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Paper 11
Entered: December 6, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENERAL MOTORS LLC AND NISSAN NORTH AMERICA, INC.,
Petitioner,

v.

NEO WIRELESS LLC,
Patent Owner.

IPR2023-00962
Patent 10,447,450 B2

Before KRISTEN L. DROESCH, HYUN J. JUNG, and STEPHEN E. BELISLE, *Administrative Patent Judges.*

DROESCH, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314
Denying Motion for Joinder as Moot
35 U.S.C. § 315(c); 37 C.F.R. § 42.122

I. INTRODUCTION

General Motors LLC and Nissan North America Inc. (collectively "Petitioner") filed a Petition requesting *inter partes* review of claims 7 and 11 of U.S. Patent No. 10,447,450 B2 (Ex. 1001, "the '450 Patent"). Paper 4 ("Pet."). Petitioner also filed a Motion for Joinder (Paper 3) with *Ford Motor Company v. Neo Wireless LLC*, IPR2023-00763 ("Ford IPR"). Paper 3 ("Mot."). Petitioner also filed a "Notice Ranking and Explaining Material Differences Between Petitions for *Inter Partes* Review of U.S. Patent No. 10,447,450."[1] Paper 2. Neo Wireless LLC ("Patent Owner") filed a Preliminary Response (Paper 10, "Prelim. Resp.") and a Response to Petitioner's Motion for Joinder (Paper 8). Petitioner filed a Reply in Support of Motion for Joinder. Paper 9.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2022). We may not institute an *inter partes* review "unless . . . 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).

We also have authority to consider Petitioner's Motion for Joinder. *See* 35 U.S.C. § 315(c); 37 C.F.R. § 42.122.

For the reasons explained below, we deny Petitioner's Motion for Joinder as moot.

Based on our consideration of the factors set forth in *General Plastic Industrial Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (precedential only as to Section II.B.4.i) ("*General*

[1] Petitioner ranks the petition filed in IPR2023-00963 ahead of this Petition.

Plastic"), and expanded upon in *Valve Corp. v. Electronic Scripting Products, Inc.*, IPR2019-00062, Paper 11 (PTAB Apr. 2, 2019) (precedential) ("*Valve*"), we determine that the circumstances before us warrant the exercise of discretion under § 314(a) to deny institution of *inter partes* review of the '450 Patent.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies General Motors LLC, Nissan North America, Inc. General Motors Company, LG Electronics, Inc., and Nissan Motor Acceptance Corporation a/k/a Nissan Motor Acceptance Company LLC as the real parties-in-interest. Pet. 54–55. Patent Owner identifies itself as the real party-in-interest. Paper 6, 1.

B. Related Matters

Petitioner lists numerous civil actions in which Patent Owner is the plaintiff and the '450 Patent is involved. Pet. 55–57. Patent Owner lists ten current district court proceedings involving the '450 Patent and fourteen proceedings that, according to Patent Owner, have been terminated. Paper 6, 1–4. The current district court proceedings include:

> *In Re: Neo Wireless, LLC Patent Litigation*, No. 2-22-md-03034 (E.D. Mich.)
>
> *Neo Wireless, LLC v. Ford Motor Co.*, No. 2-22-cv-11402 (E.D. Mich.)
>
> *Neo Wireless LLC v. American Honda Motor Co., Inc. et al.*, No. 2-22-cv-11403 (E.D. Mich.)
>
> *Neo Wireless, LLC v. Volkswagen Group of America, Inc. et al.*, No. 2-22-cv-11404 (E.D. Mich.)

Neo Wireless, LLC v. Nissan North America Inc et al., No. 2-22-cv-11405 (E.D. Mich.)

Neo Wireless LLC v. Toyota Motor North America, Inc. et al., No. 2-22-cv-11406 (E.D. Mich.)

Neo Wireless, LLC v. General Motors Co. et al., No. 2-22-cv-11407 (E.D. Mich.)

Neo Wireless, LLC v. Tesla Inc., No. 2-22-cv-11408 (E.D. Mich.)

