

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,  
Petitioner,

v.

ECOFACOR INC.,  
Patent Owner.

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IPR2020-00946  
Patent 8,131,497 B2

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Before WESLEY B. DERRICK, JEFFREY W. ABRAHAM, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

ABRAHAM, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Google LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–12 of U.S. Patent No. 8,131,497 B2 (Ex. 1001, “the ’497 patent”). EcoFactor Inc. (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 7, “Prelim. Resp.”). After receiving authorization from the Board (Paper 8), Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 9, “Reply”), and Patent Owner filed a Sur-reply (Paper 10, “Sur-reply”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2019). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Section 314(a) does not require the Director to institute an *inter partes* review. *See 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.”). Rather, a decision whether to institute is within the Director’s discretion, and that discretion has been delegated to the Board. *See 37 C.F.R. § 42.4(a); Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”).

For the reasons explained below, in the exercise of the Director’s discretion, *inter partes* review is not instituted.

*A. Related Proceedings*

The parties identify the following proceedings involving the '497 patent: *EcoFactor, Inc. v. Google LLC*, 1-19-cv-12322 (D. Mass. Nov. 12, 2019); *EcoFactor, Inc. v. Alarm.com Inc.*, 1-19-cv-12323 (D. Mass. Nov. 12, 2019); *EcoFactor, Inc. v. Daikin Industries, Ltd.*, 1-19-cv-12324 (D. Mass. Nov. 12, 2019); *EcoFactor, Inc. v. Ecobee, Inc.*, 1-19-cv-12325 (D. Mass. Nov. 12, 2019); *EcoFactor, Inc. v. Schneider Electric USA, Inc.*, 1-19-cv-12326 (D. Mass. Nov. 12, 2019); *EcoFactor, Inc. v. Vivint, Inc.*, 1-19-cv-12327 (D. Mass. Nov. 12, 2019); *Smart HVAC Systems, and Components Thereof*, 337-TA-1185 (ITC); and IPR2020-00947. Pet. 5–6; Paper 5, 2.

*B. The '497 Patent (Ex. 1001)*

The '497 patent, titled “System and Method for Calculating the Thermal Mass of a Building,” issued on March 6, 2012. Ex. 1001, codes (45), (54). The '497 patent relates generally to thermostatic controls for heating, ventilation, and cooling (HVAC) systems that are connected to a computer network. Ex. 1001, 1:18–19. The '497 patent explains that HVAC systems “have been controlled for decades by thermostats,” which include means to allow a user to set a desired temperature, a means to sense actual temperature, and a means to signal the heating or cooling devices to turn on or off in order to try to change the actual temperature to equal the desired temperature. Ex. 1001, 1:24–31. Traditionally, thermostats have only two input signals, ambient temperature and the preset desired temperature. Ex. 1001, 1:65–67.

The '497 patent explains that there are many sources of information that can be used to maximize the efficiency of an HVAC system, i.e., to increase comfort and decrease the energy use associated with an HVAC

system. Ex. 1001, 2:6–7. These sources include outside temperature and humidity, thermal mass of a structure, and whether the cost of an electric utility varies over time. Ex. 1001, 2:7–9, 2:52–67, 3:5–15. The '497 patent describes using internal and external thermal properties and other variables (e.g., building square footage, insulation, renovations, etc.) to calculate a value for the operational efficiency of an HVAC system. Ex. 1001, 4:15–37; 5:4–23; 10:57–11:19. 11:48–57.

*C. Illustrative Claim*

Petitioner challenges claims 1–12 of the '497 patent. Claims 1 and 7 are independent claims. Claim 1 is illustrative, and is reproduced below:

1. A system for calculating a value for the operational efficiency of a heating, ventilation, and air conditioning (HVAC) system comprising:

at least one HVAC control system that receives temperature measurements from at least a first location conditioned by at least one HVAC system;

one or more databases that store at least said temperatures measured at said first location over time; and

one or more processors that receive outside temperature measurements from at least one source other than said HVAC system, wherein said one or more processors are configured to calculate one or more rates of change in temperature at said first location for periods during which the status of the HVAC system is “on” and wherein said one or more processors are further configured to calculate one or more rates of change in temperature at said first location for periods during which the status of the HVAC system is “off”, and to relate said calculated rates

of change to said outside temperature measurements.

