UNITED STATES PATENT AND TRADEMARK OFFICE

Paper 11

Entered: April 2, 2019

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VALVE CORPORATION, Petitioner,

v.

ELECTRONIC SCRIPTING PRODUCTS, INC., Patent Owner.

Case IPR2019-00062 (Patent 9,235,934 B2) Case IPR2019-00063 (Patent 9,235,934 B2) Case IPR2019-00084 (Patent 9,235,934 B2)¹

Before ANDREI IANCU, *Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office*, WILLIAM M. FINK, *Vice Chief Administrative Patent Judge*, and ROBERT J. WEINSCHENK, *Administrative Patent Judge*.

WEINSCHENK, Administrative Patent Judge.

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

¹ These cases have not been joined or consolidated. Rather, this Decision governs each case based on common issues. The parties shall not employ this heading style.

I. INTRODUCTION

Valve Corporation ("Valve") filed three petitions (IPR2019-00062, Paper 1, "Pet."; IPR2019-00063, Paper 3; IPR2019-00084, Paper 1) requesting *inter partes* review of claims 1–12 of U.S. Patent No. 9,235,934 B2 (Ex. 1002, "the '934 patent"). This Decision addresses common issues presented by all three petitions. For purposes of this Decision, we treat the Petition in IPR2019-00062 as representative and cite to the record in IPR2019-00062, unless otherwise indicated.

Electronic Scripting Products, Inc. ("Patent Owner") filed a Preliminary Response (IPR2019-00062, Paper 5, "Prelim. Resp.") to the Petition. Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) to deny the Petition as an "unfair" follow-on petition. Prelim. Resp. 7–11. Pursuant to our authorization (Paper 6, 4), Valve filed a Reply (Paper 7, "Reply") to Patent Owner's follow-on petition argument, and Patent Owner filed a Sur-reply (Paper 8, "Sur-reply") to the Reply.

Valve is not the first party to request an *inter partes* review of the '934 patent. HTC Corporation and HTC America, Inc. (collectively, "HTC") previously filed a petition requesting an *inter partes* review of the '934 patent in IPR2018-01031 ("the 1031 IPR"). IPR2018-01031, Paper 2. The Board denied institution of HTC's petition because HTC failed to show a reasonable likelihood of prevailing in establishing the unpatentability of at least one challenged claim. Ex. 1060, 16. Valve filed the Petition in this case after the Board denied institution in the 1031 IPR. Paper 4, 1; Ex. 1060, 1.

In General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha,
Case IPR2016-01357, slip op. at 15–16 (PTAB Sept. 6, 2017) (Paper 19)
(precedential), the Board articulated a non-exhaustive list of factors to be
considered in determining whether to exercise discretion under § 314(a) to
deny a petition that challenges the same patent as a previous petition. Under
the first General Plastic factor, we consider "whether the same petitioner
previously filed a petition directed to the same claims of the same patent."
General Plastic, slip op. at 16. However, our application of the General
Plastic factors is not limited solely to instances when multiple petitions are
filed by the same petitioner. Rather, when different petitioners challenge the
same patent, we consider any relationship between those petitioners when
weighing the General Plastic factors. Based on our consideration of the
General Plastic factors, we determine that it is appropriate to exercise our
discretion under § 314(a) to deny the Petition.

A. Related Proceedings

The '934 patent and a related patent, U.S. Patent No. 8,553,935 B2 (Ex. 1001, "the '935 patent"), are the subject of a patent infringement lawsuit, *Electronic Scripting Products, Inc. v. HTC America, Inc.*, No. 3:17-cv-05806-RS, filed on October 9, 2017, in the United States District Court for the Northern District of California ("the District Court litigation"). Pet. 1; Prelim. Resp. 2. Valve and HTC were named as co-defendants in that lawsuit and were accused of infringing the '934 patent based on HTC's VIVE devices that incorporate Valve's technology. Prelim. Resp. 7–8 (citing Ex. 2010 (declaration of Valve's in-house attorney)); Reply 1. In response to Valve's motion challenging venue, however, Patent Owner

voluntarily dismissed Valve without prejudice on January 25, 2018. Reply 1; Sur-reply 2.

As discussed above, HTC requested an *inter partes* review of the '934 patent in the 1031 IPR, but the Board denied institution. Pet. 1–2; Prelim Resp. 8; Ex. 1060, 16. HTC also requested an *inter partes* review of the related '935 patent in IPR2018-01032, and the Board granted institution. Pet. 1. Valve requested that it be joined to IPR2018-01032, and the Board granted that request. IPR2019-00074, Paper 10, 10. Valve also has pending requests for *inter partes* review of the '935 patent in IPR2019-00064, IPR2019-00065, and IPR2019-00085. Pet. 2; Prelim. Resp. 8.

