

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COOLIT SYSTEMS, INC.,

Petitioner,

v.

ASETEK DANMARK A/S,
Patent Owner.

IPR2021-01196
Patent 10,599,196 B2

Before MICHAEL P. TIERNEY, *Vice Chief Administrative Patent Judge*,
KEVIN W. CHERRY, and JASON W. MELVIN,
Administrative Patent Judges.

MELVIN, *Administrative Patent Judge*.

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

I. INTRODUCTION

CoolIT Systems, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of *inter partes* review of claims 1–19 of U.S. Patent No. 10,599,196 B2 (Ex. 1001, “the ’196 patent”). Asetek Danmark A/S (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). In the Preliminary Response, Patent Owner notes that it has disclaimed claims 3–19. Prelim. Resp. 3; Ex. 2008. Thus, claims 1 and 2 remain at issue (the “challenged claims”). We authorized Petitioner to file a Preliminary Reply (Paper 7, “Prelim. Reply”) and Patent Owner to file a Preliminary Sur-reply (Paper 8, “Prelim. Sur-reply”). Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review.

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, we conclude that Petitioner has shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim, and we institute *inter partes* review.

A. REAL PARTIES IN INTEREST

The Petition identifies CoolIT Systems, Inc. as the real party-in-interest for Petitioner. Pet. 94. Patent Owner identifies Asetek Danmark A/S, Asetek USA, Inc., Asetek A/S, and Asetek Holdings, Inc. as the real parties-in-interest for Patent Owner. Paper 4, 1 (Patent Owner’s Mandatory Notices).

B. RELATED MATTERS

The parties identify *Asetek Danmark A/S v. CoolIT Systems, Inc.*, Case No. 3:19-cv-00410-EMC (N.D. Cal.) (filed on January 23, 2019, currently pending); *Asetek Danmark A/S v. Corsair Gaming, Inc.*, Case No. 3:20-cv-06541-EMC (N.D. Cal.) (filed on September 17, 2021, currently pending); and *Asetek Danmark A/S v. Shenzhen Apaltek Co.*, Case No. 6:21-cv-00501 (W.D. Tex.) (filed on May 14, 2021, currently pending) as the related co-pending district-court litigations. Pet. 95; Paper 4, 1. Petitioner also identifies the following pending petitions for *inter partes* review involving patents that are related to the '196 patent: IPR2020-00522 (No. 10,078,355 B2, filed February 7, 2019); IPR2020-00523 (No. 10,078,354 B2, filed February 7, 2020); IPR2020-00524 (No. 9,933,681 B2, filed February 7, 2020); and IPR2021-01195 (No. 10,613,601, filed concurrently). Pet. 95.

C. THE '196 PATENT

The '196 patent is titled “Cooling System for a Computer System.” Ex. 1001, code (54). It issued from an application filed May 29, 2018, as a continuation of application No. 15/626,706, which issued as Patent No. 10,078,355 (“the '355 patent”) and claims priority to a PCT application filed May 6, 2005, now abandoned. *Id.*, code (63).

The '196 patent relates to a liquid-cooling system for a computer system. *Id.*, code (57). The specification explains, at the time of the invention, air cooling arrangements were the most-used cooling system for cooling central processing units (CPUs) in computer systems. *Id.* at 1:24–:31. An alternative design known at the time of the invention was to use a cooling liquid circulating inside a closed system by means of a pumping unit with a heat exchanger past which the cooling liquid circulates. *Id.* at 1:38–

:42. The specification contends that liquid cooling is generally more efficient and quieter than air cooling, but that a liquid cooling design consists of “many components,” which increases the total installation time, size, and risk of leakage of the cooling liquid from the system. *Id.* at 1:43–:48. Thus, one object of the invention is to provide a small and compact liquid-cooling solution that is more efficient than existing air-cooling arrangements and is produced at low cost, enabling high production volumes. *Id.* at 1:56–:63. Another object of the invention is to create an arrangement which is easy-to-use and implement, used with existing CPU types and computer systems, and requires a low level of maintenance or no maintenance at all. *Id.* at 1:63–:67.

An illustrative embodiment of such a device is depicted in Figures 7 and 8, reproduced below.

