency wireless transceiver, the second processor and a display; and

[c] a remote internet site, the remote internet site adapted to receive the data relate to the subject's treatment and the treatment's efficacy, in whole or part, generated by the PAP device and transmitted via the first radio frequency wireless transceiver,

[c.i] wherein the software is further adapted to retransmit a data related to the subject's treatment and the treatment's efficacy received by the software from the first radio frequency wireless transceiver of the PAP device, in whole or part, to the remote internet site, and

[c.ii] wherein the sensor data from the sensors is processed by the first processor using one or more of the signal processing techniques from the group consisting of a standard deviation technique, a recursively fit ARMAX system identification model, a short-time fourier transform technique, a time-frequency signal analysis with a variety of different kernals, and a wavelet analysis.

Ex. 1001, 23:51–24:43.

Independent claims 7 and 12 also recite sleeping disorder treatment systems. *Id.* at 24:64–54, 26:3–60. Challenged claims 2, 4, 5, 8, 9, 11, 13, 14, and 16 depend directly from independent claims 1, 7, or 12 and recite additional features of the sleeping disorder treatment systems. *Id.* at 24:44–48, 24:53–60, 25:55–61, 25:65–26:2, 26:61–27:2, 27:6–10.

E. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1, 2, 4, 5, 7–9, 11–14, and 16 are unpatentable on the following two grounds:

Ground	Claim(s) Challenged	35 U.S.C. § ²	Reference(s)/Basis
1	1, 2, 4, 5, 7–9, 11–14, 16	103(a)	Toge, ³ Burton, ⁴ Kumar ⁵
2	1, 2, 4, 5, 7–9, 11–14, 16	103(a)	Toge, Burton, Kumar, Kisner ⁶

Pet. 2. Petitioner supports its contentions with the Declarations of Jason Kirkness, Ph.D. (Ex. 1003) and Dr. Sandeep Chatterjee (Ex. 1005), among other evidence.

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

² 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.

³ Toge, JP 2002-291889 A, published October 8, 2002 (“Toge,” Ex. 1044). Exhibit 1044 includes a Japanese-language document and a translation of that document to English. *See* Ex. 1052 (translator declaration for Toge).

⁴ Burton et al., WO 2004/032719 A2, published April 22, 2004 (“Burton,” Ex. 1050).

⁵ Kumar et al., U.S. Patent App. Pub. 2002/0198473 A1, published December 26, 2002 (“Kumar,” Ex. 1008).

⁶ Kisner et al., U.S. Patent 5,309,921, issued May 10, 1994 (“Kisner,” Ex. 1051).

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 ’921 patent (90/019,700) (filed by Petitioner); or (2) under *Fintiv*⁷ 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 ’921 Patent at Petitioner’s request several weeks before Petitioner submitted this Petition.” Prelim. Resp. 6 (citing Ex. 1053 (Decision Ordering Reexamination, Control No. 90/019,700) (dated November 15, 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 Office cannot, without violating due process rights, require a party to

⁷ *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 11, 2020) (precedential).

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.” Prelim. Resp. 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.⁸ 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.*

⁸ 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.

Devices, Inc., No. 1:23-cv-02221-BMB, 2025 WL 744610, at *1, 4 (N.D. 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 ’921 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. 2019,⁹ 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 ’921 patent and three of the four references raised in this Petition (Toge, Kisner, and Burton), 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 Burton 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

⁹ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

pending EPR [ex parte reexamination].” Prelim. Reply 1–2; *compare* Pet. 2 (Identification of the Challenges), *with* Ex. 1053, 4 (Proposed Grounds of 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 ’921 patent (and at least one other patent).¹⁰ *See* Prelim. Resp. 12–13. In the Ohio case, Patent Owner asserted counterclaims of infringement of the ’921 patent and additional patents. *See id.* at 13–14; Ex. 1054 1 n.1 (listing patents-in-suit). Petitioner responded to Patent Owner’s counterclaims by asserting invalidity of the ’921 patent and the other asserted patents. Prelim. Resp. 13–14.

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.

¹⁰ Petitioner filed the initial complaint in a different court; the case was subsequently transferred to Ohio. *See* Prelim. Resp. 13.

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 '921 patent and the other asserted patents. *See, e.g.*, Prelim. Resp. 7, 15; Prelim. Reply 4–5.