Neo Wireless, LLC v. Mercedes-Benz USA, LLC, No. 2-22-cv-11769 (E.D. Mich.)

Neo Wireless v. FCA US LLC, No. 2-22-cv-11770 (E.D. Mich.)

See Pet. 55–57; Paper 6, 1–2.

Both parties further identify IPR2021-01486 (institution denied, "Dell IPR"), IPR2022-01567 (instituted, "Volkswagen IPR"), IPR2023-00763 (institution denied), IPR2023-00793 (instituted, joined to IPR2022-01567), and IPR2023–00963 (concurrently filed) as proceedings before the Board. Pet. 58; Paper 6, 1, 4.

In addition, Petitioner also identifies several commonly-assigned U.S. patents that are the subject of IPR2022-01537, IPR2022-01539, IPR2023-00079, IPR2023-00764, IPR2023-00766, IPR2023-00791, IPR2023-00961, and IPR2023-00964. Pet. 58.

C. The '450 Patent

The '450 Patent, titled "Method and System for Multi-Carrier Packet Communication with Reduced Overhead," issued on October 15, 2019, from an application filed August 14, 2017, and claims the benefit of an earlier effective filing date through a series of continuation applications to a provisional application filed on September 28, 2005. Ex. 1001, codes (22), (45), (54), (60), (63).

According to the '450 Patent, "[b]andwidth efficiency is one of the most important system performance factors for wireless communication systems." Ex. 1001, 1:33–34. In order to support the high degree of flexibility needed to accommodate different applications having different sized application payloads and different quality of service ("QoS") requirements in packet-based data communication, however, wireless communication systems generally must provide a high degree of flexibility. *Id.* at 1:34–40. In wireless systems based on the IEEE 802.16 standard, for example, "multiple packet streams are established for each mobile station to support different applications," and "[a]t the medium access control (MAC) layer, each packet stream is mapped into a wireless connection." *Id.* at 1:42–47. "Special scheduling messages, DL-MAP and UL-MAP, are utilized to broadcast of the scheduling decisions to the mobile stations." *Id.* at 1:47–50. According to the '450 Patent, the MAP scheduling method defined by the IEEE 802.16 standard involves significant control overhead, amounting altogether to 52 bits, representing as much as 32.5% of overall data communication for application such as voice-over-IP ("VoIP") and resulting in a relatively low spectral efficiency. *Id.* at 1:51–2:13.

With the goal of improving spectral efficiency, the '450 Patent describes a system and method for minimizing the control overhead in a multi-carrier wireless communication network by using a "time-frequency resource." Ex. 1001, 2:13–16, 2:45–47. One or more zones in the time-frequency resource may be designated for particular applications, such as VoIP applications. *Id.* at code (57), 2:47–50. By grouping applications of a similar type together within a zone, a reduction can be achieved in the

number of bits necessary for mapping a packet stream to a portion of the time-frequency resource. *Id.* at 2:50–54.

Figure 3 of the '450 Patent is reproduced below.

