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Paper No. 11
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHARKNINJA OPERATING LLC,
SHARKNINJA MANAGEMENT LLC, AND
SHARKNINJA SALES COMPANY,

Petitioner,

v.

IROBOT CORPORATION,
Patent Owner.

IPR2020-00734
Patent 9,921,586 B2

Before TERRENCE W. McMILLIN, AMANDA F. WIEKER, and JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

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

I. INTRODUCTION

SharkNinja Operating LLC, SharkNinja Management LLC, and SharkNinja Sales Company ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting institution of *inter partes* review of claims 1–19 of U.S. Patent No. 9,921,586 B2 (Ex. 1001, "the '586 patent"). iRobot Corporation ("Patent Owner") filed a Preliminary Response. Paper 6. After our email authorization, Petitioner filed a Preliminary Reply (Paper 7) and Patent Owner filed a Preliminary Sur-Reply (Paper 9). Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review.

An *inter partes* review may not be instituted unless "the information presented in the petition . . . and any response . . . 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." 35 U.S.C. § 314(a). For the reasons set forth below, we conclude that Petitioner has shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim, and we institute *inter partes* review.

A. RELATED MATTERS

The parties identify the following matters related to the '586 patent: *SharkNinja Operating LLC v. iRobot Corporation*, Civil Action No. 1:19-cv-01935 (D. Del.) (filed Oct. 11, 2019); *iRobot Corporation v. SharkNinja Operating LLC, et al.*, Civil Action No. 1:19-cv-12125 (D. Mass.) (filed Oct. 15, 2019); and *SharkNinja Operating LLC v. iRobot Corporation*, Civil Action No. 1:19-cv-12236 (D. Mass.) (filed Oct. 30, 2019).
Pet. 73; Paper 4, 2.

B. THE '586 PATENT

The '586 patent is titled Celestial Navigation System for an Autonomous Vehicle. Ex. 1001, code (54). It addresses "the demand for robotic devices that can navigate around a complex environment or [working] space with little or no assistance from a human operator." *Id.* at 1:31–34. The '586 patent uses "vacuuming as a demonstrative task of the depicted robotic cleaning device 12." *Id.* at 4:19–21. In one aspect, the Specification discloses projecting infrared signals onto a room's ceiling or walls and refers to regions where the signals contact a surface as "points." *Id.* at 4:43–46. Alternatively, it explains, "visible points can be used in place of infrared points" and may be detected using a camera. *Id.* at 5:14–19. Then, the device's microprocessor can calculate bearings from the robot to the signals and, ultimately, "determine the location of the autonomous vehicle 12 within the working area 14." *Id.* at 5:19–25.

The '586 patent describes aspects of how an autonomous vehicle may take advantage of location information. For example, it discloses that "an operator may be able to direct the autonomous vehicle to clean specific rooms in a particular order and/or at a specific time." *Id.* at 11:53–55.

C. CHALLENGED CLAIMS

In the Preliminary Response, Patent Owner notes that it has disclaimed claims 1–7, 9, 11–12, and 17–19. PO Prelim. Resp. 1; Ex. 2001. Thus, claims 8, 10, and 13–16 remain at issue (the "challenged claims").

Challenged claim 8 depends from claim 7, which in turn depends from claim 1; both claims 1 and 7 have now been disclaimed. Ex. 2001. We reproduce claim 8 below, including the limitations of claims 1 and 7:

[1]. An autonomous robotic cleaning device comprising:

a robot body;

a drive supporting the robot body above a floor surface of a home and configured to maneuver the robot body across the floor surface;

a cleaning apparatus to clean the floor surface;

a processor configured to

wirelessly receive data indicative of a user selection of one or more rooms in the home and a user selection of a schedule to clean the floor surface in the one or more rooms, and

initiate, in accordance to the schedule, one or more cleaning operations, wherein during each of the one or more cleaning operations, the drive maneuvers the autonomous robotic cleaning device about the floor surface in accordance to the user selection of the one or more rooms while the cleaning apparatus cleans the floor surface[;]

[7] . . . a wireless antenna to communicate with a remote device, wherein the processor is configured to initiate operations for the wireless antenna to receive the data from the remote device[;]

8. . . . wherein the remote device includes a cellular phone.

Ex. 1001, 19:8–25, 19:66–20:5. Claim 10 depends from claim 1 and recites an "upward-angled camera . . . to capture visible points on wall surfaces" and that the cleaning device can "navigate . . . based on a location . . . relative to the points." *Id.* at 20:12–19. Claim 13 depends from claim 1 and recites that the device can "initiate the area rug cleaning operation" in response to a received user command. *Id.* at 20:36–40. Claim 14 depends from claim 1 and recites that the processor is "configured to create a map of the home while navigating the autonomous robot cleaning device about the home to perform the one or more cleaning operations." Claim 15 depends

from claim 14 and recites that the processor is configured to "indicate, on the map, an entrapment area based on an output from the sensors while navigating the autonomous robotic cleaning device during a first cleaning run, and then control the autonomous robotic cleaning device using the map to avoid the entrapment area during a subsequent cleaning run." *Id.* at 20:46–56. Claim 16 depends from claim 14 and recites a "dirt sensor" and that the device can "indicate, on the map, readings from the dirt sensor." *Id.* at 20:57–60.