Because “[a] district court stay of the litigation pending resolution of the PTAB trial allays concerns 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. *See* Prelim. Resp. 22–23. 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. *See 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 '921 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 '921 Patent.” *See* Prelim. Resp. 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 PO [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, 12, 52 (Petitioner’s invalidity contentions in the Ohio case citing Toge and Burton, but not Kumar or Kisner). As to Toge, the excerpt of the invalidity contentions provided in the record lists this reference but does not indicate how Petitioner uses it. *See* Ex. 2004, 12. As to Burton, the parties agree that Petitioner uses it in the Ohio case only against other patents, not the ’921 patent. *See* Prelim. Reply 7; Prelim. Resp. 13 (noting that Petitioner’s invalidity contents “cit[e] Burton against a related patent”); Ex. 2004, 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.*, 815 F.3d at 1363 (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”)). Petitioner ultimately bears the burden of persuasion to prove unpatentability of each challenged claim by a preponderance of the evidence. 35 U.S.C. § 316(e). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the briefing of record shows a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

Under pre-AIA 35 U.S.C. § 103(a), a claim is unpatentable as obvious 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. 35 U.S.C. § 103(a); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any objective indicia of nonobviousness.¹¹ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). 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.

B. Level of Ordinary Skill in the Art

We consider the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time the invention was made.¹² *See Graham*, 383 U.S. at 17–18. At this stage, the parties agree that a person of ordinary skill in the art would have had:

¹¹ At this stage, Patent Owner does not assert any objective indicia of nonobviousness. *See generally* Prelim. Resp.

¹² For purposes of this Decision, we apply a priority date of November 4, 2005. *See supra* n.2.

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. 12–13 (citing Ex. 1003 (Kirkness Decl.) ¶¶ 44–46); 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).

C. Claim Construction

In AIA proceedings we interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Petitioner states that it adopts Patent Owner's interpretation of various claim terms as described in Patent Owner's opening claim construction brief in the Ohio case.¹³ Pet. 13 (citing Ex. 1054, 12, 13). Patent Owner asserts that “[n]o express construction is necessary for the Board to resolve the instant dispute.” Prelim. Resp. 28.

¹³ The claim terms are recited in limitations 1[a.iii]/7[a.iii]/12[a.iii] and 1[a.vi]/7[a.vi]/12[a.vi]. *See* Pet. 13–14.

We find it unnecessary to construe any claim term to decide whether Petitioner satisfies the “reasonable likelihood” standard for instituting trial. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we 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))).

Any final written decision entered in this case may include express claim constructions, or may include discussion of claim scope that differs from that provided in our analysis below. Any final claim constructions will be based on the full trial record.

D. Overview of 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. 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. We reproduce Toge’s Figure 1 below.

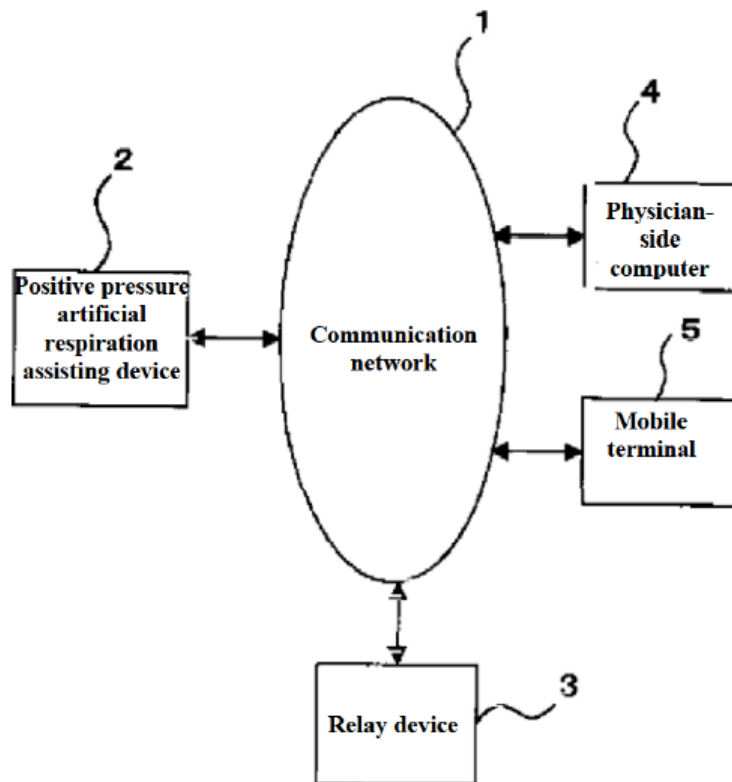


Figure 1 depicts a remote telemedicine system. *Id.* ¶ 8. The system includes positive pressure artificial respiration assisting device 2, relay device 3, and physician-side terminal devices, specifically physician-side computer 4 and mobile terminal 5, which are all connected to communication network 1. *Id.* ¶ 8. Communication network 1 may be “a public telephone network, the Internet, a mobile communication network, or a dedicated line network.” *Id.* ¶ 9.