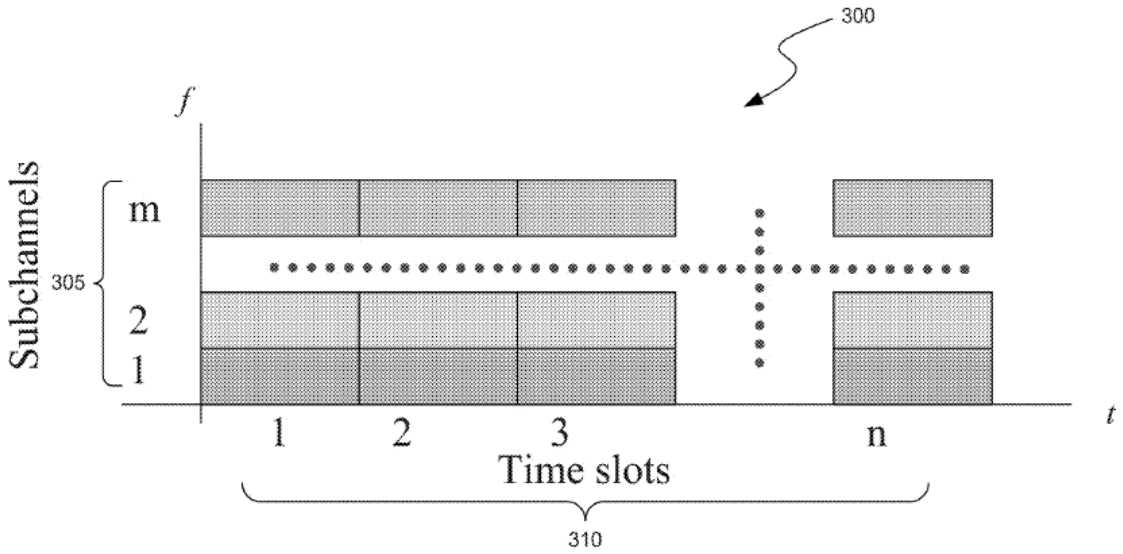

Figure 3 is a block diagram depicting a division of communication capacity in a physical media resource (e.g., radio or cable) into frequency and time domains. Ex. 1001, 2:25–26, 4:16–18. With reference to Figure 3, "[t]he frequency is divided into two or more subchannels 305, represented as subchannels 1, 2, . . . m;" and "[t]ime is divided into two or more time slots 310, represented in the diagram as time slots 1, 2, . . . n." *Id.* at 4:18–22. The '450 Patent explains that "[t]he canonical division of the resource by both time and frequency provides a high degree of flexibility and fine granularity for resource sharing between multiple applications or multiple users of the resource." *Id.* at 4:22–26.

Figure 6 of the '450 Patent is reproduced below.