B. The '934 Patent

The '934 patent relates to determining an absolute pose of a manipulated object in a real three-dimensional environment, particularly of a manipulated object used by human users to interface with the digital world. Ex. 1002, 1:24–28. An object's pose is its position and orientation. *Id.* at 46:14. More specifically, an object's pose combines the three linear displacement coordinates (x, y, z) of any reference point on the object and the three orientation angles, also called the Euler angles (ϕ, θ, ψ) , that describe the object's pitch, yaw, and roll. *Id.* at 1:46–50.

Figure 23 of the '934 patent is reproduced below.

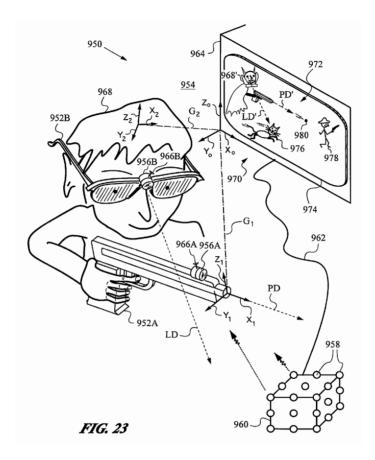


Figure 23 illustrates an embodiment having virtual reality simulation program 970 running on computer 964. *Id.* at 40:15–16.

User or military trainee 968 interfaces with program 970 using manipulated objects 952A and 952B. *Id.* at 39:38–40. For example, "[o]bject 952B is a wearable article, in this case a pair of glasses worn by military trainee 968." *Id.* at 40:3–4. Glasses 952B are equipped with onboard optical measuring arrangement 956B for sensing light emitted from beacons 958, which are disposed in a 3-D grid pattern and modulated by computer 964. *Id.* at 39:41–46, 39:50–51. Using a lens and a position-sensing device (PSD), on-board optical measuring arrangement 956B infers its own absolute pose by viewing beacons 958. *Id.* On-board optical measuring arrangement 956B then transmits absolute pose data (x, y, z, ϕ , θ , θ ,

ψ) to computer 964. *Id.* at 40:35–37, 40:57. Using the absolute pose data, a combat scenario including avatar 968′, corresponding to trainee 968, is displayed on display 974 to monitor the progress of trainee 968. *Id.* at 40:16–18, 40:24–26, 40:37–38. The inferred absolute pose of on-board optical measuring arrangement 952B also allows for the looking direction of trainee 968 to be automatically inferred, tracked, and visualized on display 974. *Id.* at 40:6–11, 40:23–24.

C. Illustrative Claim

Of the challenged claims, claims 1 and 7 are independent. Claim 1 is illustrative of the claims at issue and is reproduced below.

- 1. A wearable article cooperating with a first plurality of predetermined light sources disposed in a known pattern, said wearable article comprising:
- a) a photodetector configured to detect said first plurality of predetermined light sources and generate photodetector data representative of the positions of said first plurality of predetermined light sources; and
- b) a controller configured to identify a derivative pattern of said first plurality of predetermined light sources from said photodetector data, wherein said derivative pattern is indicative of the position of said photodetector.

Ex. 1002, 51:6–16.

D. Evidence of Record

In Valve's three petitions for *inter partes* review of the '934 patent, Valve relies on the following references and declarations.

| IPR2019-00062 | | |
|---|-------------|--|
| Reference or Declaration | Exhibit No. | |
| Declaration of Dr. Gregory Welch | Ex. 1003 | |
| Masaki Maeda et al., Tracking of User Position and | Ex. 1047 | |
| Orientation by Stereo Measurement of Infrared Markers | | |

| and Orientation Sensing, PROCEEDINGS OF THE EIGHTH | |
|---|----------|
| INTERNATIONAL SYMPOSIUM ON WEARABLE COMPUTERS | |
| 77 (2004) ("Maeda") | |
| Anderson et al., U.S. Patent No. 7,063,256 B2 (filed Jan. | Ex. 1054 |
| 23, 2004; issued June 20, 2006) ("Anderson") | |

| IPR2019-00063 | | |
|---|-------------|--|
| Reference or Declaration | Exhibit No. | |
| Declaration of Dr. Gregory Welch | Ex. 1003 | |
| Greg Welch et al., High-Performance Wide-Area Optical | Ex. 1004 | |
| Tracking, Presence: Teleoperators and Virtual | | |
| Environments 1 (Feb. 2001) ("Welch-HiBall") | | |