Ex. 1001, 13:31–50.

*D. The Asserted Unpatentability Challenges*

Petitioner contends claims 1–12 of the ’497 patent are unpatentable based on the following challenges:

References	35 U.S.C §	Claims Challenged
Ehlers <sup>1</sup>	102	1, 4, 7, 10
Ehlers, Barnard <sup>2</sup>	103	1, 4–7, 10–12
Ehlers, Barnard, Rosen <sup>3</sup>	103	2, 3, 8, 9

Petitioner also relies on a declaration from Rajendra Shah (Ex. 1002, “the Shah Declaration”).

II. DISCRETION UNDER 35 U.S.C. § 314

Patent Owner argues that we should exercise discretion under 35 U.S.C. § 314 and deny institution because the ’497 patent is the subject of a pending ITC proceeding that is at an advanced stage and involves the same parties, overlapping claims, and the same prior art. Prelim. Resp. 2–4 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Petitioner argues that “the ITC cannot fully decide issues of invalidity,” and the evaluation of the factors set forth in

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<sup>1</sup> US 6,216,956 B1, issued Apr. 17, 2001 (Ex. 1008).

<sup>2</sup> US 4,660,759, issued Apr. 28, 1987 (Ex. 1015).

<sup>3</sup> US 6,789,739 B2, issued Sep. 14, 2004 (Ex. 1010).

*Fintiv* demonstrates we should *not* exercise discretion to deny institution of *inter partes* review. *See generally*, Reply.

*A. Parallel ITC Investigation*

As noted above, an ITC investigation involving the '497 patent, Patent Owner, and Petitioner (as well as other Respondents) is currently pending. Patent Owner filed a complaint in the ITC alleging infringement of the '497 patent by Petitioner on October 22, 2019, and the ITC instituted the investigation on November 22, 2019. Prelim. Resp. 4. A hearing in the ITC is scheduled to begin on November 16, 2020. Sur-reply 1. Claims 1, 2, and 5 of the '497 patent are at issue in the ITC investigation. Reply 6. As of the filing date of the Preliminary Response, fact and expert discovery in the ITC investigation had closed, and the parties had already exchanged witness statements, exhibit lists, and deposition designations. Prelim. Resp. 4–5.

*B. Parallel District Court Proceedings*

Of the six district court proceedings listed above in Section I.A, the cases involving defendants Diakin and Schnieder Electric have been dismissed. Reply 1. The four remaining cases, involving defendants Google, Alarm.com, Ecobee, and Vivint, have been stayed pending resolution of the ITC investigation. Reply 1; Prelim. Resp. 4.

*C. Analysis*

In determining whether to exercise discretion on behalf of the Director, we are guided by the Board's precedential decision in *NHK Spring Co. v. Intri-Plex Techs, Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). In *NHK*, the Board found that the "advanced state of the district court proceeding" was a "factor that weighs in favor of denying" the petition under § 314(a). *NHK*, Paper 8 at 20. The Board determined that

“[i]nstitution of an *inter partes* review under these circumstances would not be consistent with ‘an objective of the AIA . . . to provide an effective and efficient alternative to district court litigation.’” *Id.* (citing *Gen. Plastic Indus. Co., Ltd. v. Canon Kabushuki Kaisha*, IPR2016-01357, Paper 19, 16–17 (PTAB Sept. 6, 2017) (precedential in relevant part)).

The Board’s precedential decision in *Fintiv* sets forth six factors that we consider when determining whether to use our discretion to deny institution due to the advanced state of a parallel proceeding:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

*Fintiv*, Paper 11 at 6. “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* (citing Patent Trial and Appeal Board Consolidated Trial Practice Guide 58 (November 2019), <https://www.uspto.gov/TrialPracticeGuideConsolidated>).