Toge teaches that relay device 3 receives data transmitted from positive pressure artificial respiration assisting device 2 and transmits it to the physician-side computer 4. *Id.* ¶ 16. “[M]edical institution personnel . . . can operate the physician-side computer 4 to send a data download request to the relay device 3 and download the necessary data onto the physician-side computer 4” and can operate physician-side computer 4 to set

necessary data for positive pressure artificial respiration assisting device 2.
Id. ¶ 18.

According to Toge, “mobile terminal 5, in the possession of a physician or nurse, is capable of being mobilized in emergencies by the physician-side computer 4, relay device 3, or other mobile terminals possessed by hospital personnel,” and can be used to set data for positive pressure artificial respiration assisting device 2. *Id.* ¶ 19. “[M]obile terminal 5 includes mobile phones, PHS, PDAs and PocketBell (registered trademark), etc.” *Id.*

We reproduce Toge’s Figure 2 below.

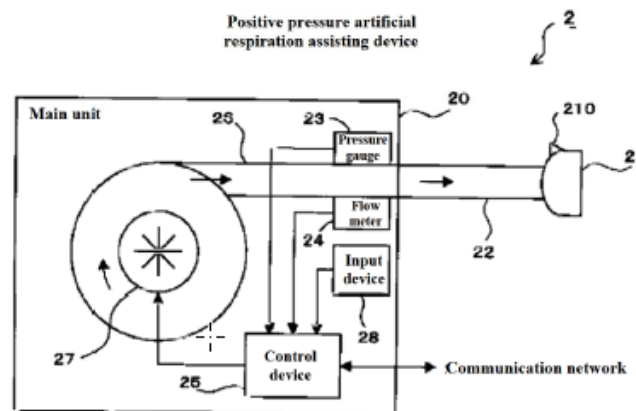


Figure 2 depicts details of positive pressure artificial respiration assisting device 2. *Id.* ¶ 20. Device 2 includes main unit 20 connected via air tube 22 to nasal mask 21. *Id.* ¶ 21. “[M]ain unit 20 is equipped with a pressure gauge 23, a flow meter 24, a control device 25, a flow path 26, a blower 27, and an input device 28.” *Id.* ¶ 23. “Positive pressure air is constantly delivered to the nasal mask 21 via the air tube 22 from the main unit 20” and “nasal mask 21 is equipped with an exhalation vent 210 to expel the patient’s exhaled breath to the exterior of the nasal mask 21.” *Id.* ¶ 22.

We reproduce Toge's Figure 3 below.

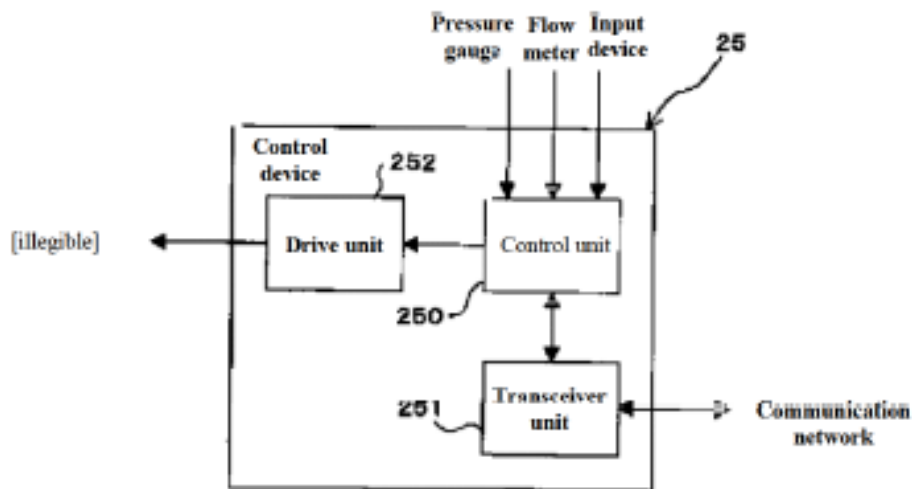


Figure 3 shows the detailed configuration of control device 25 of positive pressure artificial respiration assisting device 2. *Id.* ¶ 20. Control device 25 “comprises a control unit 250, a transceiver unit 251, and a drive unit 252.” *Id.* ¶ 23. Control unit 250 can determine operational time, which physicians can use to “determine whether the patient is using the positive pressure artificial respiration assisting device 2 and assess the treatment (patient) compliance.” *Id.* ¶ 42.

Toge teaches that the functionality of relay device 3 can be integrated into the positive pressure artificial respiration assisting device 2, such that device 2 can directly transmit treatment data to the physician-side computer 4 or mobile terminal 5 via the communication network 1. *Id.* ¶ 60. “[P]hysician-side computer 4 or mobile terminal 5 then directly sets the thresholds on the positive pressure artificial respiration assisting device 2 and sends download requests.” *Id.* ¶ 61.