| IPR2019-00084 | | |
|---|-------------|--|
| Reference or Declaration | Exhibit No. | |
| Declaration of Dr. Gregory Welch | Ex. 1003 | |
| Masaki Maeda et al., A Wearable AR Navigation System | Ex. 1048 | |
| Using Vision Based Tracking with Infrared, TECHNICAL | | |
| REPORT OF IEICE (2004) ("Maeda II") | | |
| Masaki Maeda et al., Proposal of a Three-dimensional | Ex. 1064 | |
| User Position and Orientation Detection Technique | | |
| Using Infrared Identifiers for a Wearable System, The | | |
| 65TH NATIONAL CONVENTION OF THE INFORMATION | | |
| PROCESSING SOCIETY OF JAPAN 203 (2003) ("Maeda I") | | |

E. Asserted Grounds of Unpatentability

In Valve's three petitions for *inter partes* review of the '934 patent, Valve asserts that the challenged claims are unpatentable on the following grounds.

| IPR2019-00062 | | |
|-------------------|----------|-----------|
| Claims Challenged | Basis | Reference |
| 1–12 | § 103(a) | Maeda |
| 1–12 | § 103(a) | Anderson |

| IPR2019-00063 | | |
|-------------------|----------|--------------|
| Claims Challenged | Basis | Reference |
| 1–12 | § 103(a) | Welch-HiBall |

| IPR2019-00084 | | |
|-------------------|----------|----------------------|
| Claims Challenged | Basis | References |
| 1–12 | § 103(a) | Maeda I and Maeda II |

II. ANALYSIS

A. 35 U.S.C. § 314(a)

Patent Owner argues that the Petition should be denied under 35 U.S.C. § 314(a) because the Petition challenges the same claims of the '934 patent as the petition in the 1031 IPR, and Valve is "similarly situated" to HTC, the petitioner in the 1031 IPR. Prelim. Resp. 7–9. Patent Owner also argues that Valve "waited until HTC's petition on this patent was reviewed by the Board (as a test case), and only then filed its own petition on cumulative grounds on the same patent." *Id.* at 9–10 (emphasis omitted). Patent Owner, therefore, contends that the Petition "is nothing more than an 'unfair' follow-on petition of the previously denied HTC IPR petition." *Id.* at 11. Valve responds that the Board should not deny the Petition under § 314(a) because HTC is an "unrelated" company that at most shares "[a] common desire to see a patent invalidated." Reply 1–2. Valve also responds that the timing of its Petition was the result of a recent change in the law regarding the one-year time bar under 35 U.S.C. § 315(b). Reply 2.

For the reasons discussed below, we determine that it is appropriate to exercise our discretion under § 314(a) to deny the Petition.

1. Legal Framework

35 U.S.C. § 314(a) states that

[t]he Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 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.

Under § 314(a), the Director has discretion to deny institution of an *inter* partes review. 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.").

As discussed above, in the precedential *General Plastic* decision, the Board articulated a non-exhaustive list of factors to be considered in determining whether to exercise discretion under § 314(a) to deny a petition that challenges the same patent as a previous petition. *General Plastic*, slip op. at 15–16. These factors are

- 1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
- 2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
- 3. whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
- 4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
- 5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;

- 6. the finite resources of the Board; and
- 7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

Id. at 16.

2. Factor One

Under the first *General Plastic* factor, we consider "whether the same petitioner previously filed a petition directed to the same claims of the same patent." *Id.* at 16. Patent Owner argues that the Petition in this case challenges the same claims of the '934 patent as the petition in the 1031 IPR, and Valve is "similarly situated" to HTC, the petitioner in the 1031 IPR. Prelim. Resp. 7–9. Valve responds that HTC is an "unrelated" company that at most shares "[a] common desire to see a patent invalidated." Reply 1.

The petitions in these cases and the previous petition in the 1031 IPR all challenge claims 1–12 of the '934 patent. *See, e.g.*, Pet. 3; IPR2018-01031, Paper 2, 3. Although Valve did not file the petition in the 1031 IPR, as discussed above, our application of the *General Plastic* factors is not limited solely to instances when multiple petitions are filed by the same petitioner. Rather, when different petitioners challenge the same patent, we consider any relationship between those petitioners when weighing the *General Plastic* factors. *See NetApp Inc. v. Realtime Data LLC*, Case IPR2017-01195, slip op. at 10 (PTAB Oct. 12, 2017) (Paper 9) ("[T]he *General Plastic* factors provide a useful framework for analyzing the facts and circumstances present in this case, in which a different petitioner filed a petition challenging a patent that had been challenged already by previous petitions."). Here, Valve and HTC were co-defendants in the District Court litigation and were accused of infringing the '934 patent based on the same