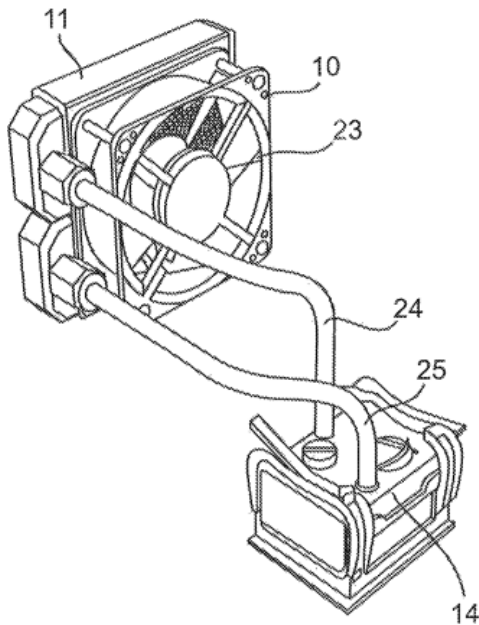


FIG. 7

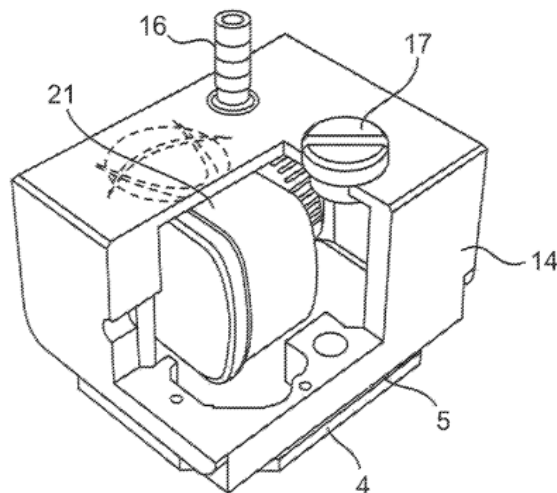


FIG. 8

Figure 7¹ is a perspective view of the cooling system showing reservoir housing 14 with the heat exchanging surface 5 (shown in Figure 8) and the pump 21 (shown in Figure 8) inside the reservoir. *Id.* at 16:18–:21. Figure 8 is a cut-out view into reservoir housing 14, when the reservoir, pump 21, and heat exchanging surface 4 are situated inside the reservoir. *Id.* at 15:50–:52. The reservoir has a tube inlet connection (not shown in Figure 8) through which the cooling liquid enters the reservoir. *Id.* at 15:52–:57. From the tube inlet connection, the cooling liquid flows through the reservoir passing heat exchanging surface 4 and enters the inlet of the pump. *Id.* at 15:55–:57. After the cooling liquid flows through the pump, the cooling liquid passes out of the outlet of the pump and further out through tube outlet connection 16. *Id.* at 15:57–:59. As shown in Figure 7, tube inlet connection and tube outlet connection 16 are connected to heat radiator 11 by means of connecting tubes 24 and 25. *Id.* at 16:21–:23. Cooling liquid flows into and out of the reservoir and the heat radiator through connecting tubes 24 and 25, respectively. *Id.* at 16:23–:25. Heat radiator 11 (shown in Figure 7) cools the cooling liquid before it passes back into the reservoir. *Id.* at 16:25–:32.

The reservoir may be provided with channels or segments for establishing a certain flow-path for the cooling liquid through the reservoir to prevent the cooling liquid passing the reservoir too quickly to take up a sufficient amount of heat from the heat exchanging surface. *Id.* at 16:51–:64.

¹ We agree with Petitioner that it appears that the specification transposes the description of Figure 7 with that of Figure 8. Pet. 5 n.1. We refer to the description of “Figure 8” in the specification in our discussion of Figure 7, and we refer to the specification’s discussion of “Figure 7” in our discussion of Figure 8.

Figures 17 and 20 show the internal structures of a preferred embodiment of the reservoir according to the invention and are reproduced below. *Id.* at 10:19–:20, 21:52–:53.