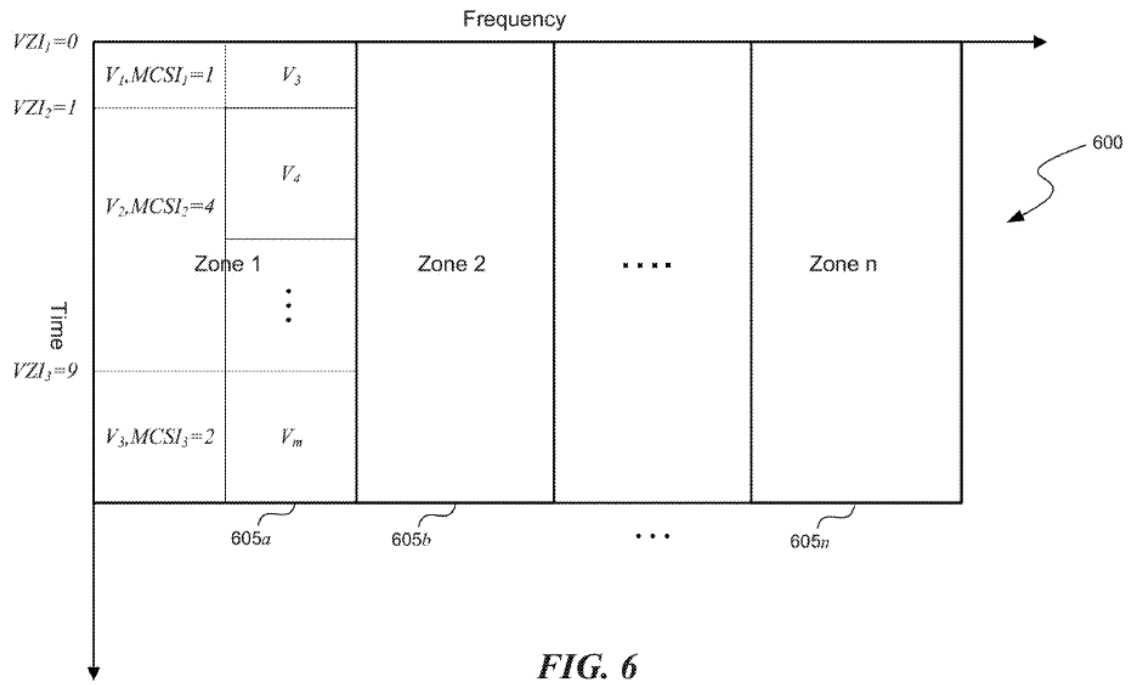

FIG. 6

Figure 6 is a block diagram of a frequency-time resource utilized by a wireless communication network. Ex. 1001, 2:32–33, 5:32–34. Figure 6 depicts an alternative way of managing multiple packet streams in order to overcome the inefficiencies associated with the mapping of packet streams in typical wireless systems based on the IEEE 802.16 standard. *Id.* at 5:34–43. In Figure 6, time-frequency resource 600 is divided into zones 605*a*, 605*b*, . . . 605*n*, each of which is associated with a particular type of application (e.g., VoIP, video applications). *Id.* at 5:43–49. "[B]y grouping like applications together[,] the amount of control overhead in MAC headers is reduced." *Id.* at 5:50–52. More particularly, according to the '450 Patent, "[w]hen applications of a similar type are grouped together within a zone, a reduction in the number of bits necessary for mapping a packet stream to a time-frequency segment can be achieved." *Id.* at 5:54–57. "In some embodiments, the identification of the time-frequency segment

associated with a particular packet stream can be indicated by the starting time-frequency coordinate and the ending time-frequency coordinate relative to the starting point of the zone." *Id.* at 5:57–61.

> If the time-frequency resource is divided into two or more zones, the amount of control information necessary to map to a location relative to the starting point of the zone may be significantly less than the amount of information necessary to map to an arbitrary starting and ending coordinate in the entire time-frequency resource.

Id. at 5:64–6:2.

The '450 Patent further explains that "[w]ithin each zone 605*a*, 605*b*, . . . 605*n*, the time-frequency resource may be further divided in accordance with certain rules to accommodate multiple packet streams V_1, V_2, . . . V_m." Ex. 1001, 6:3–6. "For example, as depicted in Figure 6, zone 605*a* is divided into multiple columns and the packet streams are arranged from top down in each column and from left to right across the columns." *Id.* at 6:6–9. "The width of each column can be a certain number of subcarriers, and each packet stream V_1, V_2, . . . V_m may be associated with an application." *Id.* at 6:9–11. "For example, V_1 is the resource segment to be used for the first voice packet stream, V_2 is the resource segment to be used for the second voice packet stream, etc." *Id.* at 6:12–14. Further, according to the '450 Patent, "[w]hen the zones are further subdivided into time-frequency segments in accordance with certain rules, a mapping of packet streams to segments may be achieved using a one-dimensional offset with respect to the origin of the zone rather than the two-dimensional (i.e., starting time-frequency coordinate and ending time-frequency coordinate relative to the starting point of the zone) mapping method discussed above." *Id.* at 6:22–29.

The '450 Patent further describes use of a "basic resource unit," which is the resource utilized by the highest available modulation coding scheme ("MCS") associated with a particular packet stream, such that the resources used by other MCSs can be represented as integer multiples of the basic unit. Ex. 1001, 6:45–52. Once the MCS is selected for each packet stream contained in a particular zone, the offset to a segment representing a particular packet stream may be easily calculated, and the index for any selected packet stream is defined as the sum of all basic resource units associated with each packet stream preceding the selected packet stream, with an optional adjustment depending on the location where the division of the time-frequency resource is started. *Id.* at 7:7–18. The '450 Patent explains that "[u]sing basic resource units as the granularity of a location offset to the packet stream reduces the number of bits required to represent its location with the zone." *Id.* at 7:28–30.