2. 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.

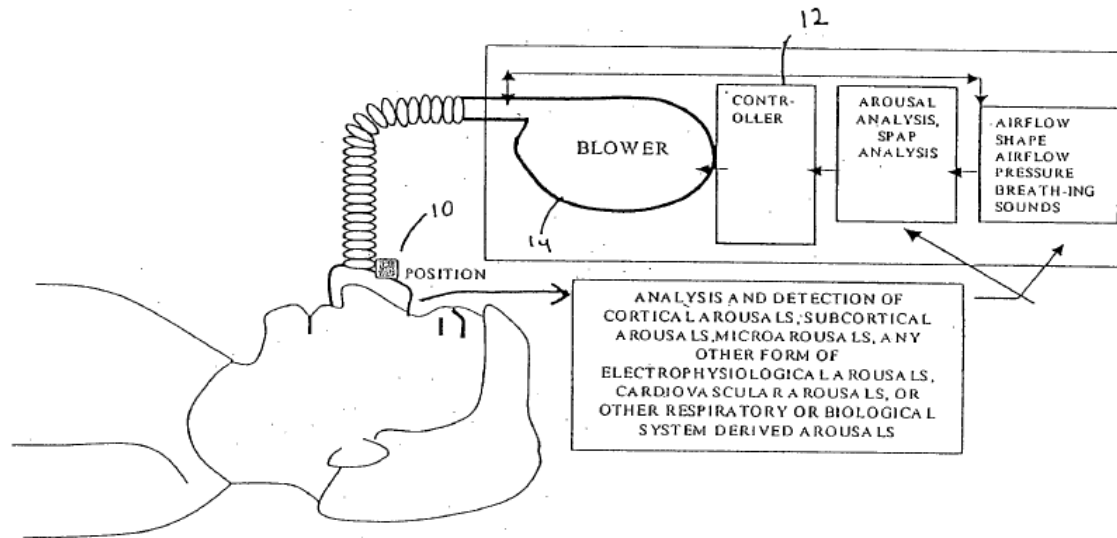


FIG. 1

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.

3. 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 devices 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.

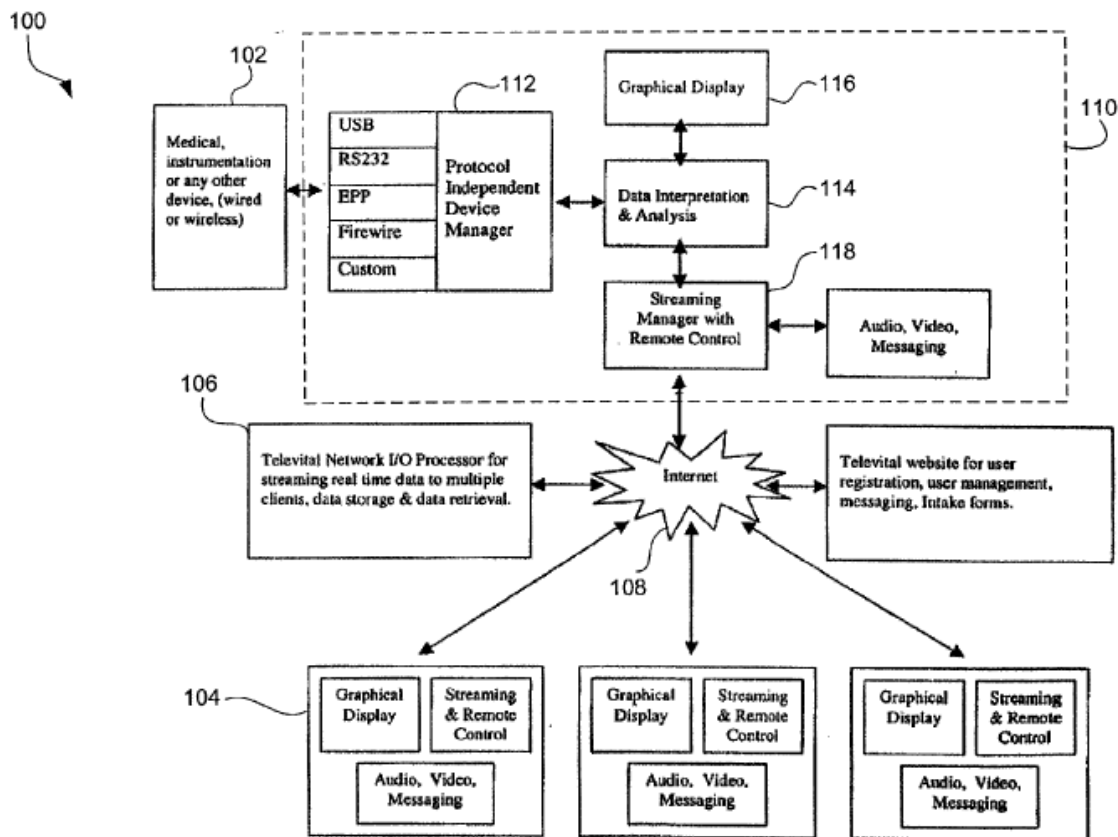


Fig. 1A

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.