product, namely HTC's VIVE devices that incorporate technology licensed from Valve. Prelim. Resp. 7–8; Ex. 2009 ¶ 7; Ex. 2010 ¶¶ 6–7. Indeed, in that lawsuit, Valve represented that "HTC's VIVE devices incorporate certain Valve technologies under a technology license from Valve," and that "Valve employees did provide HTC with technical assistance during the development of the accused VIVE devices." Ex. 2010 ¶¶ 6–7. Although Valve was voluntarily dismissed from the District Court litigation after it filed a motion challenging venue (Reply 1; Sur-reply 2), Valve was aware of Patent Owner's infringement allegations at the time HTC filed its petition in the 1031 IPR (Ex. 2009 ¶ 7; Ex. 2010 ¶¶ 6–7).

We determine that the first *General Plastic* factor weighs against institution. As discussed above, the petitions in these cases challenge the same claims of the '934 patent as the previous petition in the 1031 IPR. As also discussed above, Valve and HTC were co-defendants in the District Court litigation and were accused of infringing the '934 patent based on HTC's VIVE devices that incorporate technology licensed from Valve. Thus, there is a significant relationship between Valve and HTC with respect to Patent Owner's assertion of the '934 patent. The complete overlap in the challenged claims and the significant relationship between Valve and HTC favor denying institution.

3. Factor Two

Under the second *General Plastic* factor, we consider "whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it." *General Plastic*, slip op. at 16. This factor includes considering whether the prior art relied on in the later petition "could have been found with reasonable diligence." *Id.* at 20.

Patent Owner argues that Valve "was simply lying in wait and fully aware of the alleged new prior art." Prelim. Resp. 10. Patent Owner points out that the Maeda reference relied on in the Petition in this case cites two articles by Dr. Gregory Welch, the same author as the prior art references in the 1031 IPR. *Id.* Patent Owner contends that "Maeda's citation of these references clearly shows that Maeda's and Welch's research groups were well aware of each other," and that "present Petitioner Valve was also aware of prior Petitioner HTC's prior art references." *Id.*

We determine that the second *General Plastic* factor weighs against institution. With respect to IPR2019-00063, Valve knew or should have known of the Welch-HiBall reference around the time HTC filed its petition in the 1031 IPR because it was one of the two references relied upon by HTC. Ex. 1060, 5. With respect to IPR2019-00062 and IPR2019-00084, as indicated above, the petitions in those cases rely on references attributable to Maeda and Anderson. Although Valve may not have known of the Maeda and Anderson references at the time HTC filed its petition in the 1031 IPR, the timing of Valve's petitions suggests that it could have found the Maeda and Anderson references through the exercise of reasonable diligence around the time of HTC's petition. Specifically, by its own admission, Valve began preparing its petitions on or after August 16, 2018, and filed them less than two months later, which indicates that Valve found the Maeda and Anderson references quickly. See Reply 2. Valve's knowledge of the Welch-HiBall reference and its ability to quickly locate the Maeda and Anderson references favor denying institution.

4. Factor Three

Under the third *General Plastic* factor, we consider "whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition." *General Plastic*, slip op. at 16. The Board previously explained that

factor 3 is directed to Petitioner's potential benefit from receiving and having the opportunity to study Patent Owner's Preliminary Response, as well as our institution decisions on the first-filed petitions, prior to its filing of follow-on petitions. . . . Multiple, staggered petitions challenging the same patent and same claims raise the potential for abuse. The absence of any restrictions on follow-on petitions would allow petitioners the opportunity to strategically stage their prior art and arguments in multiple petitions, using our decisions as a roadmap, until a ground is found that results in the grant of review. All other factors aside, this is unfair to patent owners and is an inefficient use of the *inter partes* review process and other post-grant review processes.

Id. at 17–18 (internal citation and footnote omitted). Patent Owner argues that Valve "waited until HTC's petition on this patent was reviewed by the Board (as a test case)" and then filed its Petition. Prelim. Resp. 9–10.

