

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FORD MOTOR COMPANY,
Petitioner,

v.

NEO WIRELESS LLC,
Patent Owner.

IPR2023-00763
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

I. INTRODUCTION

Ford Motor Company (“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 1 (“Pet.”). Neo Wireless LLC (“Patent Owner”) filed a Preliminary Response. Paper 12 (“Prelim. Resp.”).

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) (2020). 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).

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 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 *inter partes* review of the ’450 Patent.

II. BACKGROUND

A. Real Parties in Interest

Petitioner and Patent Owner identify themselves as the real parties in interest. Pet. 63; Paper 6, 1.

B. Related Matters

The parties indicate that the ’450 Patent was or is the subject of IPR2021-01486 (“Dell IPR”) (institution denied) and IPR2022-01567

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(“Volkswagen IPR”) (pending final written decision) and IPR2023-00793 (joined to Volkswagen IPR). *See* Pet. 6–7; Paper 6, 1.

Patent Owner indicates the ’450 Patent is currently involved in the following district court proceedings between the parties:

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 Paper 6, 1–2.

Patent Owner also advises us that the ’450 Patent was formerly involved in fourteen other district court proceedings. *See* Paper 6, 2–4. In addition, Petitioner identifies a dozen U.S. patent applications and issued patents “related to the ’450 Patent.” *See* Pet. 63.

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 “at 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 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 dedicated 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.

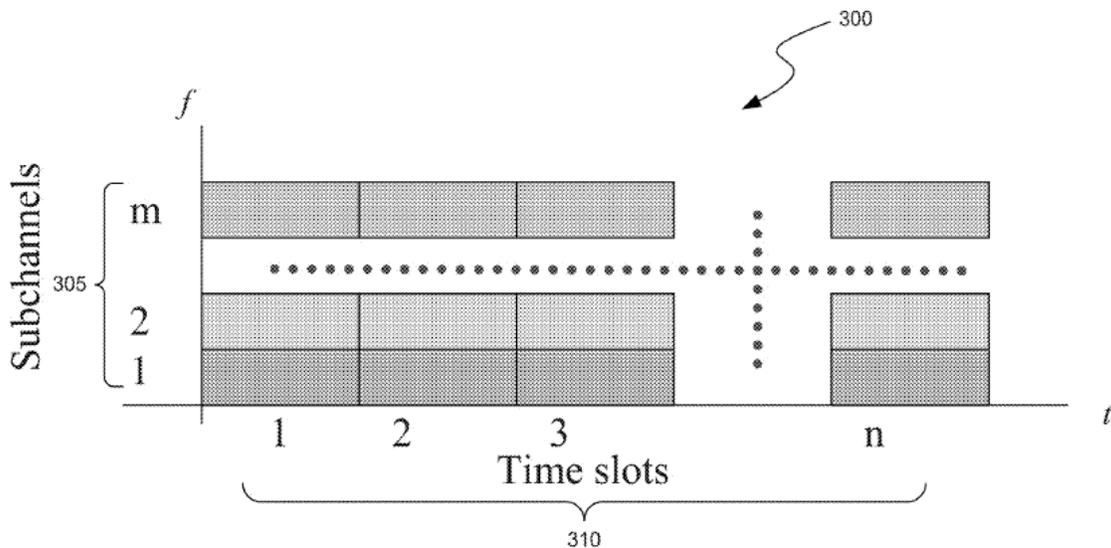


Figure 3 is a block diagram depicting a division of communication capacity in a physical media resource (e.g., radio or cable) into frequency and time domains. Ex. 1001, 2:25–26, 4:16–18. With reference to Figure 3, “[t]he frequency is divided into two or more subchannels 305, represented as subchannels 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.