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.

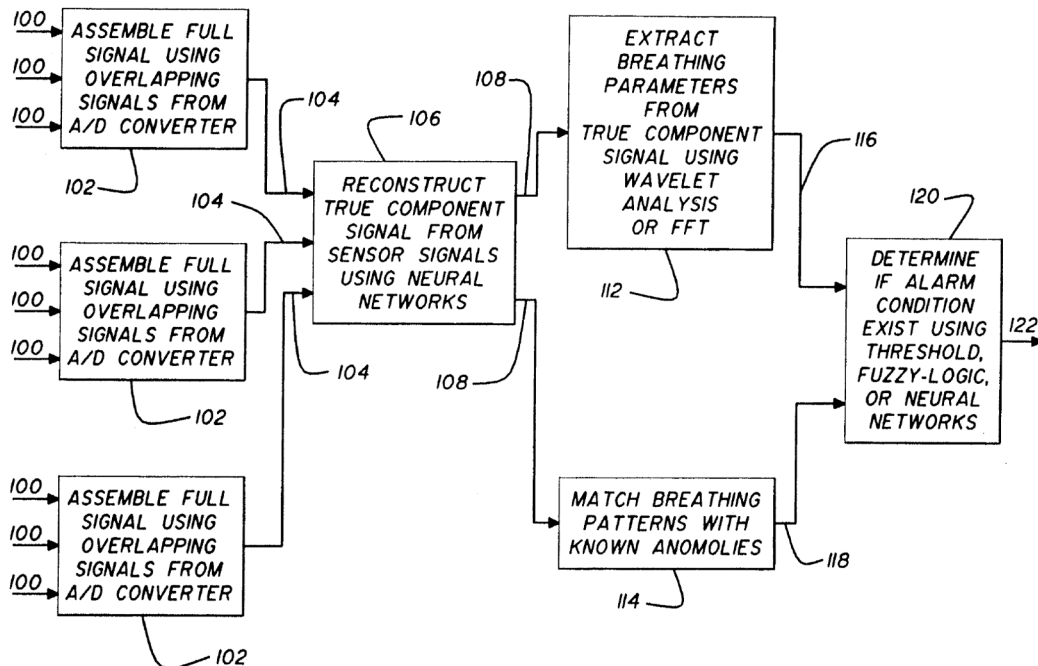


FIG. 11

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 – Alleged Obviousness Over Toge, Burton, and Kumar

Petitioner asserts that claims 1, 2, 4, 5, 7–9, 11–14, and 16 are unpatentable as obvious over the combination of Toge, Burton, and Kumar. Pet. 15–67. At this stage of the proceeding, Patent Owner disputes whether Petitioner sufficiently demonstrates that the proposed combination teaches or suggests claim limitations [1.c]/[7.c]/[12.c] and [1.c.i]/[7.c.i]/ [12.c.i], and sufficiently demonstrates a motivation to combine to reach claim limitations [1.c]/[7.c]/[12.c]. *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]/[7.c]/[12.c]

Claim limitations [1.c]/[7.c]/[12.c] recite a “***remote internet site*** adapted to receive data relate [sic] to the subject’s treatment and the treatment’s efficacy.” *See* Pet. 79, 81, 83 (emphasis added).

In arguing these limitations, Petitioner cites Toge's disclosure of a CPAP device connected to a physician-side terminal via a communication network such as the internet. *See* Pet. 49 (citing Ex. 1044 (Toge) ¶¶ 6, 9). Petitioner argues that in light of this disclosure, it would have been obvious to a person of ordinary skill in the art to use a "remote internet site" on the physician-side devices to receive data from Toge's PAP. *Id.* (citing Ex. 1003 (Kirkness Decl.) ¶ 214; Ex. 1005 (Chatterjee Decl.) ¶ 146). According to Dr. Kirkness, a person of ordinary skill in the art "would have understood that one common way to access data transmitted over the internet, like the data from Toge's wireless PAP device, is via a remote internet site." Ex. 1003 (Kirkness Decl.) ¶ 214.