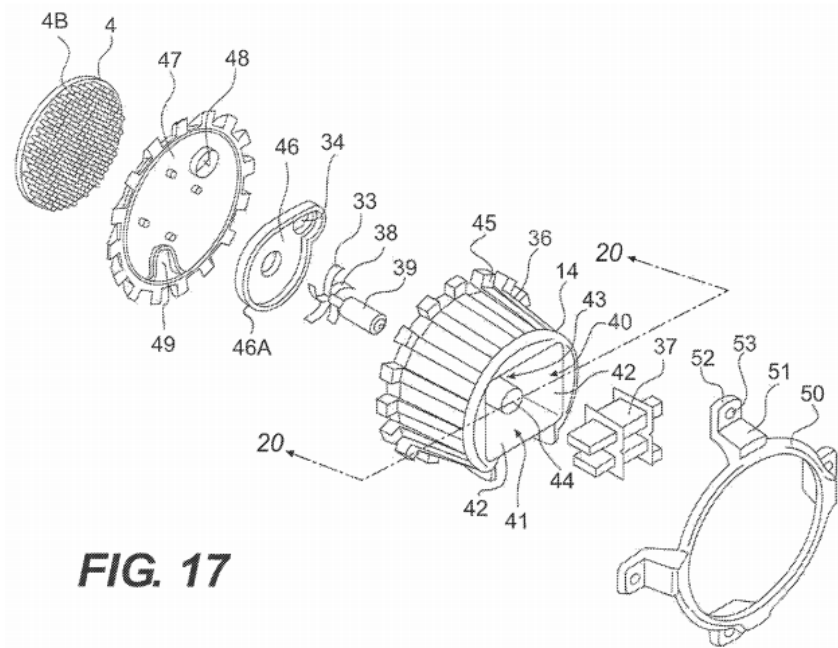


FIG. 17

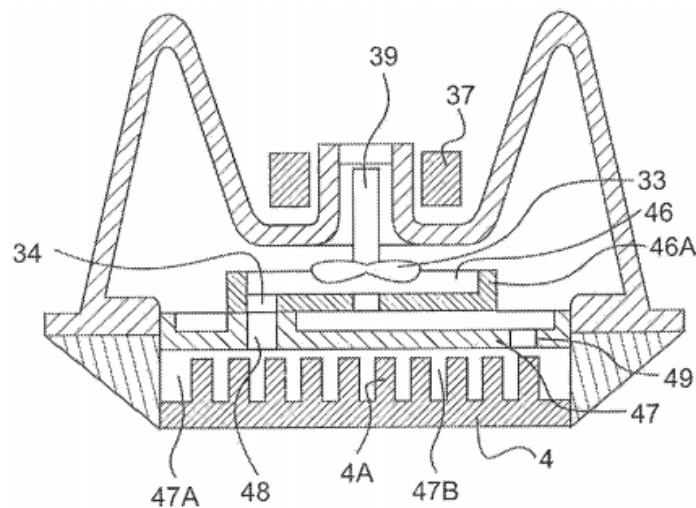


FIG. 20

Figure 17 is an exploded perspective view of a preferred embodiment of a reservoir and a pump and the heat exchanging surface. *Id.* at 10:10–:12.

Figure 20 is a simplified schematic showing a cross-sectional view of the reservoir along plane 20-20 of Figure 17. *Id.* at 10:19–:20. Reservoir housing 14, as shown in Figures 17 and 20, is in the form of a double-sided chassis having a substantially conical, circular configuration with stiffening ribs 36 extending axially along the exterior of the reservoir housing and configured to mount an electrical motor. *Id.* at 21:53–:61. Reservoir housing 14 has recess 40 intended for accommodating stator 37 of an electrical motor driving impeller 33 of the pump, which is attached to shaft 38 of rotor 39 of the electric motor. *Id.* at 22:1–:5. The specification explains that “a liquid-proof division” is made between rotor 39 of the motor, which is submerged in the cooling liquid, and the stator 37 of the pump. *Id.* at 22:14–:18.

The enclosed space between impeller 33 and heating exchanging interface 4 is divided into two separate chambers by impeller cover 46A and intermediate member 47, as shown in Figure 20. *Id.* at 23:22–:24. The chamber formed by impeller 33 and impeller cover 46A is described as “pump chamber 46” and has outlet 34. *Id.* at 23:24–:29.