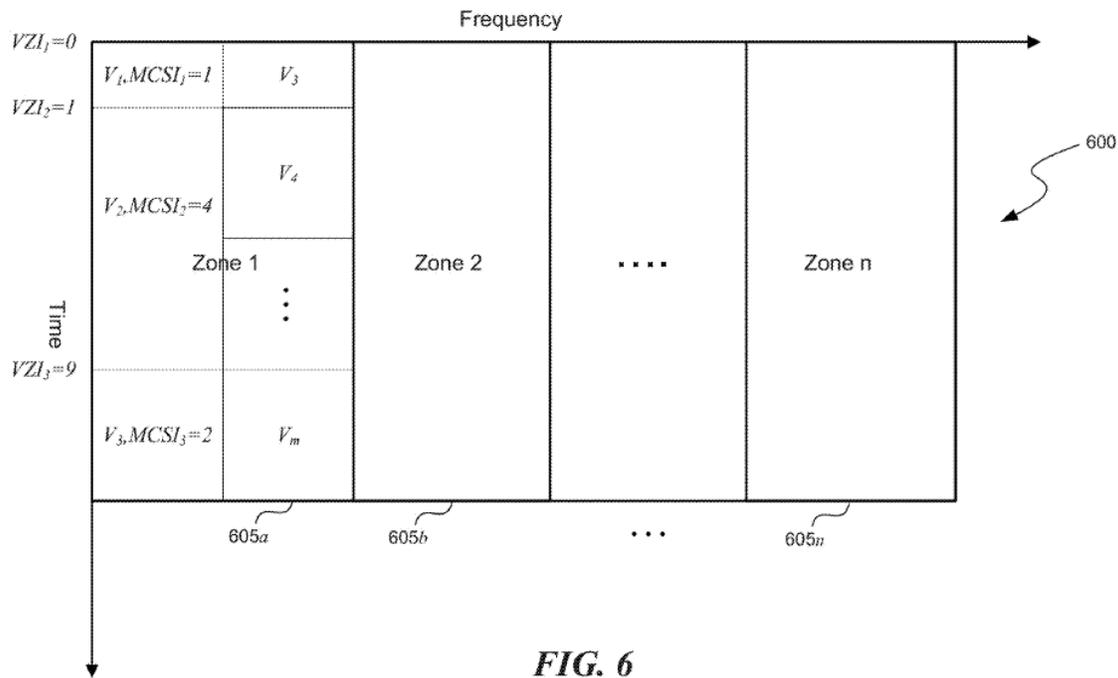


FIG. 6

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 605a, 605b, . . . 605n, 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 5:49–51. 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 605a, 605b, . . . 605n, the time-frequency resource may be further divided in accordance with certain rules to accommodate multiple packet streams $V_1, V_2, \dots V_m$.” Ex. 1001, 6:3–6. “For example, as depicted in Figure 6, zone 605a 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 $V_1, V_2, \dots V_m$ 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. *Id.* at 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. 1–2, 9–49):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
7, 11	103 ¹	Park ² , IEEE802.16-2004 ³

Petitioner also relies on a Declaration of Todor Cooklev (Ex. 1003).

Patent Owner relies on a Declaration of William P. Alberth, Jr. (Ex. 2001).

¹ 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.

² US 2006/0039274 A1, published Feb. 23, 2006 (Ex. 1005).

³ *IEEE Standard for Local and metropolitan area networks, Part 16: Air Interface for Fixed Broadband Wireless Access Systems* (Oct. 1, 2004) (Ex. 1006).

III. 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 Guide⁴ (“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 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

⁴ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>

“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, 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. 51–57; Prelim. Resp. 15. According to Patent Owner, “the fact that Petitioner challenges only a subset of claims already before the Board for evaluation, further weighs against institution.” Prelim. Resp. 15 (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 the first factor weighs strongly in favor of institution. *See* Pet. 54, 57. Petitioner contends that in contrast to the relationship between the petitioners in *Valve*, there is no relevant relationship between Petitioner and Volkswagen as they are direct competitors, were not sued in the same court, and are only before the Board due to Patent Owner’s strategy of filing seven infringement complaints against seven automobile manufacturers. *See* Pet. 54. Petitioner asserts that Volkswagen and Petitioner are not co-

