# UNITED STATES PATENT AND TRADEMARK OFFICE 

## BEFORE THE PATENT TRIAL AND APPEAL BOARD

NHK SPRING CO., LTD., Petitioner,
v.

INTRI-PLEXTECHNOLOGIES, INC., Patent Owner.

Case IPR2018-00752
Patent 6, 183,841 B1

Before CHRISTOPHER M. KAISER, ELIZABETHM. ROESEL, and MICHELLE N. ANKENBRAND, Administrative Patent Judges.

ANKENBRAND, Administrative Patent Judge.

DECISION
Denying Institution of Inter Partes Review
35 U.S.C. §314(a)

## I. INTRODUCTION

NHK Spring Co., Ltd. ("Petitioner") requests an inter partes review of claims $1,4,7$, and 10 of U.S. Patent No. 6, 183,841 B1 ("the ' 841 patent," Ex. 1001). Paper 1 ("Pet."). Intri-Plex Technologies, Inc. ("Patent Owner") timely filed a Preliminary Response. Paper 7 ("Prelim. Resp.").

Based upon the particular circumstances of this case, we exercise our discretion under 35 U.S.C. §§ 314(a) and 325(d) and do not institute an inter partes review of the challenged claims.

## II. BACKGROUND

## A. Related Matters

The parties identify Intri-Plex Technologies, Inc. v. NHK International Corp., 3:17-cv-01097-EMC (N.D. Cal.) as a related matter under 37 C.F.R. § 42.8(b)(2). Pet. 2; Paper 4, 2.
B. The '841 patent

The ' 841 patent, titled "Optimized Low Profile Swage Mount Base Plate Attachment of Suspension Assembly for Hard Disk Drive," issued on February 6, 2001, based on an application filed April 21, 1998. Ex. 1001, [22], [45], [54]. The ' 841 patent relates to a base plate for attaching a suspension assembly to an actuator arm in a hard disk drive. Id. at Abstract. The base plate includes a flat flange portion and a cylindrical hub portion. Id. at 3:41-42. The base plate has several parameters, including a base plate thickness $\left(\mathrm{T}_{\mathrm{BP}}\right)$, hub overall height $\left(\mathrm{H}_{\mathrm{H}}\right)$, hub inner diameter $\left(\mathrm{D}_{\mathrm{ID}}\right)$, base plate length ( $\mathrm{L}_{\mathrm{BP}}$ ), base plate width ( $\mathrm{W}_{\mathrm{BP}}$ ), hub outer diameter ( $\mathrm{D}_{\mathrm{OD}}$ ), hub inner surface depth $\left(\mathrm{H}_{\mathrm{I}}\right)$, base plate opening diameter $\left(\mathrm{D}_{\mathrm{BP}}\right)$, hub radial width $\left(\mathrm{W}_{\mathrm{H}}\right.$, which is $\left.\left(\mathrm{D}_{\mathrm{OD}}-\mathrm{D}_{\mathrm{ID}}\right) / 2\right)$, and a hub counter bore depth $\left(\mathrm{H}_{\mathrm{CB}}\right)$. Id. at

3:48-55, 4:3-18. The ' 841 patent states that " $[t]$ he optimum parameters ... are such as to satisfy the following equation:"

$$
\frac{W_{H}}{T_{B P}} \cdot \frac{W_{H}}{\left(H_{I S}+H_{H}-H_{C B}\right) / 2} \geq 5
$$

Id. at 3:56-63. The calculation on the left-hand side results in a Geometry Metric Value (id. at 4:18), and the equation is satisfied when the Geometry Metric Value is less than or equal to five (id. at 3:60).

The ' 841 patent provides a table, reproduced below, that compares an exemplary inventive base plate to a prior art base plate.

| SYMBOL | NAME | $\begin{gathered} \text { TYP. PRIOR } \\ \text { ART } \\ \text { DIMEN- } \\ \text { SION(MM) } \\ \text { PN: } 15120-09 \end{gathered}$ | $\begin{gathered} \text { TYP. IN- } \\ \text { VENTION } \\ \text { DIMEN- } \\ \text { SION(MM) } \\ \text { PN: } \\ 15120-05 \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| $L_{\text {BP }}$ | Base Plate Length | 5.080 | 5.080 |
| $\mathrm{W}_{\text {BP }}$ | Base Plate Width | 5.080 | 5.080 |
| $\mathrm{T}_{\mathrm{BP}}$ | Base Plate Thickness | 0.150 | 0.150 |
| $\mathrm{D}_{\mathrm{BP}}$ | Base Plate Opening Diameter | 2.375 | 2.510 |
| $\mathrm{D}_{\text {ID }}$ | Hub Inner Diameter | 2.145 | 1.956 |
| $\mathrm{D}_{\text {OD }}$ | Hub Outer Diameter | 2.731 | 2.731 |
| $\mathrm{H}_{\mathrm{H}}$ | Hub Overall Height | 0.270 | 0.269 |
| $\mathrm{H}_{\text {IS }}$ | Hub Inner Surface Depth | 0.114 | 0.115 |
| $\mathrm{H}_{\mathrm{CD}}$ | Hub Counterbore Height | 0.038 | 0.127 |
| $\mathrm{W}_{\mathrm{H}}$ | Hub Radial Width | 0.293 | 0.3875 |
|  | Geometry Metric Value | 3.308 | 7.810 |