We discuss the parties’ arguments in the context of considering the above factors.

i. Factor 1: *Whether a Stay Exists or Is Likely to Be Granted if a Proceeding Is Instituted*

Patent Owner asserts that that this factor weighs against institution because the ITC has not granted a stay and no evidence exists that one may be granted if we institute an *inter partes* review. Prelim. Resp. 6. Patent Owner notes that the Respondents in the ITC investigation (including Petitioner) have neither requested a stay nor given any indication that they would request a stay in the ITC investigation. Prelim. Resp. 6–7. According to Patent Owner, the parties in the ITC investigation have agreed to go to trial in November 2020, and, therefore, “there will be no stay.” Sur-reply 3; *see also* Prelim. Resp. 6 (asserting that a stay in the ITC action is “unlikely” given the advanced stage of the ITC investigation). Patent Owner further contends that “the fact that the parallel district court cases are stayed in the context of concurrent ITC litigation is unremarkable,” and that “*Fintiv* suggests that the PTAB should deny institution when district court cases are stayed in light of an ITC investigation,” which “makes sense because instituting this IPR will not promote efficiency by causing any currently pending cases to be stayed.” Prelim. Resp. 7.

In that regard, Patent Owner argues that “[t]he *Fintiv* factors are not limited to district court proceedings and are ‘factors related to a parallel, co-pending petition,’ which includes parallel ITC proceedings.” Prelim. Resp. 5. Patent Owner asserts that “parties expend enormous resources in ITC investigations, and the ITC is a forum where parties can litigate their disputes fully and fairly.” Prelim. Resp. 5. As a result, “the same considerations of Board, party, and judicial economy apply” to ITC and district court proceedings. Prelim. Resp. 5.

Patent Owner further contends that

*Fintiv* recognizes that even though “ITC final invalidity determinations do not have preclusive effect,” it explains that denial of institution can nonetheless be sensible since “it is difficult to maintain a district court proceeding on patent claims determined to be invalid at the ITC.” *Fintiv Order* at 8-9. As a practical matter, the parties’ validity disputes as to the ‘497 patent are likely to carry over to the district court cases.

Prelim. Resp. 5–6; *see also* Sur-reply 3–4 (stating that “once the ITC case makes a determination regarding invalidity as to a particular patent versus a particular prior art, neither side is likely to maintain the same assertion in district court”).

Petitioner argues that this factor weighs in favor of institution because “all active infringement lawsuits are stayed pending the outcome of the ITC action.” Reply 4. Petitioner notes that *Fintiv* did not involve a co-pending ITC investigation (Reply 4), and asserts that “[t]he stayed district court cases are . . . a more appropriate benchmark for measuring the timing of parallel proceedings” because the ITC cannot hold claims invalid with binding effect, and, therefore, “whatever the result before the ITC—validity will be litigated again in various district court actions” (Reply 2). Petitioner also argues that because the ITC investigation involves only claims 1, 2, and 5 of the ‘497 patent, the remaining non-elected claims will be litigated in the district court actions regardless of the outcome at the ITC. Reply 5–6.

We disagree with Petitioner’s assertion that the district court actions are the “more appropriate benchmark” to consider for purposes of analyzing the *Fintiv* factors in this case, such that the ITC investigation can, in effect, be ignored. As noted by Patent Owner, *Fintiv* expressly addresses ITC investigations, and the Board has considered ITC investigations in weighing whether or not to exercise its discretion under 35 U.S.C. § 314. *Fintiv*,

Paper 11 at 8 (“[E]ven though the Office and the district court would not be bound by the ITC’s decision, an earlier ITC trial date may favor exercising authority to deny institution under *NHK* if the ITC is going to decide the same or substantially similar issues to those presented in the petition.”); *Garmin International, Inc. v. Koninklijke Philips N.V.*, IPR2020-00754, Paper 11 (PTAB Oct. 27, 2020); *Comcast Cable Communications, LLC v. Rovi Guides, Inc.*, IPR2020-00800, Paper 10 (PTAB Oct. 22, 2020).

Specifically with regard to Factor 1, there is no evidence here that Petitioner has requested a stay of the ITC investigation, and we agree with Patent Owner that a stay of the ITC investigation is unlikely given the hearing in the ITC investigation is scheduled to begin on November 16, 2020. Accordingly, we determine that this factor weighs in favor of not instituting this proceeding.

ii. Factor 2: *Proximity of the Court’s Trial Date to the Board’s Projected Statutory Deadline*

Patent Owner argues this factor weighs strongly against institution based on the November 16, 2020 hearing date and the March 15, 2021 “target date” in the ITC.<sup>4</sup> Prelim. Resp. 8; Sur-reply 4–5. Patent Owner notes that the trial and target dates will occur months before the deadline for a final written decision in this proceeding (November 2021). Prelim. Resp. 8; Sur-reply 4–5.