defendants because Patent Owner moved to transfer the seven different district court proceedings into a single multidistrict litigation for pretrial proceedings only. Pet. 55. According to Petitioner, even if Petitioner and Volkswagen could be considered co-defendants, “that would not be enough to establish the significant relationship required for this factor.” Pet. 54–55 (citing *Facebook, Inc. v. Express Mobile, Inc.*, IPR2021-01455, Paper 11 at 11 (PTAB March 4, 2022) (“*Express Mobile*”). Similarly, Petitioner argues that, the fact that the seven parties submitted coordinated claim constructions and invalidity contentions, is not enough to establish the significant relationship required for this factor. See Pet. 56 (citing *Twitter, Inc. v. Palo Alto Rsch. Ctr. Inc.*, IPR2021-01458, Paper 11 at 31–33 (PTAB Apr. 6, 2022)).

Petitioner also distinguishes the relationship between Petitioner and Volkswagen, contending that unlike the circumstances in *Valve*, Petitioner did not incorporate Volkswagen’s technology under license or receive technical assistance from Volkswagen. See Pet. 55. Petitioner further asserts that even if all seven accused defendants comply with the cellular LTE specification, it takes much more than that to establish the requisite significant relationship. See *id.* Petitioner contends that Petitioner and Volkswagen are even less related than the petitioners in *Express Mobile* where the Board found that the parties were not related despite the petitioners being sued in the same court on the same day. See Pet. 56. Petitioner further asserts that it had no involvement with or input into Volkswagen’s *inter partes* review and vice versa. See Pet. 57

In response, Patent Owner presents numerous considerations for the first factor. *See* Prelim. Resp. 10–17. Patent Owner summarizes those considerations as follows:

Petitioner and Volkswagen (who filed the second petition) are co-defendants in the district court, and have been ordered by the Court to jointly present their invalidity contentions to the district court—and in fact they have jointly presented their invalidity contentions to the district court, including with respect to the same combination of the IEEE 802.16 and Park references asserted in this Petition. Furthermore, the 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.

Prelim. Resp. 10; *see id.* at 11–13 (reproducing Ex. 2019, 666; citing Ex. 1013, 1–2; 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 Volkswagen than the relationship in *Valve* that the Board found sufficient to deny institution. *Id.* at 14. Patent Owner further points out that, even absent a district court co-defendant relationship, the Board has found road mapping alone to be sufficient to deny institution. *See id.* (quoting *Ericsson*, Paper 8 at 12).

Patent Owner argues that Petitioner’s series of arguments addressing why there is no significant relationship between it and Volkswagen fail because “Petitioner does not address the fact that it has created an ‘implicit[]’ relationship sufficient to deny institution by using the prior petitions as a road-map.” Prelim. Resp. 15 (citing Pet. 53–57; *Ericsson*, Paper 8 at 12). Patent Owner also contends that Petitioner’s argument that it is not a co-defendant with Volkswagen by choice, is true for most if not all co-defendants. *See id.* at 15–16.

Patent Owner further contends that Petitioner's reliance on *Express Mobile* is misplaced because it is readily distinguishable from the circumstances here. *See* Prelim. Resp. 16. According to Patent Owner,

both [Petitioner] and Volkswagen are accused of infringement based on implementing the same standards, and the judicial panel expressly found that “[All actions thus can be] expected to share factual questions concerning such matters as the technology underlying the patents, prior art, claim construction, and/or issues of infringement involving the patents.”

Id. (citing Ex. 1013, 1–2). Patent Owner asserts that the district court has ordered defendants to jointly select and present a limited number of validity challenges, and they have done so, including with respect to the same combination of IEEE 802.16-2004 and Park presented in this Petition. *See id.* (citing Ex. 2019, 666).