Petitioner argues in the alternative that if Toge alone does not disclose this limitation, a person of ordinary skill in the art would have been motivated to implement "the remote internet site of Kumar[] in the Toge system." Pet. 49. Petitioner asserts that Kumar's telemedicine system includes a browser-based engine ("a remote internet site") that manages the transmission of data from the patient-side device to the provider-side device and may "configure the devices to transfer the data directly from one device to the other" and/or "store the data for later transmission to the provider-side device." *Id.* at 50–51 (citing Ex. 1008 (Kumar) at, e.g., ¶¶ 10, 11, 87).

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 15–17 (citing Ex. 1003 (Kirkness Decl.) ¶¶ 135–40; Ex. 1005 (Chatterjee Decl.) ¶¶ 76–87). 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 53 (citing Ex. 1008 (Kumar) ¶¶ 83–84; Ex. 1003 (Kirkness Decl.) ¶ 223; Ex. 1005 (Chatterjee Decl.) ¶¶ 150–53).

On this record, and after consideration of Patent Owner’s arguments (discussed below), we find that Petitioner has demonstrated a reasonable likelihood that Toge, or alternatively Toge in view of Kumar, discloses the “remote internet site” recited in limitations [1.c]/[7.c]/[12.c] for the reasons in the Petition. Pet. 48–54. We now turn to addressing Patent Owner’s two arguments regarding claim limitations [1.c]/[7.c]/[12.c].

*a. Whether Toge Teaches or Suggests Claim Limitations
[1.c]/[7.c]/[12.c]*

Patent Owner disputes Petitioner’s argument (at Pet. 49) that in light of Toge’s disclosures, it would have been obvious to a person of ordinary skill in the art to use a “remote internet site” on the physician-side devices to receive data from Toge’s PAP. Prelim. Resp. 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 PAP transmits treatment data directly to the physician-side client devices,” not to a remote internet site. *Id.* at 29 (citing, e.g., Ex. 1044 (Toge) ¶¶ 79–82), 31. 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 30 (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 (Toge) ¶ 80; Pet. 9, 22, 49. The PAP, relay device, and physician-side client devices can be connected via the internet. *See, e.g.*, Ex. 1044 (Toge) ¶ 9; Pet. 49. As such, Petitioner and Dr. Kirkness adequately demonstrate for purposes of institution that a person of ordinary skill in the art “would have understood that one common way to access data transmitted over the internet, like the data from Toge’s wireless PAP device” to the physician-side client devices, “is via a remote internet site.” Ex. 1003 (Kirkness Decl.) ¶ 214.

*b. Whether Petitioner Demonstrates a Motivation to Combine
Toge With Kumar to Reach Claim Limitations
[1.c]/[7.c]/[12.c]*

Patent Owner disputes Petitioner’s alternative argument (*see* Pet. 15, 49) 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. As an initial matter, as discussed in Section III.E.1.a above, we have already found that Petitioner has adequately demonstrated for purposes of institution that Toge discloses these claim limitations.

Nevertheless, in the interests of completeness, we offer the following observations on Patent Owner's arguments.

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. 16) is insufficient because "Toge only allows medical professionals to access the treatment data." Prelim. Resp. 36–37 (citing Ex. 1044 (Toge) ¶¶ 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. 16; Ex. 1003 (Kirkness Decl.)

¶ 137; *see also* Ex. 1005 (Chatterjee Decl.) ¶ 78 (“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 (Kumar) ¶ 78 (discussing ability to provide care even when patient or physician is not physically available or accessible).

Finally, Patent Owner argues that Petitioner’s “arguments predicated on ‘advances in mobile computing’ and ‘general market trend’ (Pet. at 16–17) are ‘generic and bear[] 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 Limitations
[1.c.i]/[7.c.i]/[12.c.i]*

Patent Owner argues that Toge and Kumar would not have rendered obvious claim limitations [1.c.i]/[7.c.i]/[12.c.i], which relate to software (on the claimed base station, cellphone, or PDA, *see* [1.b]/[7.b]/[12.b]) that is adapted to retransmit or receive treatment and efficacy data generated by the

PAP. Prelim. Resp. 37–47. Because the language of claim limitations [1.c.i], [7.c.i], and [12.c.i] differs across the limitations, we address each limitation in turn below.

a. Claim Limitation [1.c.i]

Claim limitation [1.c.i] recites “***software . . . adapted to retransmit a data*** related to the subject’s treatment and the treatment’s efficacy received by the software from the first radio frequency wireless transceiver of the PAP device, in whole or part, ***to the remote internet site.***” Pet. 79 (emphasis added).