D. CHALLENGED CLAIMS

Challenged claim 1 is independent; claim 1 is reproduced below:

1. A liquid cooling system for cooling a heat-generating component of a computer, comprising:
 - a reservoir configured to circulate a cooling liquid therethrough, the reservoir including:
 - a pump chamber housing an impeller and defined at least in part by an impeller cover and a double-sided chassis, the impeller being positioned on one side of the chassis and a stator of the pump is positioned on an opposite side of the chassis, wherein the pump chamber includes:

- an inlet defined by the impeller cover positioned below a center of the impeller configured to enable a cooling liquid to flow into the center of the pump chamber;
- an outlet defined by the impeller cover positioned tangentially to the circumference of the impeller;
- a thermal exchange chamber configured to be disposed between the pump chamber and a heat-generating component when the system is installed on a heat-generating component;
- a heat-exchanging interface forming a boundary wall of the thermal exchange chamber, the heat-exchanging interface has an outer surface configured to be placed in thermal contact with a surface of a heat-generating component and an inner surface that defines a plurality of channels that direct the flow of a cooling liquid within the thermal exchange chamber;
- a heat radiator adapted to pass the cooling liquid therethrough, the heat radiator being fluidly coupled to the reservoir via fluid conduits, the heat radiator being configured to dissipate heat from the cooling liquid;
- a first passage fluidly coupling the pump chamber and the thermal exchange chamber, wherein the first passage is configured to direct the cooling liquid from the outlet of the pump chamber into the thermal exchange chamber between a first end and a second end of the thermal exchanger chamber.

Id. at 28:22–:58. Claim 2 depends from claim 1.

E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts the following ground of unpatentability:²

Claims Challenged	35 U.S.C. §	References/Basis
1, 2	103	Duan ³

Pet. 3. Petitioner relies also on the Declaration of Himanshu Pokharna, Ph.D. Ex. 1003.

II. ANALYSIS

A. REAL PARTIES IN INTEREST

Patent Owner argues that we should deny institution under 35 U.S.C. § 312(a)(2) because the Petition does not name all real parties in interest (“RPI”). Prelim. Resp. 1–2. Section 312(a)(2) requires that the “petition identif[y] all real parties in interest.” 35 U.S.C. § 312(a)(2). This provision serves important notice functions to patent owners, to identify whether the petitioner is barred from bringing an IPR due to an RPI that is time-barred or otherwise estopped, and to the Board, to identify conflicts of interests that are not readily apparent from the identity of the petitioner. Patent Owner argues that Corsair Gaming, Inc. and Corsair Memory, Inc. (collectively, “Corsair”) are Petitioner CoolIT’s longstanding customers, co-defendants, and indemnitees in the district-court litigation.⁴ Prelim. Resp. 1–2, 16–18. Patent Owner asserts that this is not an inadvertent omission, but rather that CoolIT and Corsair are deliberately trying to hide Corsair’s status as an RPI,

² As noted above, Patent Owner disclaimed claims 3–19 (*see* Ex. 2008), so we consider only the sole ground addressing claims 1 or 2.

³ US Pub. No. 2006/0185830, published Aug. 24, 2006 (Ex. 1004).

⁴ The panel confirms that it does not have a conflict with Corsair Gaming, Inc., or Corsair Memory, Inc.

and thus trying to lay the groundwork for an argument that Corsair should not be subject to estoppel in the district-court action. *Id.* at 2. Petitioner asserts that the Petition correctly names all RPIs and further contends that there is no time bar implication and no evidence that Corsair is attempting to advance invalidity arguments beyond those put forward by Petitioner. Reply 11–12.

Under the Board’s precedential decision in *SharkNinja Operating LLC v. iRobot Corp.*, when no time-bar or estoppel would apply once determining Petitioner did not name all RPIs, the Board need not address the issue. IPR2020-00734, Paper 11 (Oct. 6, 2020) (precedential); *Lumentum Holdings, Inc. v. Capella Photonics, Inc.*, IPR2015-00739, Paper 38 at 6 (PTAB Mar. 4, 2016) (precedential) (“[O]ur jurisdiction to consider a petition does not require a ‘correct’ identification of all RPIs in a petition.”); *see also Mayne Pharma Int’l Pty. Ltd. v. Merck Sharp & Dohme Corp.*, 927 F.3d 1232, 1240 (Fed. Cir. 2019) (“[I]f a petition fails to identify all real parties in interest under § 312(a)(2), the Director can, and does, allow the petitioner to add a real party in interest.” (quoting *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1374 n.9 (Fed. Cir. 2018) (en banc))). This approach also serves the interest of cost and efficiency.⁵