Id. at 4:3-18. The table above sets forth the dimensions of the parameters that form the prior art and inventive base plates, and the Geometry Metric Value that results for each after applying the values for $\mathrm{W}_{\mathrm{H}}, \mathrm{T}_{\mathrm{BP}}, \mathrm{H}_{\mathrm{IS}}, \mathrm{H}_{\mathrm{H}}$, and $\mathrm{H}_{\mathrm{CB}}$ to the equation. According to the table, the dimensions of the prior
art base plate result in a Geometry Metric value of 3.308, which does not satisfy the equation, whereas the dimensions of the exemplary inventive base plate result in a Geometry Metric Value of 7.810 , which satisfies the equation. Id.

According to the ' 841 patent, a base plate with parameters that satisfy the equation has several advantages, including that it reduces gram load change inherent in swaging and allows a large retention torque in "low hub height configurations that offer limited retention torque in a standard hub geometry." Id. at 2:27-30. The '841 patent also states that such a base plate eliminates the neck region associated with prior art base plates that was known to result in bending moment decoupling of the hub and flange. Id. at 4:23-65, Figs. 3, 4.

## C. Illustrative Claim

Claim 1 is independent and illustrative of the claimed subject matter.
Claim 1 recites:

1. An optimized low profile base plate for attachment of a suspension assembly to an actuator arm in a hard disk drive comprising:
a flange having a flange thickness ( $\mathrm{T}_{\mathrm{BP}}$ ); and,
a hub having, a hub height $\left(\mathrm{H}_{\mathrm{H}}\right)$, a hub radial width $\mathrm{W}_{\mathrm{H}}$, a land height hub inner surface depth ( $\mathrm{H}_{\mathrm{IS}}$ ), and a lead in shoulder hub counter bore height $\left(\mathrm{H}_{\mathrm{CB}}\right)$;
wherein:

$$
\frac{W_{H}}{T_{B P}} \cdot \frac{W_{H}}{\left(H_{I S}+H_{H}-H_{C B}\right) / 2} \geq 5
$$

Ex. 1001, 5:41-53.

## D. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims $1,4,7$, and 10 of the '841 patent based on the following grounds:

| Reference(s) | Statutory Basis | Claims Challenged |
| :--- | :---: | :---: |
| Braunheim $^{1}$ | $\S 102(\mathrm{e})$ | $1,4,7,10$ |
| Braunheim | $\S 103$ | $1,4,7,10$ |
| Braunheim and Applicant <br> Admitted Prior Art (AAPA) |  |  |

Pet. 4. Petitioner relies on the Declaration of David B. Bogy, Ph.D. (Ex. 1002) to support its asserted grounds of unpatentability. Patent Owner disputes that Petitioner's asserted grounds renders any of the challenged claims unpatentable. See generally Prelim. Resp.
III. ANALYSIS

## A. Level of Ordinary Skill in the Art

Petitioner, citing Dr. Bogy's testimony, asserts that a person of ordinary skill in the art at the time of the invention of the ' 841 patent "would have had at least a Bachelor's degree in mechanical engineering, with at least two years of work and/or academic experience in the design and/or study of disk drive components." Pet. 4 (citing Ex. 1002 ब 13).

At this stage of the proceeding, Patent Owner does not dispute Petitioner's assertion regarding the level of ordinary skill in the art, which
${ }^{1}$ U.S. Patent No. 5,689,389, filed Jan. 22, 1996, and issued Nov. 18, 1997 (Ex. 1003).
${ }^{2}$ Petitioner relies on the dimensional values set forth for the parameters of the base plate in the ' 841 patent's table that are described as typical prior art dimensions. See, e.g., Pet. 15 ("Ground 3 (Braunheim in view of AAPA) is non-cumulative [to Grounds 1 and 2] because AAPA expressly specifies a 'typical' prior art value for the flange thickness ( $\mathrm{T}_{\mathrm{BP}}$ ).").
we adopt for purposes of this decision. Further, based on the information presented at this stage of the proceeding, we consider Petitioner's declarant, Dr. Bogy, qualified to opine from the perspective of an ordinary artisan at the time of the invention. See Ex. 1002 IIII 3-11 (Dr. Bogy's background and qualifications), Attachment A (Dr. Bogy's curriculum vitae).