D. Challenged Claims

Claim 7 is independent and claim 11 depends therefrom. Claim 7 is representative and is reproduced below:

> A mobile device in a wireless packet system using a frame structure of multiple frames for transmission, each frame comprising a plurality of time intervals, each time interval comprising a plurality of orthogonal frequency division multiplexing (OFDM) symbols, and each OFDM symbol containing a plurality of frequency subcarriers, the mobile device configured to:
>
> receive an identifier from a base station in a cell in which the mobile device is operating; and
>
> receive a signal containing information from the base station over a segment of time-frequency resource, the segment having a starting time-frequency coordinate and the

> segment comprising N time-frequency resource units within a time interval, each unit containing a set of frequency subcarriers in a group of OFDM symbols, where N=2, 4, or 8; and
>
> recover the information from the received signal using the starting time-frequency coordinate and N in conjunction with the received identifier.

Ex. 1001, 13:15–33.

E. Asserted Patentability Challenge and Asserted Prior Art

Petitioner asserts that claims 7 and 11 would have been unpatentable based on the following ground (Pet. 10–47):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
7, 11	103[2]	Park[3], IEEE802.16-2004[4]

Petitioner also relies on a Declaration of Todor Cooklev (Ex. 1003). Patent Owner relies on a Declaration of William P. Alberth, Jr. (Ex. 2001).

III. MOTION FOR JOINDER

Concurrent with the Petition, Petitioner filed a Motion for Joinder seeking joinder to *Ford Motor Co. v. Neo Wireless LLC,* IPR2023-00763. *See* Mot. 1. Petitioner acknowledges "[s]hould the Ford IPR be . . . not

[2] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. §§ 102 and 103 effective March 16, 2013. Because the '450 Patent claims the benefit of an earlier effective filing date prior to the effective date of the applicable AIA amendment, we refer to the pre-AIA versions of §§ 102 and 103.

[3] US 2006/0039274 A1, published Feb. 23, 2006 (Ex. 1005).

[4] *IEEE Standard for Local and Metropolitan Area Networks, Part 16: Air Interface for Fixed Broadband Wireless Access Systems* (Oct. 1, 2004) (Ex. 1006).

instituted for any reason, Petitioners submit this motion for joinder would be moot, and requests the Board consider Petitioner's IPR petition on its own merits." Institution was denied in IPR2023-00763. *Ford Motor Co. v. Neo Wireless LLC,* IPR2023-00763, Paper 17 (PTAB Nov. 9, 2023). Accordingly, we deny Petitioner's Motion for Joinder as moot.

IV. ANALYSIS

35 U.S.C. § 314(a) provides:

> The 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.

The Supreme Court has explained that, because § 314 includes no mandate to institute review, "the agency's decision to deny a petition is a matter committed to the Patent Office's discretion." *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016); *see also 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."). A decision whether to institute is within the Director's discretion, and that discretion has been delegated to the Board. 37 C.F.R. § 42.4(a); *see General Plastic*, Paper 19 at 19 (citing 35 U.S.C. § 314(a)); *Cuozzo*, 579 U.S. at 273.

As the Consolidated Trial Practice Guide[5] ("CTPG") notes, the AIA was "designed to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive

[5] Available at https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf

litigation costs." H.R. Rep. No. 112−98, pt. 1, at 40 (2011), 2011 U.S.C.C.A.N. 67, 69 (Post grant reviews were meant to be "quick and cost effective alternatives to litigation"); *see also* S. Rep. No. 110−259, at 20 (2008). The Board recognized these goals of the AIA, but also "recognize[d] the potential for abuse of the review process by repeated attacks on patents." *General Plastic*, Paper 19 at 16−17.

In *General Plastic*, the Board articulated a non-exhaustive list of factors to consider in evaluating whether to exercise discretion, under § 314(a), to deny institution of *inter partes* review based on a petition challenging the claims of a patent previously before the Board. Those factors include:

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.

General Plastic, Paper 19 at 15–16.

We consider below all of the factors enumerated above.

A. First General Plastic Factor

The first *General Plastic* factor asks, "whether the same petitioner previously filed a petition directed to the same claims of the same patent." *General Plastic*, Paper 19 at 16. "[O]ur 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." *Valve*, Paper 11 at 2, 8–9.