For purposes of institution, we find that Petitioner adequately demonstrates that Toge or Toge and Kumar teach or suggest this claim limitation. *See* Pet. 55–56. 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 (Toge) ¶¶ 18–19. Petitioner’s declarant Dr. Chatterjee explains that “[a] person of ordinary skill in the art would have understood that this mobilization would have included communications between the mobile terminal 5 and physician-side computer 4.” Ex. 1005 (Chatterjee Decl.) ¶ 159. Dr. Chatterjee explains that

code on the mobile terminal 5 (*software*) can transmit (*is further adapted to retransmit*) the patient treatment data or efficacy and severity data . . . from the transceiver unit 251 of the positive pressure device 2 (*from the first radio frequency wireless transceiver of the PAP device*) to the physician-side computer 4 or physician-side computer 4 modified by Kumar (*remote internet site*).

Id. ¶ 158.

Additionally, Kumar discloses that after receiving data from the PAP, a provider can analyze the data and manage and maintain it via the remote internet site, which includes a storage device. Ex. 1008 (Kumar) ¶¶ 78, 83. Dr. Kirkness demonstrates that a person of ordinary skill in the art would have been motivated “to retransmit the ‘data related to the subject’s treatment and the treatment’s efficacy’ received from the PAP device, along with the care provider’s comments/analysis . . . regarding . . . such received ‘data’ to the browser-based engine (‘a remote internet site’) for secured storage and later access.” Ex. 1003 (Kirkness Decl.) ¶ 229; *see also* Ex. 1005 (Chatterjee Decl.) ¶ 162; Pet. 56.

Thus, because physician-side computer 4 and terminal 5 have software that allows communication and mutual exchange of data received from the PAP, this meets the claimed requirement of “*software . . . adapted to retransmit a data* related to the subject’s treatment and the treatment’s efficacy received by the software from the first radio frequency wireless transceiver of the PAP device, in whole or part, *to the remote internet site.*”

Patent Owner counters that there is no reason why Toge’s mobile terminal 5 would retransmit patient data anywhere, let alone to Toge’s physician-side computer 4, especially because both devices already receive patient data from the PAP device. Prelim. Resp. 38–39. Patent Owner also argues that in Toge’s system, both the physician-side computer 4 and mobile terminal 5 retransmit data to the PAP device, and there is “no reason to retransmit the data to a web server.” *Id.* at 39–40.

On this record, we find these arguments unavailing. At a minimum, Patent Owner overlooks Petitioner’s argument that one reason to retransmit patient data between mobile terminal 5 and the physician-side computer 4 is

to include the care provider's comments/analysis on the PAP data and to allow for secured storage and later access. *See, e.g.*, Pet. 56. Patent Owner dismisses Petitioner's reference to secured storage, asserting that "the PAP device *already* includes a database for storage, and therefore retransmission would be to the PAP device for any storage needs." Prelim. Resp. 40. On this record, we are not persuaded by Patent Owner's attorney argument that a person of ordinary skill in the art would have looked solely to the PAP device to store the patient's medical data and physician's analysis.

b. Claim Limitation [7.c.i]

Claim limitation [7.c.i] recites "***software . . . adapted to receive***, in whole or in part, ***the data*** related to the subject's treatment and the treatment's efficacy ***generated by the PAP device that is first received by then retransmitted from the remote internet site.***" Pet. 81 (emphasis added).

Similar to claim limitation [1.c.i] discussed above, Petitioner cites Toge's teachings that mobile terminal 5 and the physician-side computer 4 can communicate with each other and receive data from the PAP device. Pet. 57 (citing Ex. 1044 (Toge) ¶¶ 18–19). Petitioner also cites Kumar's teaching regarding storage and integration of patient data from multiple prior treatments on the physician-side devices. *Id.* at 58 (citing Ex. 1008 (Kumar) ¶ 83). In view of these teachings, Petitioner persuasively argues that a person of ordinary skill in the art "would have found it obvious to transmit the entire medical record from the browser-based engine to the care provider's device" to allow the provider to review the patient's entire medical record. Pet. 58. We agree with Petitioner, for purposes of institution, that because

the entire medical record contains “data” from at least one prior treatment that has been previously transmitted to the care provider’s device for care provider’s review, transmitting the medical record containing “data” from multiple prior treatments discloses “the data related to the subject’s treatment and the treatment’s efficacy generated by the PAP device that is first received by then retransmitted from the remote internet site.”

Id. at 59 (citing Ex. 1003 (Kirkness Decl.) ¶ 236).

Patent Owner counters that because both the physician-side computer 4 and mobile terminal 5 in Toge’s system receive data from the PAP device, it would not have been obvious “to have such data ‘*first received*’ by then retransmitted from the *remote internet site*’ (browser-based engine).” Prelim. Resp. 41 (quoting Pet. 56–57). This overlooks Petitioner’s argument regarding receiving data and then retransmitting it together with data from prior treatments (i.e., retransmitting a patient’s entire medical record). *See, e.g.*, Pet. 58–59.