We determine that the third *General Plastic* factor weighs against institution. In the 1031 IPR, the Board construed the term "wearable article" in the preamble of claims 1 and 7 as limiting and including a "controller." IPR2018-01031, Paper 6, 11. The Board determined that HTC failed to show that the asserted prior art teaches a wearable article including the claimed controller. *Id.* at 15. Valve had access to the Board's institution decision in the 1031 IPR before filing the Petition and used the institution decision as guide to addressing the deficiencies in the 1031 IPR. *See* Pet. 27

("The Board has construed the preamble of claims 1 and 7 to be limiting."). For example, Valve submitted a declaration from the same expert that HTC used in the 1031 IPR, Dr. Welch. Ex. 1003 ¶ 9. In this case, Dr. Welch acknowledges that the Board "disagreed with certain of [his] prior opinions regarding the '934 Patent" in the 1031 IPR, and he "address[es] those issues" in his declaration. *Id.*; *see also id.* ¶¶ 100, 122, 149, 208, 261, 262, 275, 287, 288, 291. Valve's use of the Board's institution decision in the 1031 IPR as a roadmap for the Petition in this case implicates the fairness concerns discussed in *General Plastic* and favors denying institution.

5. Factors Four and Five

Under the fourth and fifth *General Plastic* factors, we consider "the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition" and "whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent." *General Plastic*, slip op. at 16.

Patent Owner argues that "given that Valve and HTC have been immersed and were intimately involved in [the] subject 'VIVE' technology in tandem and were both 'sued at the same time,' there can be no colorable reason that their petitions should not have been filed 'around the same time." Prelim. Resp. 10. Valve responds that the timing of its Petition was dictated by the Federal Circuit's decision in *Click-to-Call Technologies*, *LP v. Ingenio*, *Inc.*, 899 F.3d 1321 (Fed. Cir. 2018). Reply 2. Valve argues that, under the Board's established practice, the voluntary dismissal of a district court complaint without prejudice tolled the one-year deadline for requesting an *inter partes* review under § 315(b). *Id.* Valve contends that,

as a result, it "had no intention of filing any IPR petitions after its dismissal" from the District Court litigation. *Id.* According to Valve, however, *Clickto-Call* changed the Board's practice by holding that the voluntary dismissal of a district court complaint without prejudice does not toll the one-year deadline under § 315(b). *Id.* Thus, after *Click-to-Call*, Valve "immediately began preparing its own petitions—including analyzing prior art and retaining an expert—to avoid a statutory bar if [Patent Owner] refiled in the future." *Id.* Valve states that the Board's denial of HTC's petition in the 1031 IPR "was not a factor in Valve's decision to pursue its petitions." *Id.*

We determine that the fourth and fifth *General Plastic* factors weigh against institution. The *Click-to-Call* decision may have prompted Valve to file the Petition before the deadline under § 315(b), but it does not excuse the five-month delay between the filing of HTC's petition and Valve's Petition. As discussed above, Valve could have found the prior art asserted in its Petition through the exercise of reasonable diligence at or around the time of HTC's petition. As also discussed above, Valve was a co-defendant with HTC in the District Court litigation and provides HTC with technology used in the accused VIVE devices. As a licensor of technology incorporated in the accused products, Valve's interests are aligned closely with HTC's interests, and Valve could have filed its Petition at or around the same time as HTC. The fact that Valve waited five months after HTC's petition to file the Petition in this case favors denying institution. If *Click-to-Call* had been decided differently, and Valve had waited even longer to file these petitions, Valve's delay still would favor denying institution.

6. Factors Six and Seven

Under the sixth and seventh *General Plastic* factors, we consider "the finite resources of the Board" and "the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review." *General Plastic*, slip op. at 16. The sixth and seventh factors are efficiency considerations. *Id.* at 16–17; *see also* Trial Practice Guide Update,² at 9 (referenced at 83 Fed. Reg. 39,989 (Aug. 13, 2018)) (noting that the Director's discretion under § 314(a) is informed by 35 U.S.C. § 316(b), which requires "the efficient administration of the Office, and the ability of the Office to timely complete proceedings instituted under this chapter").

We determine that the sixth and seventh *General Plastic* factors weigh against institution. In general, having multiple petitions challenging the same patent, especially when not filed at or around the same time as in this case, is inefficient and tends to waste resources. Here, Valve waited until after the institution decision in the 1031 IPR, and then filed not one but three additional petitions. These serial and repetitive attacks implicate the efficiency concerns underpinning *General Plastic*, and, thus, favor denying institution.

7. *Summary*

As discussed above, the evidence of record shows that all the *General Plastic* factors weigh against institution. As a result, we determine that it is appropriate to exercise our discretion under § 314(a) to deny institution.

² Available at https://go.usa.gov/xU7GP.

III. CONCLUSION

For the forgoing reasons, we exercise our discretion under § 314(a) to deny institution of an *inter partes* review.

IV. ORDER

It is hereby

ORDERED that the Petition is *denied*, and an *inter partes* review is not instituted.

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