Patent Owner further contends that it was Petitioner's choice to not be involved with Volkswagen's *inter partes* review. *See* Prelim. Resp. 17. Patent Owner contends that there is no reason why multiple defendants cannot be expected to cooperate in their IPR challenges when the defendants are forced into a single multi-district litigation because of strong overlap of issues, and are expected to make joint submissions regarding claim construction and infringement. *See id.*

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 case 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 Volkswagen’s Petition 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. 57–59*). 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.*

Petitioner asserts that the second, fourth, and fifth *General Plastic* factors are less relevant when Petitioner is not the same party or significantly related to the earlier petitioner. *See Pet. 57* (citing *Illumina Inc. v. Ravgen, Inc.*, IPR2021-01271, Paper 12 at 20 (PTAB Jan. 26, 2022); *Shenzhen v. Apaltek Co. v. Asatek Denmark A/S*, IPR2022-01318, Paper 7 at 11 (PTAB Feb. 6, 2023); *Express Mobile*, Paper 11 at 13; *Google LLC v. Parus Holdings, Inc.*, IPR2020-00846, Paper 9 at 24–26 (PTAB Oct. 21, 2020)).

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Petitioner contends that when a later filed petition relies on different prior art, this factor is especially less relevant. *See id.* (citing *Google LLC v. Neonode Smartphones LLC*, IPR2021-01041, Paper 19 at 12–14 (PTAB Jan. 13, 2022)).

Petitioner asserts that Volkswagen “independently chose to prepare and file its IPR relatively early in this slow-moving multidistrict litigation.” Pet. 58. Petitioner acknowledges that it “knew of, or should have known of, the art in its IPR at the time VW hurriedly filed its IPR.” *Id.* Petitioner further contends that even if these factors are to be given weight, Petitioner “was fully justified in waiting until [Patent Owner] reduced the number of asserted claims to just *two claims* and the parties agreed to certain claim constructions.” *Id.*; *see* Pet. 58–59 (quoting *LG Elecs., Inc. v. Bell N. Rsch., LLC*, IPR2020-00319, Paper 15 at 13 (PTAB June 23, 2020); *Shenzhen AOTO Elecs. Co. v. Ultravision Techs., LLC*, IPR2021-00190, Paper 7 at 18–19 (PTAB June 9, 2021)). According to Petitioner, it

conserved party and Board resources by waiting until [Patent Owner] reduced the number of asserted claims for all six asserted patents on November 28, 2022 down to just two claims for the [’450 Patent], and the parties agreed to several constructions in a joint statement submitted on January 18, 2023.

See Pet. 58 (citing Ex. 2009, 7; Ex. 1011, 12–13).

In response, Patent Owner contends that, “at the time Volkswagen filed the second petition challenging the Patent, Petitioner knew or should have known of the references it is now asserting in this third Petition.” Prelim. Resp. 18. 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).

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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 IPR2021-01486, 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. 18–19 (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, 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. 24.

Patent Owner further contends:

Petitioner claims that the reason it waited until the last day of its statutory bar to file its Petition was that it was “conserv[ing] party and Board resources” by waiting to see if Patent Owner would drop district litigation claims. Pet., 58. But that *ex post facto* rationale is not credible for several reasons.

First, Volkswagen’s Petition has already challenged all claims of the Patent, and its trial is currently pending before the Board. It is not clear what “resources” would be preserved by Petitioner later challenging only a subset of the claims already being considered by the Board. *Compare Ericsson*, 11 (holding that “challenging a subset of previously challenged claims” did not favor institution).

The fact that Petitioner did not file a joint Petition with Volkswagen, but instead chose to wait six months to file a

separate Petition, has wasted, not preserved, the Board's resources. . . .

Prelim. Resp. 24–25.