First, we consider whether the "same claims" are being challenged. There is no apparent dispute that the challenged claims here were also challenged in the earlier-filed petitions in the Dell IPR and Volkswagen IPR. *See* Pet. 50–54; Prelim. Resp. 18–19. According to Patent Owner, "the fact that Petitioner challenges only a subset of the claims already before the Board for evaluation, further weighs against institution." Prelim. Resp. 19 (citing *Ericsson Inc. v. Uniloc 2017, LLC*, IPR2019-01550, Paper 8 at 11 (PTAB Mar. 17, 2020)).

Next, we consider "whether the same petitioner previously filed a petition," or "when different petitioners challenge the same patent, we consider any relationship between those petitioners." Petitioner contends that "*General Plastic* does not apply here because Petitioner has not previously challenged this patent and Petitioner and the Ford Petitioner are not similarly situated; for example, they are not accused in the litigation of infringing based on the same products as examined under Factors 1 and 3." Pet. 54 (citing *General Plastic*, Paper 19 at 15–19).

In response, Patent Owner presents numerous considerations for the first factor. *See* Prelim. Resp. 13–20. Patent Owner summarizes those considerations as follows:

> Petitioner, Volkswagen (who filed the second, instituted petition), and Ford, who filed the third, targeted petition, are all co-defendants in the district court, and have been ordered by the Court to all ***jointly*** present their invalidity contentions to the district court—and in fact they have done so, including with respect to the same combination of the IEEE 802.16 and Park references asserted in this Petition. Furthermore, the district court judicial panel has found that both Petitioner and Volkswagen will have similar issues relating to claim construction and infringement as both are accused of infringement based on implementing the same LTE and/or 5G standards.

Id. at 13; *see id.* at 15–17 (reproducing Ex. 2019, 666; quoting Ex. 1010, 3; Ex. 1013, 1–2; citing Ex. 1010, 1, 3; Ex. 1027; Ex. 2019, 2 n.1, 16, 27). Patent Owner contends that Petitioner here has an even stronger relationship with petitioner Volkswagen and petitioner Ford than the relationship in *Valve* that the Board found sufficient to deny institution. *See id.* at 17; *see also id.* at 19 (pointing out that Petitioner did not present arguments why there is no "significant relationship."). Patent Owner further contends that, even absent a district court co-defendant relationship, the Board has found road mapping alone to be sufficient to deny institution. *See id.* at 17–18 (quoting *Ericsson*, Paper 8 at 12); *see also id.* at 19–20 (asserting that Petitioner does not mention *Ericsson* and not address the fact that it created an "implicit" relationship sufficient to deny institution).

Based on the current record, we are persuaded by Patent Owner's arguments that the relationship between Petitioner and Volkswagen falls within the purview of the type of "significant relationship" contemplated by

Valve. *See Valve*, Paper 11 at 10. Although Petitioner and Volkswagen are not co-defendants in same the district court litigation where Patent Owner asserted the '450 Patent against Volkswagen nor the same district court litigation where Patent Owner asserted the '450 Patent against Petitioner, there is sufficient evidence indicating that Petitioner and Volkswagen have a significant relationship due to the filing of joint claim construction and invalidity contentions. *See* Exs. 2003–2005, 2019. Accordingly, due to the same claims being challenged in this Petition and in the petition filed in the Volkswagen IPR, and the significant relationship between Petitioner and Volkswagen, the first *General Plastic* factor weighs against institution.

B. Second, Fourth, and Fifth General Plastic Factors

Petitioner presents the second, fourth, and fifth *General Plastic* factors collectively. *See* Pet. 54. Accordingly, we also address these factors collectively. The second *General Plastic* factor asks the Board to 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*, Paper 19 at 16. The fourth *General Plastic* factor asks the Board to consider "the length of time that elapsed between the time petitioner learned of the prior art asserted in the second petition and the filing of the second petition." *Id.* The fifth *General Plastic* factor asks, "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." *Id.*

According to Petitioner, "[a]s to timing under Factors 2, 4, and 5, while Petitioner became aware of the prior art references in the Ford IPR and the Dell IPR as of at least the time of their filing, Petitioner made no serial

attack on the '450 patent and has filed this Petition within the one-month period under 37 C.F.R. § 42.122(b)." Pet. 54.