Petitioner again focuses on the district court cases, noting that the cases do not have a scheduled trial date. Reply 6 (again asserting that the

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<sup>4</sup> We note that the final determination target date in the ITC proceeding has been extended to August 20, 2021, following the rescheduling of the hearings to November 16–19, and 23, 2020. ITC Inv. No. 337-TA-1185, Order 22 (dated Nov. 2, 2020), 3–4.

district court cases “are a more appropriate benchmark for comparing relative timing”).

As discussed above, we disagree with Petitioner’s contention that our analysis of this factor should focus on the district court cases, and not the ITC investigation. *See Fintiv*, Paper 11 at 8–9; *Garmin International*, IPR2020-00754, Paper 11; *Comcast Cable Communications*, IPR2020-00800, Paper 10. The current ITC schedule has an evidentiary hearing set for November 16, 2020, the same month as this decision on institution, with a final ITC determination set to pre-date the Board’s final written decision by several months. These facts weigh against institution of this proceeding.

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

Patent Owner argues that the parties have already invested, and will continue to invest, an enormous amount of effort and resources in the ITC proceeding. Prelim. Resp. 9–10. Specifically, Patent Owner contends that the parties have already concluded fact and expert discovery, exchanged witness statements, exhibit lists, exhibits, and deposition designations, and by November 20, 2020, the projected date of the institution decision, the parties will have concluded all pre-trial disclosures and motion *in limine* briefing. Prelim. Resp. 9–10.

Petitioner argues that this factor weighs in favor of institution because “[w]hile the parties have invested a significant amount in the ITC proceedings, they have invested very little in the district court proceedings, and it is only in district court that a dispositive ruling on invalidity could be rendered, absent this *IPR*.” Reply 6.

After considering the parties’ arguments and evidence of record, we determine that this factor weighs against institution. The parties agree that

they have invested heavily in the ITC investigation, and Patent Owner has provided evidence of the specific resources the parties have expended therein. Prelim. Resp. 9–10; Sur-reply 5; Reply 6. Petitioner’s argument that the parties have invested very little in the district court proceedings is unavailing, as the fact that these additional proceedings exist does not detract from the considerable resources already invested in the ITC proceeding. *See* Sur-reply 5.

iv. Factor 4: *Overlap Between Issues Raised in the Petition and in the Parallel Proceeding*

Patent Owner argues that this factor weighs against institution because of overlapping claims, prior art, and invalidity theories in the ITC investigation and the Petition. Prelim. Resp. 12. In particular, Patent Owner contends that the sole primary reference (Ehlers) and one of only two secondary references (Rosen) relied upon in the Petition are also at issue in the ITC investigation. Sur-reply 6. Patent Owner argues that Petitioner (and the other Respondents) could have chosen different references or agreed not to assert these references in their recent prior art election in the ITC investigation. Sur-reply 6. Patent Owner also contends that the majority of the Petition focuses on independent claim 1, which is one of the claims at issue in the ITC action, and, therefore, “there is substantial overlap in *issues* between the Petition and the ITC case when looking at the overlap of claims.” Sur-reply 6.

Petitioner argues that only claims 1, 2, and 5 are at issue in the ITC investigation, and, therefore, even if the ITC finds them invalid, Patent Owner could still pursue claims 3, 4, and 6–12 in district court. Reply 6–7; *see also* Reply at 5 (arguing the “*Fintiv* consideration loses force” in view of the fact that “only one-quarter of the claims at-issue this IPR could be held

invalid by the ITC”). Petitioner also argues that although the Ehlers and Rosen references, as well as Ground 1 of the Petition, are at issue in the ITC investigation, the combination of those references with Barnard, as reflected in Grounds 2 and 3 of the Petition, is not. Reply 7.

Because the ITC proceeding involves only claims 1, 2, and 5 of the ’497 patent, whereas Petitioner’s challenges in this proceeding involve claims 1–12, resolution of the ITC proceeding will not directly resolve the parties’ dispute concerning patentability of claims 3, 4, and 6–12 of the ’497 patent. Our review of dependent claims 3, 4, 6, 9, 10, and 12 indicates that these claims address limitations not present in the ITC proceeding. *See* Ex. 1001, 14:4–6 and 14:36–39 (claims 3 and 9 requiring use of the internet), 14:7–9 and 14:41–43 (claims 4 and 10 requiring an electricity meter), 14:13–15 and 14:47–49 (claims 6 and 12 requiring temperature measurements at a first location occur at only one physical location). This weighs in favor of institution.