Patent Owner also argues that a person of ordinary skill in the art “would not have been motivated to modify Toge’s physician-side computer to include a web server” because “Toge implements a push protocol that sends treatment data without a request,” but “Kumar implements a pull protocol that sends data only upon request.” Prelim. Resp. 41–42. On this record, this argument is unavailing, because as noted above, “a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate a motivation to combine.” *Medichem*, 437 F.3d at 1165. 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, this does not necessarily obviate Petitioner’s proffered motivations to combine, which we find sufficient for purposes of

institution. For example, a push protocol may not be a priority for all patients or all situations.

Patent Owner also again argues that “because Toge’s PAP device already stores and transmits treatment data directly to the physician-side client devices, there is no need to have the data also stored at the browser-based engine’s central server, as Petitioner suggests.” Prelim. Resp. 44 (internal citation omitted). As noted above, on this record we are not persuaded by Patent Owner’s attorney argument that a person of ordinary skill in the art would have looked solely to the PAP device to store the patient’s medical data and physician’s analysis.

c. Claim Limitation [12.c.i]

Claim limitation [12.c.i] recites “wherein both *the software and the remote internet site independently receive*, in whole or in part, *the data* related to the subject’s treatment and the treatment’s efficacy *generated by the PAP device*.” Pet. 83 (emphasis added). Petitioner argues that, in Toge’s system, both the physician-side computer 4 and mobile terminal 5 independently receive data from the PAP device, thereby meeting this claim limitation. Pet. 59–60. Petitioner additionally argues that in Kumar, the data may be transferred “**directly** from one device to the other.” *Id.* at 60 (quoting Ex. 1008 (Kumar) ¶ 81).

Patent Owner responds that “in Toge *only* physician-side client devices receive the data.” Prelim. Resp. 44. On the current record, this argument is unclear, and appears to contradict Patent Owner’s acknowledgement that in Toge, “the physician-side computer and mobile terminal *both* receive patient data from the PAP device.” *See id.* at 38–39.

Patent Owner again argues that a person of ordinary skill in the art “would **not** have been motivated to modify Toge’s physician-side computer to be a web server that hosts a browser-based engine as in Kumar.” Prelim. Resp. 45. We addressed that argument above in Section III.E.1.b.

Finally, Patent Owner argues that “in Petitioner’s Toge-Kumar combination, there is no separate/independent transfer of data because Kumar’s browser-based engine/server manages the transfer of data between devices.” Prelim. Resp. 46 (citing Ex. 1008 (Kumar) ¶ 81). Thus, Patent Owner argues, “the transfer of data ‘from the PAP device to the provider-side device’ is **dependent upon** the browser-based engine/server.” *Id.* (quoting Pet. 60).

As an initial matter, here Patent Owner addresses Petitioner’s alternative argument that adds Kumar, but we find that Petitioner has adequately demonstrated for purposes of institution that Toge discloses this claim limitation alone, as discussed in the Petition. *See* Pet. 59. But even if Kumar is necessary, on this record Patent Owner’s argument is unavailing. Petitioner correctly notes Kumar’s teaching that data may be transferred “directly from one device to the other.” *Id.*; Ex. 1008 (Kumar) ¶ 81. Kumar teaches that the engine “[p]referably” “manages transmission of the data from the patient-side device to the provider-side device,” thus indicating that this functionality is not required. During trial, the parties may wish to more fully develop whether this functionality is required in Petitioner’s Toge-Kumar combination.

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 – Alleged Obviousness Over Toge, Burton, Kumar, and Kisner

Petitioner asserts that claims 1, 2, 4, 5, 7–9, 11–14, and 16 are unpatentable as obvious over Toge, Burton, Kumar, and Kisner. Pet. 67–73. 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. 47 (arguing that the addition of Kisner for the limitation “sensor data from the sensors is processed by the first processor using one or more of the signal processing techniques” does not resolve the deficiencies Patent Owner asserts for 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 2 for the reasons set forth in the Petition. *See* Pet. 67–73.

IV. CONCLUSION

For the foregoing reasons, we determine that the information presented establishes a reasonable likelihood that Petitioner would prevail in showing that at least one of the challenged claims of the '921 patent is unpatentable.

At this preliminary stage, we have not made a final determination regarding the patentability of any challenged claim or any underlying factual or legal issue. *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.

The Board will deem forfeited any issue not raised by Patent Owner in a timely response to the Petition, or as permitted in another manner during trial, even if asserted in the Preliminary Response or discussed in this Decision.

Nothing in this Decision authorizes Petitioner, in a manner not otherwise permitted by the Board’s rules, to supplement the information pertaining to any ground advanced in the Petition.

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 instituted based on all grounds asserted in the Petition; and

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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