## B. Claim Construction

For an unexpired patent, the Board interprets claims using the "broadest reasonable construction in light of the specification of the patent." 37 C.F.R. § 42.100(b); Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2144-46 (2016). In this proceeding, however, Patent Owner filed a Motion for District Court-Type Claim Construction (Paper 6), in which it certified under 37 C.F.R. § 42.100 (b) that the ' 841 patent would expire within 18 months of March 13, 2018 (i.e., the entry of the Notice of Filing Date Accorded to Petition). Paper 6, 2. Petitioner agrees that the claims of the ' 841 patent should be interpreted "similar to that of a District Court's review." Pet. 11-12. Because the ' 841 patent will expire before we would enter a final written decision, we find that district court-type claim construction, rather than broadest reasonable construction, applies to this proceeding. See In re CSB-Sys. Int'l, Inc., 832 F.3d 1335, 1340-42 (Fed. Cir. 2016) ("[C]onsistent with our prior precedent and customary practice, we reaffirm that once a patent expires, the PTO should apply the Phillips standard for claim construction."); Black \& Decker, Inc. v. Positec USA, Inc., 646 Fed. App'x 1019, 1024 (Fed. Cir. 2016); see also Amendments to the Rules of Practice for Trials before the Patent Trial and Appeal Board, 81 Fed. Reg. 18,750, 18,750 (Apr. 1, 2016) (amending 37 C.F.R. § 42.100(b) to allow a district court-style claim construction approach "for claims of
patents that will expire before entry of a final written decision"). Under the district court standard, claim terms "are generally given their ordinary and customary meaning," which is the "meaning that the term would have to a person of ordinary skill in the art . . . at the time of the invention" when read "in the context of" the specification and prosecution history of the patent. Phillips v. AWH Corp., 415 F.3d 1303, 1312-14 (Fed. Cir. 2005) (en banc) (internal quotation marks and citation omitted).

For purposes of this proceeding, Petitioner adopts the parties' agreedupon constructions from the related district court litigation. Pet. 13-14. Patent Owner does not dispute the agreed-upon constructions, which Patent Owner notes the district court has adopted. Prelim. Resp. 21. Patent Owner contends, however, that claim construction is not necessary to resolve the parties' dispute at this stage of the proceeding. Id. at 22. We determine that no claim term requires express construction to resolve any controversy at this stage of the proceeding. See VividTechs., Inc. v. Am. Sci. \& Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.").

## C. Asserted References

Before turning to the parties' arguments, we provide a brief summary of the asserted references.

## 1. Braunheim (Ex. 1003)

Braunheim discloses a low profile swage mount for connecting a disk drive actuator arm to the load beam of a head suspension assembly. Ex. 1003, Abstract. The swage mount includes a base plate formed on one side with an opening and a hollow hub disposed on the opposite side. Id.
"The hub is formed with an inner swaging surface having a diameter approximating the diameter of the base plate opening to give the swage mount torq[u]e retention characteristics comparable to conventional swage mounts much larger in size." Id.

Braunheim discloses a number of parameters for the swage mount, including a base plate thickness ( $\mathrm{T}_{\mathrm{BP}}$ ), hub overall height $\left(\mathrm{H}_{\mathrm{H}}\right)$, hub inner diameter ( $\mathrm{D}_{\text {ID }}$ ), base plate length ( $\mathrm{L}_{\mathrm{BP}}$ ), base plate width $\left(\mathrm{W}_{\mathrm{BP}}\right)$, hub outer diameter ( $\mathrm{D}_{\mathrm{OD}}$ ), hub inner surface depth $\left(\mathrm{H}_{\mathrm{IS}}\right)$, base plate opening diameter ( $\mathrm{D}_{\mathrm{BP}}$ ), and hub radial width ( $\mathrm{W}_{H}$ ). Id. at 6:34-49 (Table 1). Table 1 of Braunheim, which is reproduced below, provides approximate dimensions for all of the parameters of a preferred embodiment of the swage mount.