Patent Owner contends that, "at the time Volkswagen filed the second petition challenging the Patent in November, and certainly when Ford filed the third petition in March, Petitioner knew or should have known of the references it is now asserting in this sixth Petition." Prelim. Resp. 21. As to IEEE802.16-2004, Patent Owner asserts that this reference was one of two references that Dell relied upon in its petition filed on September 16, 2021. *See id.* (citing IPR2021-01486, Paper 2). According to Patent Owner, "Petitioner was undisputedly aware of the IEEE 802.16-2004 at the time Volkswagen filed its petition on September 27, 2022—a year after the *Dell Petition*." *Id.* (citing IPR2021-01567, Paper 2). As to Park, Patent Owner asserts that "Petitioner was either aware, or should have been aware, of its Park reference at the time Volkswagen filed the second petition against the Patent" because "Petitioner jointly with Volkswagen identified Park as a reference in its invalidity contentions shortly after the filing of the *Volkswagen Petition*" and "the *Volkswagen Petition* itself included the Park reference as an exhibit and discussed it." Prelim. Resp. 21–22 (citing Ex. 2019, 2 n.1, 16; IPR2022-01567, Ex. 1024). According to Patent Owner, "[t]here is simply no reason why Petitioner could not have filed a petition together with Volkswagen, filed a petition together with Ford, or even filed its separate Petition in November 2022 when it indisputably knew of its combination of IEEE 802.16-2004 and Park." Prelim. Resp. 27. Patent Owner further contends that Petitioner does not "present an 'adequate explanation' of the time lapse between the two petitions, just as it does not have an adequate explanation as to why there

should be two instituted petitions against the same patent, which is strongly disfavored." *Id.* (citing *Valve*, Paper 11 at 14).

In consideration of the second *General Plastic* factor, we determine that Petitioner knew of, or should have known of the IEEE 802.16-2004 and Park references at the time Volkswagen filed its petition on September 27, 2022 to weigh against institution. We further determine that a substantial amount of time (i.e., at least eight months) elapsed between September 27, 2022, when Petitioner knew of, or should have known of both the IEEE 802.16-2004 and Park references and when the Petition was filed on June 5, 2023. Accordingly, we also determine that the considerations of the second and fourth *General Plastic* factors weigh against institution. As pointed out by Patent Owner, Petitioner does not offer any explanation for the time elapsed between the filings of the Volkswagen petition and this Petition directed to the same claims of the same patent. Accordingly, we also determine that the considerations of the fifth *General Plastic* factor weigh against institution.

C. Third General Plastic Factor

The third *General Plastic* factor asks the Board to 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*, Paper 19 at 16. The Board explained the relevance of this factor in *General Plastic*:

> [F]actor 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.

> As discussed in our Decisions Denying Institution, we are concerned here by the shifts in the prior art asserted and the related arguments in 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).

Petitioner does not directly address this factor. *See* Pet. 51–54.

Patent Owner contends:

> At the time Ford filed its Petition on March 29, 2023, Ford, and Petitioner, had already received the Patent Owner Preliminary Response in the *Volkswagen Petition*. Specifically, in the Volkswagen IPR, the Petition was filed on September 27, 2022, and the Patent Owner Preliminary Response was filed on February 8, 2023. Both dates are substantially prior to the filing date of the Petition in this matter, on March 29, 2023. In fact, the evidence suggests that Petitioner waited until the ***very last day*** of its statutory bar grace period to file its Petition on March 29, 2023, making sure it had received Patent Owner's Preliminary Response, and maximizing its road-mapping opportunity. *See* Ex. 2016 [Ford-POS] (service of complaint on Petitioner on March 29, 2022). Petitioner here waited even longer, until June 2023. . . .
>
> At the time it filed its Petition on March 29, 2023, Ford had also received Patent Owner's Preliminary Response (filed December 20, 2021) and the Board's decision denying institution (issued March 16, 2022) in the *Dell* IPR[.]