As explained above addressing the first *General Plastic* factor, we consider Petitioner and Volkswagen to have a significant relationship, and, therefore, contrary to Petitioner's assertion, the second, fourth, and fifth *General Plastic* factors remains relevant for the purpose of determining whether to institute review. Therefore, 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 seven 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 March 29, 2023. Accordingly, we also determine that the considerations of the fourth *General Plastic* factor weigh against institution. Although Petitioner asserts that its delay in filing its Petition was reasonable and justified, and conserved Board and party resources by focusing the dispute to the reduced asserted claims in the district court proceedings, as explained below with respect to the sixth *General Plastic* factor, instituting *inter partes* review on the basis of this Petition challenging the same claims as those challenged in the instituted Volkswagen IPR will not conserve the finite resources of the Board. 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 asserts that “[t]his factor should receive little weight, and is neutral in any event.” Pet. 59. Petitioner contends that road mapping concerns are minimized when, as here, Petitioner did not and could not refine its Petition in view of any lessons learned from later developments because the merits of the previous preliminary response have not been addressed by the Board. *See id.* (quoting *Code 200, UAB v. Bright Data Ltd.*, IPR2022-00861, Paper 18 at 5 (PTAB Aug. 23, 2022) (precedential);

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citing *Code 200*, Paper 14 at 25–70; *Siemens Gamesa Renewable Energy, Inc. v. General Elec. Co.*, IPR2022-01479, Paper 11 at 10–14 (PTAB Mar. 7, 2023). Petitioner further asserts that similar circumstances existed between different petitioners in *Express Mobile* where the Board found that Facebook received limited benefit from having been able to review the preliminary response. *See* Pet. 60 (citing *Express Mobile*, Paper 11 at 12–13).

Petitioner contends that it gained no unfair tactical advantage because the parties agreed in the district court to adopt the same construction of “time-frequency coordinate” that Patent Owner advanced in its preliminary responses filed in the Dell IPR and Volkswagen IPR. *See* Pet. 60. Petitioner asserts that it adopted the same construction in its Petition. *See id.* Petitioner also asserts that its prior art and arguments are completely different from the prior art and arguments advanced in the petitions filed by Volkswagen and Dell. *See id.* (citing *Shenzhen AOTO*, Paper 7 at 18; *Neonode*, Paper 19 at 13).

In response, Patent Owner contends:

At the time [Petitioner filed its Petition on March 29, 2023, it 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). . . .

At the time it filed its Petition on March 29, 2023, Petitioner 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. 20–21.

We agree with Petitioner that the third *General Plastic* factor is neutral. 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 where “prior art and arguments are completely different than VW’s (and Dell’s).” Pet. 60. 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. 61–62; Prelim. Resp. 26–27), 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.

Petitioner asserts that the Board’s mission is to improve patent quality and restore confidence in the presumption of validity that comes with issued patents. *See* Pet. 61 (quoting *Code 200*, Paper 18 at 6). Petitioner contends that it “should not be prejudiced by [Volkswagen]’s litigation strategy to rush out an IPR as soon as possible, without waiting to see which claims are at issue and disavowing the parties’ agreed-upon constructions in the Joint Claim Construction Statement.” *Id.* (citing Ex. 1011). Petitioner further asserts that its Petition is streamlined by challenging the only two claims at issue in the litigation and adopting the agreed-upon claim constructions. *See id.* Petitioner also contends the Board is now familiar due to Dell’s and Volkswagen’s previous petitions. *See id.* (quoting *Parus*, Paper 9 at 26; *Illumina*, Paper 12 at 25).

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. 26 (quoting *Valve*, Paper 11 at 13). According to Patent Owner, “[a]s the third petition challenging this Patent, especially in light of an already instituted trial, these factors also strongly weigh against intuition.” *Id.* Patent Owner asserts:

The fact that the second petition challenging the claims were instituted is an additional factor that weighs against institution. As noted above, the Board has also instituted trial in the Volkswagen Petition, with oral argument for that matter scheduled for February 1, 2024. Thus, instituting a second trial on the same claims of the same patent would present a double burden on both the Board and Patent Owner that would not have been present if Volkswagen’s petition were also denied.

Prelim. Resp. 26. According to Patent Owner, the '450 Patent “will be fully evaluated again on the merits based on the full record at the conclusion of the Volkswagen IPR.” *Id.* at 27.

Under the circumstances before us, instituting *inter partes* review based on this second 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 seven 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 review.

IV. CONCLUSION

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

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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Patent 10,447,450 B2

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