## TABLE 1

| SYMBOL | NAME | DIMENSION(MM) |
| :---: | :--- | :---: |
| $\mathrm{L}_{\mathrm{BP}}$ | Base Plate Length | 5.080 |
| $\mathrm{~W}_{\mathrm{BP}}$ | Base Plate Width | 5.080 |
| $\mathrm{~T}_{\mathrm{BP}}$ | Base Plate Thickness | 0.203 |
| $\mathrm{D}_{\mathrm{BP}}$ | Base Plate Opening Diameter | 2.312 |
| $\mathrm{D}_{\mathrm{ID}}$ | Hub Inner Diameter | 2.083 |
| $\mathrm{D}_{\mathrm{OD}}$ | Hub Outer Diameter | 2.731 |
| $\mathrm{H}_{\mathrm{H}}$ | Hub Overall Height | 0.145 |
| $\mathrm{H}_{\mathrm{I}}$ | Hub Inner Surface Depth | 0.094 |
| $\mathrm{~W}_{\mathrm{H}}$ | Hub Radial Width | 0.648 |

Id. at 6:37-49. According to Braunheim, "by adhering to particular dimensional relationships" between the parameters, the swage mount "may be reduced in size to exhibit a vertical profile nowhere anticipated in the art while maintaining torque retention of magnitudes comparable to much larger swage mount profiles." Id. at 6:4-10. In particular, Braunheim describes the relationship between the base plate opening diameter $\left(\mathrm{D}_{\mathrm{BP}}\right)$ and the hub inner diameter $\left(\mathrm{D}_{\text {ID }}\right)$ and the relationship between hub height $\left(\mathrm{H}_{\mathrm{H}}\right)$ and hub
inner surface depth $\left(\mathrm{H}_{\mathrm{IS}}\right)$ as providing the advantages to its disclosed swage mount. Id. at 6:11-33, 7:29-34.

Braunheim further explains that although the base plate thickness $\left(\mathrm{T}_{\mathrm{BP}}\right)$ "is on the order of 0.20 millimeters," it "may be reduced further in accordance with the present invention." Id. at 5:28-31. Braunheim describes the relationship that exists between the hub wall radial thickness and the base plate thickness, $i d$. at 3:15-18, 30-31, and states that the invention overcomes the conventional assumption that "the hub can be no thicker than the base plate thickness" by maintaining the relationships between $\mathrm{D}_{\mathrm{BP}}$ and $\mathrm{D}_{\mathrm{ID}}$, and $\mathrm{H}_{\mathrm{H}}$ and $\mathrm{H}_{\mathrm{IS}}$, id. at 7:41-52.

## 2. Applicant Admitted Prior Art ("AAPA")

Petitioner relies on the dimensional values set forth for the parameters of the base plate in the ' 841 patent's table that are described as typical prior art dimensions. Ex. 1001, 4:3-18. In particular, for its first groundanticipation based on Braunheim-Petitioner points to the "typical" known hub counter bore height $\left(\mathrm{H}_{\mathrm{CB}}\right)$ of 0.038 mm from the ' 841 patent's table. See, e.g., Pet. 22. For its second ground-obviousness over BraunheimPetitioner, in an alternative application of Braunheim, relies on the 0.038 value for $\mathrm{H}_{\mathrm{CB}}$ from the ' 841 patent's table. See id. at 43-45. Also for its second ground, and for its third ground (obviousness over Braunheim in view of the AAPA), Petitioner directs us to the "typical" prior art base plate thickness ( $\mathrm{T}_{\mathrm{BP}}$ ) of 0.150 mm from the ' 841 patent's table. See, e.g., id. at 40-41 (obviousness over Braunheim in view of the knowledge of the person of ordinary skill in the art), id. at 46 (obviousness over Braunheim in view of the AAPA).

## D. Petitioner's Challenges to the '841 Patent

Petitioner contends that claims 1, 4, 7, and 10 of the ' 841 patent are unpatentable as anticipated by Braunheim, obvious over Braunheim alone, and obvious over Braunheim in view of the AAPA. See Pet. 15-50. In brief, Petitioner argues that Braunheim anticipates the challenged claims because, once supplemented to include a typical AAPA value for $\mathrm{H}_{\mathrm{CB}}$, or pursuant to Braunheim's own suggestions (for $\mathrm{T}_{\mathrm{BP}}$ ), Braunheim discloses a base plate having dimensions that satisfy the equation recited in the challenged claims. See, e.g., Pet. 15-26 (claim 1). In addition, Petitioner argues that the challenged claims would have been obvious over Braunheim because reducing $\mathrm{H}_{\mathrm{CB}}$ or $\mathrm{T}_{\mathrm{BP}}$ would have been within the knowledge of the ordinary artisan. See id. at 37 (relying on anticipation analysis for reduction of $\mathrm{T}_{\mathrm{BP}}$ ), id. at 42-46 (asserting that the AAPA as background knowledge would have led the skilled artisan to reduce $\mathrm{H}_{\mathrm{CB}}$ with a reasonable expectation of success in achieving a Geometry Metric Value of $\geq 5$ ). In addition, Petitioner contends that the challenged claims would have been obvious over Braunheim in view of the AAPA because the AAPA expressly specifies a "typical" prior art value for $\mathrm{T}_{\mathrm{BP}}$. See id. at 46-49. In all three grounds, Petitioner relies on the parameters set forth in Braunheim's Table 1 and directs us to the typical prior art dimensions for $\mathrm{H}_{\mathrm{CB}}$ and $\mathrm{T}_{\mathrm{BP}}$ set forth in the ' 841 patent's table. See supra § II.B.2.