Here, there is no allegation that the one-year time bar under 35 U.S.C. § 315(b) would prevent Corsair from bringing an independent IPR. *See* Prelim. Sur-reply 5–6; Prelim. Resp. 1–2. Nor have the statutory estoppel provisions been implicated. The statutory estoppel provisions aim to protect patent owners from harassment via successive petitions by the same or

⁵ *See* 37 C.F.R. § 42.1(b) (“This part shall be construed to secure the just, speedy, and inexpensive resolution of every proceeding.”).

related parties, to prevent parties from having a “second bite at the apple,” and to protect the integrity of both the USPTO and federal courts by assuring that all issues are promptly raised and vetted. *Cf.* Fed. R. Civ. P. 17(a) (Advisory Committee Note to 1966 Amendment to Rule 17(a)). Here, there is no evidence that Corsair is pursuing estopped invalidity grounds (*see* Prelim. Reply 11–12; Prelim. Sur-reply 6–7; Prelim. Resp. 1–2, 19–20), and if it were, that would be an issue for the district court to resolve. Thus, on this record, we will not consider whether Corsair must be named as an RPI in this proceeding.

B. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(a)
BASED ON PARALLEL PROCEEDING

Patent Owner contends we should exercise our discretion to deny the Petition under § 314(a), because of the copending district-court litigation involving the parties, which will be resolved before the Board’s final written decision. Prelim. Resp. 1. As guided by our precedent, we consider a number of factors when determining whether to deny institution based on the parallel district-court litigation. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential).

1. *Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Petitioner moved to stay the district-court case, but the district court denied the motion. Ex. 2014, 1. Petitioner argues that the court “effectively stayed almost all of the remaining case to wait for the IPR institution decision.” Reply 10. The court, however, set a new trial date for July 25, 2022, adding two and a half months to the schedule, because of a criminal case on the docket taking priority. Ex. 1027, 7:25–10:2. Thus, the court did

not issue a stay, but directed the parties to meet and confer to stipulate a new schedule based on the July 25, 2022, trial date and continue with expert reports and depositions. *Id.* at 11:22–13:19; *see* Ex. 1024. Further, although the court denied a stay, it indicated that, “[i]f an IPR is instituted, then that’s a different matter.” Ex. 1027, 4:11–:16. The court recognized that we have issued a Final Written Decision for Petitioner’s challenge to the ’355 patent, in which we determined all challenged claims unpatentable (*see* IPR2020-00522, Paper 36; Ex. 1027, 7:12–:14), and indicated that it would “sever and stay with respect to anything that’s been invalidated.” Ex. 1027, 40:3–:14. We will not speculate as to whether the court will be inclined to stay its case in light of this Institution Decision. We determine that this factor is neutral.

2. *Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

The district-court litigation has a trial date of July 25, 2022, which is five months before the deadline for a final written decision in this proceeding (one year after this Institution Decision). Ex. 1024, 1. As discussed above and below, however, given the limited overlap between the issues in the district-court litigation and this proceeding, the time overlap has less significance. We determine that this factor weighs slightly in favor of exercising discretion to deny institution.

3. *Investment in the parallel proceeding by the court and the parties*

Petitioner contends that because the asserted claims in the ’196 patent almost completely overlap with the ’355 patent, which was also asserted in the litigation, the parties have not invested significant time and effort in the litigation that is unique to the ’196 patent. Pet. 88–89; Reply 7–8. Patent Owner, however, contends that at the time of the expected institution

decision in December 2021, the parties will have completed the bulk of the work in the district-court litigation, including completing claim construction specific to the '196 patent, closing fact discovery, and serving opening expert reports. Prelim. Sur-reply 3–4. In addition, rebuttal expert reports will be served by December 8, 2021, and expert discovery will close soon after the Board's institution decision. Prelim. Sur-reply 3–4. These facts counsel against institution.