We recognize that independent claim 7 is not in front of the ITC. Petitioner’s arguments for claim 7 in the Petition, however, are substantially identical to those for claim 1. *See* Pet. 18–32, 35–36. Thus, despite the fact that claim 7 is not a part of the ITC investigation, Petitioner’s assertions regarding claim 7 are substantially in front of the ALJ. The same is true for dependent claims 8 and 11, which contain limitations similar to those in claims 2 and 5, respectively, and for which Petitioner’s arguments are substantially the same. *See* Pet. 59–61 (claim 5), 63 (claim 11), 66–67 (claims 2 and 8). This significant overlap between the prior art challenges asserted before the Board and the ITC weighs against institution.

On balance, based on the fact that the Petition is directed to some substantively different claims than those before the ITC, we determine this factor weighs slightly in favor of institution.

v. Factor 5: *Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party*

The parties in the ITC proceeding and this proceeding are the same. Petitioner does not dispute this fact. Accordingly, this factor weighs against institution. *Fintiv*, Paper 11 at 6.

Petitioner states that it is the defendant in only one of the co-pending, stayed district court proceedings, and is only one of several ITC Respondents. Reply 7. Petitioner, however, never explains how or why these facts are relevant to our consideration of this *Fintiv* factor.

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

Neither Patent Owner nor Petitioner direct us to any “other circumstances” that impact our exercise of discretion. For example, Patent Owner states that “there are no other circumstance[s] that favor[] institution.” Prelim. Resp. 13. Petitioner contends that the large number of cases filed by Patent Owner “suggests that fears of overburdening the Patent Owner are unjustified, and that the public interest would be served by having the claims evaluated by the PTAB.” Reply 7. Petitioner, however, fails to explain adequately how “unjustified” fears of overburdening Patent Owner weigh against the exercise of authority to deny institution in view of an earlier trial date in a parallel proceeding, or how the public interest would be served by having certain claims and issues evaluated by both the PTAB and the ITC. *See Fintiv*, Paper 11 at 6.

On balance, we determine that this factor is neutral.

vii. *Balancing the Fintiv Factors*

We have considered the circumstances and facts before us in view of the *Fintiv* factors. Our analysis is fact driven and no single factor is determinative of whether we exercise our discretion to deny institution under § 314(a).

Here, Factors 1, 2, 3, and 5 weigh against institution. The ITC will evaluate Petitioner's assertions regarding two of the three references cited in the Petition and the ITC is scheduled to hold an evidentiary hearing this month and complete its proceeding several months before this matter will reach a final written decision. It is also undisputed that the parties have made a significant investment in the ITC investigation, and that, in view of the advanced stage of the ITC proceeding, a stay is unlikely.

Factor 4 weighs somewhat in favor of institution because the overlap between the asserted claims in the ITC and this proceeding is not complete. Nevertheless, there remains some overlap between the prior art and arguments raised in the ITC action and this proceeding that suggest it may be inefficient to proceed because the ITC may resolve key issues raised in the Petition. *Fintiv*, Paper 11 at 13. For example, as discussed above, although independent claim 7 is not included in the ITC action, claim 1 is, and Petitioner largely relies on its arguments presented for claim 1 as the basis for its argument that Ehlers anticipates claim 7. Additionally, with respect to the dependent claims challenged in this proceeding but not the ITC investigation, Petitioner does not address the additional limitations included in the non-overlapping dependent claims or whether those limitations result in the Petition including "materially different grounds,

arguments, and/or evidence than those presented” in the ITC investigation.  
*Fintiv*, Paper 11 at 12–13.

Factor 6 weighs neither in favor of nor against institution.

Thus, based on the arguments and evidence of record, and in the exercise of the Director’s discretion under 35 U.S.C. § 314(a), *inter partes* review is not instituted.

### III. ORDER

In consideration of the foregoing, it is hereby

ORDERED that the Petition is *denied*, and no trial is instituted.

IPR2020-00946  
Patent 8,131,497 B2

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