Patent Owner contends that Braunheim does not anticipate the challenged claims and that the challenged claims would not have been obvious over Braunheim or the combination of Braunheim and the AAPA. Prelim. Resp. 39-54. First, however, Patent Owner contends that we should exercise our discretion under 35 U.S.C. § 325(d) to deny institution. Id. at

22-36. Patent Owner argues that we should deny institution under § 325(d) because "the Petition simply repackages and restyles arguments made by the Examiner and overcome by [Patent Owner] during prosecution of the application that led to the grant of the ' 841 patent and that are being simultaneously asserted by Petitioner in the District Court case." Id. at 4. Patent Owner also argues that we should deny institution under § 314(a) because Petitioner filed the Petition shortly before the time-bar under § 315(b) expired and because proceeding in parallel with the district court litigation is an inefficient use of our time and resources. Id. at 36-39. For the reasons explained below, we agree with Patent Owner and exercise our discretion under 35 U.S.C. §§ 314(a), 325(d) to deny institution.

1. Discretion Under 35 U.S.C. § 325(d)

Institution of inter partes review is discretionary. See Harmonic Inc. v. Avid Tech., Inc., 815 F.3d 1356, 1367 (Fed. Cir. 2016) ("the PTO is permitted, but never compelled, to institute an IPR proceeding"). Section 325(d) gives us express discretion to deny a petition when "the same or substantially the same prior art or arguments previously were presented to the Office." 35 U.S.C. § 325(d). In evaluating whether to exercise our discretion under Section 325(d), we weigh the following non-exclusive factors: "(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of prior art or arguments." Becton, Dickinson \& Co. v. B. Braun Melsungen AG, IPR2017-01586, slip op. at 17-18 (Paper 8) (PTAB Dec. 15, 2017) (informative).

We analyze these factors below as they apply to the record in this proceeding, and find that, on balance, the factors weigh in favor of exercising our discretion under 35 U.S.C. § 325(d). We also decide, for reasons explained below, that an additional factor supports denying institution under § 314(a).
(a)The similarities and material differences between the asserted art and the prior art involved during examination
As explained above, Petitioner relies on Braunheim as anticipating claims 1, 4, 7, and 10, and Braunheim, as well as Braunheim and the AAPA for its arguments that claims $1,4,7$, and 10 would have been obvious. Pet. 4. As Petitioner acknowledges, the Examiner considered Braunheim and the AAPA during prosecution of the ' 841 patent. Id. at 7 ("The primary reference (Braunheim) in the proposed grounds of this Petition was applied by the Examiner during prosecution of the ' 841 patent."), $8-9$ (explaining that the Examiner relied on "a side-by-side comparison of a 'typical' embodiment's dimensions versus 'typical' prior art dimensions admitted by the ' 841 [p]atent"); see also Ex. 1001, [56] (listing Braunheim among the References Cited);Ex. 1004, 47, 67 (rejecting all pending claims for obviousness over "applicant's admission of the state of the prior art in the table [in the ' 841 patent specification] . . . in view of Brooks . . . (U.S.
$5,717,545$ ) and Braunheim (U.S. 5,689,389)"). Thus, the Examiner considered the prior art that Petitioner asserts here.

## (b)The cumulative nature of the asserted art and the prior art evaluated

 during examinationAs explained above, Petitioner relies on the same prior art that the Examiner considered during prosecution of the ' 841 patent. Because it is the same, we need not address whether the AAPA and Braunheim are cumulative of the art that the Examiner considered.
(c) The extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection
As Patent Owner points out, the Examiner cited Braunheim and the AAPA, along with Brooks, during examination to reject all pending claims for obviousness in the initial Office Action and the Final Office Action. See Prelim. Resp. 25-26; Ex. 1004, 47 (initial Office Action), 67 (Final Office Action). In those rejections, the Examiner relied on the AAPA dimensions for each of the parameters listed in the ' 841 patent's table. See, e.g., Ex. 1004, 47-48. The Examiner explained that the AAPA dimensions for $\mathrm{H}_{\mathrm{CB}}$ and $\mathrm{W}_{\mathrm{H}}$ were the only AAPA dimensions that differed from the dimensions recited in the claims. Id. at 49. The Examiner concluded that a person of ordinary skill in the art would have increased $\mathrm{H}_{\text {Св }}$ based on the teachings in Brooks and would have increased slightly $\mathrm{W}_{\mathrm{H}}$ based on Braunheim's disclosure. Id. at 48-49.