Petitioner filed the Petition here approximately five months after Patent Owner served its amended infringement contentions, first asserting the '196 patent. *See* Pet. 88–89 (citing Ex. 1013, 3, 13); *Fintiv*, IPR2020-00019, Paper 11, 11 (“If the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution under *NHK*.”). Thus, although the district-court proceeding has completed substantial fact discovery and some expert discovery, that is not a result of Petitioner's delay. The litigation involves numerous other patents, so preparing a petition less than five months after asserted claims are identified was a diligent approach by Petitioner. Given that diligence and the work that remains to be done, we conclude this factor weighs slightly against exercising discretion to deny institution.

4. *Overlap between issues raised in the petition and in the parallel proceeding*

Following Patent Owner's disclaimer, no claims stand challenged here but not at issue in the district court. Petitioner submits that, “[s]hould the IPR trial based on this Petition be instituted, Petitioner hereby stipulates that it will not pursue any invalidity grounds against the '196 patent in the

district court that have been raised in this Petition.” Pet. at 89. Petitioner asserts that “if the IPR trial is instituted, there will be no overlap or concerns of duplicative efforts between the district court trial and this IPR proceeding.” *Id.* However, “Petitioner stipulates only that it will not pursue, in district court, the ‘same grounds’ presented in the Petition in this case.” *Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, Case IPR2019-01393, Paper 24, 12 n.5 (June 16, 2020). Petitioner did not stipulate that it would not pursue any ground raised or that could have been reasonably raised in an IPR.⁶ *Id.*

Nonetheless, Petitioner’s stipulation mitigates to some degree the concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions. *Id.* at 12; *Sand Revolution II*, IPR2019-01393, Paper 24, 12. Thus, we find that this factor weighs somewhat against exercising discretion to deny institution.

5. Whether the petitioner and the defendant in the parallel proceeding are the same party

The parties in the district-court litigation and this proceeding are the same. Pet. 93; *see* Prelim. Resp. 10. Thus, this factor weighs in favor of exercising discretion to deny institution.

6. Other circumstances that impact the Board’s exercise of discretion, including the merits

Petitioner argues that it presents a substantively strong case, weighing against discretionary denial. Pet. 87–88. Patent Owner disagrees. Prelim.

⁶ I.e., any ground that could be raised under §§ 102 or 103 on the basis of prior-art patents or printed publications.

Resp. 12–15. In this regard, Petitioner notes the similarity between claim 1 of the '196 patent and claim 1 of its parent, the '355 patent. *See* Pet. 2–4 (comparing claim 1 of the '196 patent with claim 1 of the '355 patent). And Petitioner points out that the ground here is based on the same prior-art of Duan as was at issue in IPR2020-00522. *See id.* at 2–3, 87–88. In that proceeding, we issued a Final Written Decision on August 19, 2021, determining all challenged claims unpatentable as anticipated by Duan (including '355 patent, claim 1) or obvious over Duan in combination with other references. IPR2020-00522, Paper 40. Further, Petitioner points out that Patent Owner's distinction here over the claims of the '355 patent depends on an issue we resolved against Patent Owner in IPR2020-00524, involving Patent Owner's related '681 patent.⁷ *Id.* at 13 n.3

In light of the similarity between the claims at issue here and those of the '355 patent, the overlap in the asserted prior art, and our prior determination of unpatentability regarding the '355 patent, we conclude that the merits of Petitioner's case in this proceeding are substantively strong. Thus, this factor weighs strongly in favor of institution.

7. *Holistic assessment of factors and conclusion*

We consider the above factors and take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Fintiv*, Paper 11 at 6. In weighing the totality of the evidence, we decide not to exercise discretion under § 314(a) to deny institution.

⁷ US 9,733,681 B2.

C. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner proposes that a person of ordinary skill

would have earned at least a bachelor's degree, such as a B.S. (bachelor of science), or equivalent thereof, in mechanical engineering or a closely related field and possessed at least three years of specialized experience in heat transfer devices for thermal management in electronics and computer systems, or in similar systems.

Pet. 9 (citing Ex. 1003 ¶¶ 23–26). Patent Owner does not dispute this definition of a person of ordinary skill. *See generally* Prelim. Resp. For purposes of this Decision, we adopt Petitioner's proposed level of ordinary skill as it appears to be consistent with the level of skill reflected by the specification and in the asserted prior art references. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art itself can reflect the appropriate level of ordinary skill in the art).