Prelim. Resp. 23–24.

There is insufficient evidence that the preliminary response filed in the Volkswagen IPR or the preliminary response and institution decision in the Dell IPR was used as roadmap for this Petition or otherwise provided insight for filing this Petition. Accordingly, we determine that the considerations of the third *General Plastic* factor weigh neither for nor against institution.

D. Sixth and Seventh General Plastic Factors

In view of the parties addressing the sixth and seventh *General Plastic* factors collectively (*see* Pet. 54; Prelim. Resp. 28), we also address these factors collectively. The sixth and seventh factors ask the Board to take into consideration "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*, Paper 19 at 16. The sixth and seventh factors are efficiency considerations. *See id.* at 16–17; *see also* CTPG at 56 (explaining 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"). As explained in *General Plastic*, "multiple, staggered petition filings, such as those here, are an inefficient use of the *inter partes* review process and the Board's resources." *Id.* at 21.

According to Petitioner, "[a]s to Factors 6 and 7, Petitioner seeks to join the Ford IPR and is not raising new arguments and will participate in an inactive/understudy role so that there should be no material impact on the Board's finite resources or its ability to issue a final determination within

one year." Pet. 54 (citing *General Plastic* at 15–19; *Apple Inc. v. Uniloc 2017 LLC*, IPR2020-00224, Paper 10 at 4–5 (PTAB Apr. 6, 2020)).

In response, Patent Owner points out that it is generally inefficient and wasteful of resources to have multiple petitions challenging the same patent. *See* Prelim. Resp. 28 (quoting *Valve*, Paper 11 at 13). According to Patent Owner, "[a]s the sixth petition challenging this Patent, especially in light of at least one already instituted trial, these factors also strongly weigh against intuition." *Id.*

Under the circumstances before us, instituting *inter partes* review based on this Petition challenging the same claims as those challenged in the Volkswagen IPR would not be an efficient use of the finite resources of the Board. Although there may be some efficiency gains based on familiarity of the subject matter of the '450 Patent, those gains would be negated and surpassed by the inefficiencies of considering a second set of prior art challenges in this Petition. Moreover, the evaluation of the merits of the '450 Patent on the basis of only one petition should be sufficient, in most cases, to advance "the Board's mission is to improve patent quality and restore confidence in the presumption of validity that comes with issued patents." *Cuozzo*, 579 U.S. at 272; *see also* CTPG at 59 ("Based on the Board's experience, one petition should be sufficient to challenge the claims of a patent in most situations.").

Accordingly, we determine that the considerations of the sixth and seventh *General Plastic* factors weigh against institution.

E. Summary of Analysis

We have considered the circumstances and facts before us in view of the *General Plastic* factors. For the reasons identified above, we determine

that a majority of the *General Plastic* factors weigh against institution of review, including the following facts: (1) this Petition challenges the same claims as those challenged in the petitions filed in the Dell IPR and Volkswagen IPR, (2) Petitioner has a significant relationship with Volkswagen based on the joint claim construction and infringement contentions in the district court with respect to Patent Owner's assertions of the '450 Patent; (3) Petitioner knew of, or should have known of the Park and IEEE802.16-2004 references at least eight months before filing the Petition; and (4) and the efficiency concerns implicated by instituting a second *inter partes* review challenging the same claims of the '540 Patent.

Based on these particular circumstances before us, we determine that it is appropriate to exercise discretion under § 314(a) to deny institution of *inter partes* review.

V. CONCLUSION

For the foregoing reasons, we deny Petitioner's Motion for Joinder as moot and exercise our discretion under § 314(a) to deny institution of *inter partes* review.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner's Motion for Joinder (Paper 3) is *denied* as moot; and

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

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