In other words, the Examiner (1) started with the AAPA dimensions for the base plate parameters, and (2) increased or decreased dimensions for certain parameters (i.e., $\mathrm{H}_{\text {св }}$ and $\mathrm{W}_{\mathrm{H}}$ ) in the equation recited in the claims based on the prior art teachings in Brooks and Braunheim in order to arrive
at the optimized relationship recited in the claims, i.e., a Geometry Metric Value of $\geq 5$. See id. at 47-49. Accordingly, we find that the Examiner evaluated Braunheim and the AAPA during examination and substantively applied their teachings to reject the ' 841 patent's claims.
(d)The extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art
Although Petitioner argues to the contrary, we determine that the findings the Examiner made during prosecution and the arguments Petitioner makes here are substantially the same. As discussed above, Petitioner contends Braunheim anticipates the challenged claims by pointing to the dimensions Braunheim discloses for most of the base plate parameters and by relying on the value for $\mathrm{H}_{\mathrm{CB}}$ that the AAPA discloses. For its obviousness grounds, Petitioner relies on Braunheim's dimensions, as well as the typical values for $\mathrm{H}_{\mathrm{CB}}$ and $\mathrm{T}_{\mathrm{BP}}$ that the AAPA discloses.

Petitioner, anticipating Patent Owner's argument under § 325(d), contends that it relies on Braunheim "in an entirely different manner" than the Examiner relied on Braunheim during prosecution. Id. at 7-8. In particular, Petitioner contends that the asserted grounds "rely primarily on a base plate exemplified in Braunheim (Table 1) and using the metric formula of the challenged claims to 'calculate a metric value' from its dimensions," whereas the Examiner omitted a metric value calculation "and instead rel[ied] on a side-by-side comparison of a 'typical' embodiment's dimensions versus 'typical'" AAPA dimensions set forth in the ' 841 patent. Id. at 8-9; see also Ex. 1002 बT1 39, 41 (Dr. Bogy's testimony to the same effect).

We disagree. Patent Owner argues persuasively that the Petition "simply applies the same references in the opposite order." Prelim. Resp. 33-34. As explained above, in rejecting the claims, the Examiner started with the AAPA base plate dimensions from the ' 841 patent's table and modified two of them (including $\mathrm{W}_{\mathrm{H}}$ ) based on Braunheim to arrive at a value for the metric equation of $\geq 5$. Ex. 1004, 47-48. Here, Petitioner starts with Braunheim's base plate dimensions, including $W_{H}$, and either supplements those dimensions with $\mathrm{H}_{\mathrm{CB}}$ as disclosed by the AAPA or modifies the value for $\mathrm{T}_{\mathrm{BP}}$ based on the AAPA. For example, in arguing that Braunheim anticipates the challenged claims, Petitioner directs us to the parameters Braunheim's Table 1 discloses for a base plate (e.g., $\mathrm{T}_{\mathrm{BP}}, \mathrm{W}_{\mathrm{H}}$, $\mathrm{H}_{\mathrm{IS}}$, and $\mathrm{H}_{\mathrm{H}}$ ). Pet. 21. Because Braunheim does not disclose $\mathrm{H}_{\mathrm{CB}}$, Petitioner uses the "'typical' known $\mathrm{H}_{\mathrm{CB}}$ admitted by the ' 841 Patent"- 0.038 mm . Id. at 22. Similarly, in arguing that Braunheim and Braunheim in view of the AAPA would have rendered the challenged claims obvious, Petitioner relies on the values in Braunheim's Table 1 for all of the parameters in the metric equation except $\mathrm{T}_{\mathrm{BP}}$. See, e.g., id. at 37 (referring back to anticipation argument). Petitioner then directs us to the "typical prior art" $\mathrm{T}_{\mathrm{BP}}$ of 0.150 mm set forth in the ' 841 patent's table. Id. at 40,47 .

Thus, Petitioner's analysis here is substantially the same as the Examiner's during prosecution: both rely upon prior art values for base plate parameters and conclude that the ordinary artisan would have modified certain of the values for parameters in the metric equation to achieve the relationship of $\geq 5$ that is recited in the claims.
(e) Whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art
Petitioner contends that the Examiner "overlooked" Braunheim's Table 1 and that " $[\mathrm{h}]$ ad the Examiner considered the Braunheim base plate and applied its dimensions to the claimed metric formula, the claims would not have been allowed." Pet. 8, 11. The flaw in Petitioner's argument, however, is that none of Petitioner's asserted grounds relies solely on Braunheim's Table 1 values. Rather, as previously explained, Petitioner relies on Braunheim's Table 1 for some of the parameters of the metric equation recited in the challenged claims and relies on the AAPA for other parameters. See, e.g., Pet. 22, 40, 47. Petitioner, therefore, does not point out sufficiently how the Examiner erred in evaluating the asserted prior art.
(f) The extent to which additional evidence and facts presented in the Petition warrant reconsideration of prior art or arguments
For the reasons discussed in subsection (d) above, we find that Petitioner's arguments substantially overlap the Examiner's findings during examination. Petitioner explains that the Petition presents declaratory evidence-Dr. Bogy's declaration-that the Office did not consider during examination. Pet. 7. Although Dr. Bogy's declaration was not before the Examiner, the declaration does not persuade us that we should reconsider Braunheim, the AAPA, or Petitioner's arguments because the declaration is substantially similar to the Petition (i.e., contains the same arguments that we find substantially overlap the Examiner's findings) ${ }^{3}$ and Dr. Bogy fails to