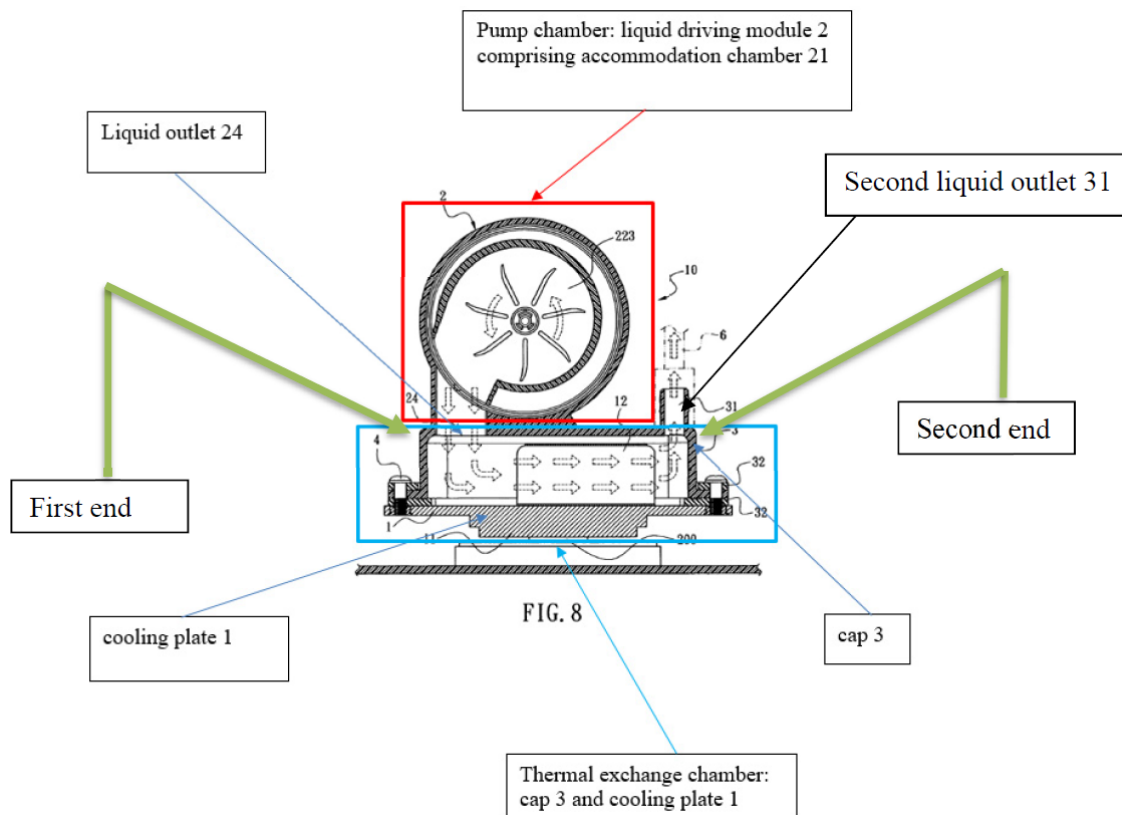
D. CLAIM CONSTRUCTION

For an *inter partes* review petition filed after November 13, 2018, we construe claim terms “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) (2020). The parties stipulated to constructions of “reservoir,” “chamber,” “double-sided chassis,” “stator,” and “either a first end or a second end of the thermal exchange chamber” in district-court litigation. Ex. 1012, 2. Petitioner proposes additional constructions for “an inlet . . . positioned below a center of the impeller” and “wherein the first passage is configured to direct the cooling liquid from the outlet of the pump chamber into the thermal exchange chamber between a first end and a second end of the thermal exchange chamber.” Pet. 12–15.

Patent Owner disputes the Petitioner’s construction of “wherein the first passage is configured to direct the cooling liquid from the outlet of the pump chamber into the thermal exchange chamber between a first end and a second end of the thermal exchange chamber.” *See* Prelim. Resp. 20–24. We discuss that language below, in context, and conclude that no other claim term identified by the parties requires express construction at this time. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

E. OBVIOUSNESS OVER DUAN

Petitioner relies primarily on Duan for most of the limitations of independent claims 1, 10, and 16. Pet. 20, 65. Patent Owner contends that Duan does not render independent claim 1 obvious “because Duan does not disclose cooling liquid entering *into* the thermal exchange chamber ‘between’ the ends of the thermal exchange chamber.” Prelim. Resp. 20. Rather, Patent Owner argues that Duan has “end-to-end flow in the alleged thermal exchange chamber, which requires cooling liquid to enter at one end of the thermal exchange chamber and exit at the opposite end.” *Id.*



Pet. 49 (annotating Ex. 1004, Fig. 8). Figure 8 depicts a sectional view of Duan’s cooling-plate module. Ex. 1004 ¶ 19. Petitioner’s annotations identify first liquid outlet 24 and second liquid outlet 31 of the thermal exchange chamber, carrying fluid into and out of, respectively, a chamber formed by cap 3 and cooling plate 1. Ex. 1004 ¶ 27, Fig. 8; *see* Pet. 49.

According to Patent Owner, Duan’s outlet 24 “is located *at* the first end of the alleged thermal exchange chamber” rather than “between the first and second ends of the alleged thermal exchange chamber” as claimed in the ’196 patent. Prelim. Resp. 20–21. Patent Owner’s contention turns on the construction of the phrase in claim 1, “wherein the first passage is configured to direct the cooling liquid from the outlet of the pump chamber

into the thermal exchange chamber *between a first end and a second end* of the thermal exchange chamber.” Ex. 1001, 28:54–:58 (emphasis added).

Patent Owner distinguishes claim 1 of the ’196 patent from similar claims of U.S. Patent No. 9,733,681 and U.S. Patent No. 10,078,355—and the Board’s decisions regarding those claims—because the Board never addressed the meaning, scope, or relevance of the limitation directing cooling liquid “*into* the thermal exchange chamber.” Prelim. Sur-reply 8. Rather, the Board considered the limitation directing cooling liquid “*in* the thermal exchange chamber.” *Id.* (emphasis added) (citing *CoolIT Sys., Inc. v. Asetek Danmark A/S*, IPR2020-00524, Paper 9, at 10–11, 26 (P.T.A.B. Aug. 19, 2021)). Patent Owner further argues that disregarding the term “into” in the claim limitation ignores the positional requirement of the first passage relative to the thermal exchange chamber. Prelim. Resp. 23.

Accepting Patent Owner’s construction, the limitation excludes a passage that enters the ends—or the sidewalls—of the thermal exchange chamber. Yet, Duan’s Figure 8 shows that first liquid outlet 24 (i.e., Duan’s first passage) is not *at* the end of the thermal exchange chamber but *between* the two ends or sidewalls. *See* Ex. 1004, Fig. 8. Indeed, there is a distinct portion of the chamber lateral to where the first passage connects to the chamber. *Id.* Figure 8 further shows that first liquid outlet 24 directs the cooling liquid from the outlet of the pump chamber *into* the thermal exchange chamber. *See id.* Therefore, even accepting Patent Owner’s construction of the claim limitation does not support denying institution.

Patent Owner does not offer any further arguments against institution. We have reviewed Petitioner’s contentions regarding obviousness over Duan, Wu, Duan-1, and Admitted Prior Art, and conclude that Petitioner has

shown a reasonable likelihood of prevailing with respect to obviousness of claims 1 and 2.

III. CONCLUSION

For the reasons discussed above, we conclude Petitioner has shown a reasonable likelihood of prevailing with respect to at least one claim. We have evaluated all of the parties' submissions and determine that the record supports institution. We conclude that instituting review in this proceeding is in the interest of efficient administration of the Office and the integrity of the patent system. *See* 35 U.S.C. § 316(b). Accordingly, we institute an *inter partes* review of all challenged claims under all grounds set forth in the Petition.

Our determination at this stage of the proceeding is based on the evidentiary record currently before us. This decision to institute trial is not a final decision as to patentability of any claim for which *inter partes* review has been instituted. Our final decision will be based on the full record developed during trial.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '196 patent is instituted on claims 1 and 2, and the ground identified above;

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.

For PETITIONER:

James L. Ryerson
Heath J. Briggs
GREENBERG TRAURIG, LLP
ryersonj@gtlaw.com
briggsh@gtlaw.com

For PATENT OWNER:

Eric Raciti
Arpita Bhattacharyya
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER LLP
Eric.raciti@finnegan.com
Arpita.bhattacharyya@finnegan.com