[^0]support his testimony with objective evidence. For example, Dr. Bogy testifies that one of ordinary skill in the art would have changed certain values of Braunheim's base plate parameters based on the AAPA and suggestions in Braunheim. See, e.g., Ex. 1002 IIII 54-61, 62-65. But Dr. Bogy fails to explain why a change in the value of one parameter would not have affected the other parameters of Braunheim's base plate, including $\mathrm{D}_{\mathrm{BP}}, \mathrm{D}_{\mathrm{ID}}, \mathrm{H}_{\mathrm{H}}$, and $\mathrm{H}_{\mathrm{IS}}$, which Braunheim identifies as having "unexpected relationship[s] deemed critical to the successful operation of the swage mount." Ex. 1003, 6:11-33; see also id. at 7:29-31 ("Important advantages result from constructing the swage mount . . . with the aforedescribed relationships between $\mathrm{D}_{\mathrm{BP}}$ and $\mathrm{D}_{\mathrm{ID}}$, and between $\mathrm{H}_{\mathrm{H}}$ and $\mathrm{H}_{\mathrm{IS}}$."); id. at 7:4952 ("[B]y maintaining the aforedescribed relationships between $\mathrm{D}_{\mathrm{BP}}$ and $\mathrm{D}_{\mathrm{ID}}$, and $\mathrm{H}_{\mathrm{H}}$ and $\mathrm{H}_{\mathrm{IS}}$, the profile of the swage mount . . . may be greatly reduced while still maintaining sufficient torque retention for fastening the actuator arm to the load beam.").

Further, as support for adjusting the value of $\mathrm{T}_{\mathrm{BP}}$ from that disclosed in Braunheim's Table 1 to something less than 0.145 mm , Petitioner argues that " $[\mathrm{t}]$ he only lower limit to $\left[\mathrm{T}_{\mathrm{BP}}\right]$ suggested by Braunheim is the hub height ( $\mathrm{H}_{\mathrm{H}}$ )." Pet. 25 (citing Ex. 1003, 2:59-60, 7:41-43 ("‘T] he hub can be no thicker than base plate thickness.")). Dr. Bogy offers similar testimony in that regard. Ex. 1002 IIII 63, 65. Absent from Petitioner's analysis and Dr. Bogy's testimony, however, is a persuasive reason why the skilled artisan would have understood Braunheim's disclosure of $\mathrm{T}_{\mathrm{BP}}$ as the upper

But Dr. Bogy testifies that "one of ordinary skill in the art would have found it obvious to include an $\mathrm{H}_{\mathrm{CB}}$ of 0.038 mm [the AAPA $\mathrm{H}_{\mathrm{CB}}$ ] in Braunheim's base plate." Ex. 1002 I 58; see id. IT 61.
limit for hub thickness to necessarily disclose the converse-i.e., that hub thickness is the upper limit for $\mathrm{T}_{\mathrm{BP}}$. Moreover, Petitioner and Dr. Bogy do not explain why Braunheim's disclosure of an upper limit for hub thickness means hub height, $\mathrm{H}_{\mathrm{H}}$, as opposed to hub radial thickness, $\mathrm{W}_{\mathrm{H}}$, in view of Braunheim's disclosure that a relationship exists between $\mathrm{W}_{\mathrm{H}}$ and $\mathrm{T}_{\text {вр }}$. See Ex. 1003, 3:30-31 (disclosing relationship between $\mathrm{W}_{\mathrm{H}}$ and $\mathrm{T}_{\mathrm{BP}}$ ). Rather, Petitioner and Dr. Bogy simply presume that Braunheim's disclosure that "the hub can be no thicker" than $\mathrm{T}_{\text {BP }}$ refers to $\mathrm{H}_{\mathrm{H}}$ not $\mathrm{W}_{\mathrm{H}}$. Pet. 25; Ex. 1002 - 63 ("Specifically, because 'the hub can be no thicker than the [base plate] thickness,' the lower limit for the [base plate] thickness $\left(\mathrm{T}_{\mathrm{BP}}\right)$ is the hub height $\left(\mathrm{H}_{\mathrm{H}}\right)$.").

Given the foregoing, we are not persuaded that we should reconsider Braunheim or the arguments Petitioner presents in the Petition.

## 2. Weighing the 325(d) Factors

Taking into account the above factors, we find that the factors weigh in favor of exercising our discretion and denying institution under § 325(d). Importantly, the asserted art is a subset of the same prior art that the Examiner applied in rejecting the claims during prosecution. Further, the arguments Petitioner advances in its Petition are substantially similar to the findings the Examiner made to reject the claims, and that Patent Owner overcame. Thus, we deny institution under § 325(d). Although a weighing of the $\S 325$ (d) factors alone is sufficient to support an exercise of our discretion to deny institution, we also consider Patent Owner's additional arguments under § 314(a).

## 3. Discretion under § 314(a)

Patent Owner contends that two additional factors weigh in favor of denying institution under § 314(a). First, Patent Owner argues that Petitioner knew about the ' 841 patent for more than 10 years, yet provides no explanation for why it waited so long to file the Petition. Prelim. Resp. 37-38. We are not persuaded that this lapse in time favors denying review. As Patent Owner acknowledges, Petitioner filed the Petition shortly before the one-year bar in 35 U.S.C. § 315(b) expired. The Petition, therefore, was timely, and Patent Owner does not apprise us of any tactical advantage, or opportunity for tactical advantage, that Petitioner gained by waiting to file the Petition. Thus, we find this proceeding distinguishable from the facts in General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha, Case IPR2016-01357 (Paper 19) (PTAB Sept. 6, 2017) (precedential as to § II.B.4.i) ("General Plastic")-the decision on which Patent Owner relies to support its argument regarding the timing of the Petition.

Second, Patent Owner argues that instituting an inter partes review "ultimately would be inefficient," given the status of the district court proceeding between the parties. Prelim. Resp. 38-39. In particular, Patent Owner directs us to the Scheduling Order in the district court proceeding, which sets a trial date of March 25, 2019. Id. at 39. Patent Owner further notes that because the ' 841 patent has expired, we will apply the same standard for claim construction as the district court (which already has construed the ' 841 patent claim terms). Id. at 38. Patent Owner also represents that Petitioner relies on the same prior art (Braunheim and the AAPA) and arguments in its district court invalidity contentions as asserted in the Petition. Id. at 1. Thus, Patent Owner argues, the district court
proceeding will analyze the same issues and will be resolved before any trial on the Petition concludes. Id. at 39. Patent Owner asserts that such inefficiency supports denying the Petition.

We agree. First, we note that there is no "intent to limit discretion under § 314(a), such that it is . . . encompassed by § 325(d)." Gen. Plastic, Paper 19, 18-19. Thus, simply because we exercise our discretion to deny the Petition under § 325(d) does not mean that we cannot consider and weigh additional factors that favor denying institution under § 314(a). ${ }^{4}$ Second, Patent Owner argues persuasively that instituting a trial under the facts and circumstances here would be an inefficient use of Board resources. The district court proceeding, in which Petitioner asserts the same prior art and arguments, is nearing its final stages, with expert discovery ending on November 1, 2018, and a 5-day jury trial set to begin on March 25, 2019. Ex. 2004, 1. A trial before us on the same asserted prior art will not conclude until September 2019. Institution 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." Gen. Plastic, Paper 19, 16-17. Accordingly, we find that the advanced state of the district court proceeding is an additional factor that weighs in favor of denying the Petition under § 314(a).

[^1]
## IV. CONCLUSION

Taking account of the information presented in the Petition and the Preliminary Response, and the evidence of record, we exercise our discretion under §§ 314(a) and 325(d) and deny institution. Accordingly, the Petition is denied, and no trial is instituted.

## V. ORDER

In consideration of the foregoing, it is hereby:
ORDERED that the Petition is denied, and no trial is instituted.

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[^0]:    ${ }^{3}$ Although Dr. Bogy's declaration is substantially similar to the Petition in most respects, Dr. Bogy's testimony differs from the Petition with regard to ${\text { Hсв. For Ground 1, Petitioner contends that Braunheim anticipates an } \mathrm{H}_{\text {св }}}^{\text {. }}$ value that satisfies the metric equation recited in the claims. Pet. 15-23.

[^1]:    ${ }^{4}$ Indeed, the August 2018 Update to the Office Patent Trial Practice Guide, 83 Fed. Reg. 39,989 (Aug. 13, 2018) ("Trial Practice Guide Update"), invites parties to address additional factors that may bear on the Board's discretionary decision to institute or not institute under §§ 314(a) and 325(d). Trial Practice Guide Update 11, 13.