D. Prior Art and Asserted Grounds

Petitioner asserts the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. §	References/Basis
8, 14	103	Toshiba[1], Ruffner-556[2]
10	103	Toshiba, Ruffner-556, Goncalves[3]
13	103	Toshiba, Ruffner-556, Köchel[4]
15	103	Toshiba, Ruffner-556, Taylor[5]
16	103	Toshiba, Ruffner-556, Minolta[6]

Pet. 2. Petitioner also relies on the Declaration of Alonzo Kelly. Ex. 1002.

[1] Japanese Patent Application Publication No. 2002-85305 (Ex. 1005 (English translation); Ex. 1004 (original)).
[2] U.S. Patent Application Publication No. 2002/0156556 (Ex. 1006).
[3] U.S. Patent Publication No. 2004/0167667 (Ex. 1014).
[4] German Patent Publication No. DE10113105 (Ex. 1008 (English translation); Ex. 1007 (original)).
[5] U.S. Patent Publication No. 2005/0000543 (Ex. 1015).
[6] Japanese Patent Application Publication No. H07-281752 A (Ex. 1010 (English translation); Ex. 1009 (original)).

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner proposes that a person of ordinary skill "would have at least a four-year degree in mechanical engineering, electrical engineering, or a closely related field and at least one year of experience in the design and implementation of robotics and embedded systems." Pet. 4 (citing Ex. 1002 ¶ 22). Patent Owner does not dispute this definition of a person of ordinary skill. *See generally* Prelim. Resp. For purposes of this Decision, we adopt Petitioner's proposed level of ordinary skill as it appears to be consistent with the level of skill reflected by the Specification and in the asserted prior art references.

B. CLAIM CONSTRUCTION

For an *inter partes* review petition filed after November 13, 2018, we construe claim terms "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b)." 37 C.F.R. § 42.100(b) (2019). Petitioner submits that no term requires express construction. Pet. 5. Patent Owner does not address the issue. Based on our analysis of the issues in dispute at this stage of the proceeding, we conclude that none of the claim terms requires express construction at this time. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

C. OBVIOUSNESS OVER TOSHIBA AND RUFFNER-556

Petitioner relies on Toshiba as teaching most limitations of claim 1 (which are included in every challenged claim). Pet. 11–39. For certain aspects, Petitioner relies on Ruffner-556. Pet. 17–39.

Toshiba discloses an "autonomous traveling robot cleaner" and a "home server" for controlling the robot. Ex. 1005, code (57). Toshiba's robot propels itself with drive wheels, each driven by a motor. *Id.* ¶¶ 16, 18, Fig. 3. It includes a vacuum with a powered brush to clean the floor surface. *Id.* Toshiba further describes its control through onboard processing and through wireless connection to the home server. *Id.* ¶¶ 17, 20, 28–37, Figs. 1, 4–10. Through the home server, a user may select a room for cleaning and may set a future time to begin cleaning. *Id.* ¶¶ 30, 32, 37, 65, Figs. 6, 9, 11; *see* Ex. 1002 ¶ 98. Toshiba provides that a mobile phone may be used to select a room and cleaning mode through the home server. *Id.* ¶ 39.

Ruffner-556 discloses methods for controlling a mobile appliance such as a vacuum, to allow it to map a work area and perform a task in the area. Ex. 1006, code (57). Petitioner relies on Ruffner-556 for explicitly disclosing that an autonomous robot such as Toshiba's would use a controller with a processor. Pet. 16 (citing Ex. 1006 ¶ 125). Petitioner relies on Ruffner-556 also for claim elements requiring the cleaning robot receive a user's selection of a cleaning schedule.[7] Pet. 17–18, 29–35. Ruffner-556 discloses that a user may enter scheduling information into the cleaning robot. Ex. 1006 ¶ 231. It further discloses that a user may enter schedule information remotely, using a Web interface, phone, or other connection. *Id.* ¶ 233.

[7] Petitioner asserts additionally that Ruffner-556 discloses the robot receiving a user's room selection, but that aspect of Toshiba does not appear to be disputed at this stage. *See* Pet. 29–30.

1. Claim 8

As reproduced above, claim 8 requires the robotic cleaning device be configured to receive the claimed data[8] from a remote cellular phone. Petitioner contends that Toshiba satisfies the limitation because it discloses that its home server is connected to a base station for communicating with a mobile phone. Pet. 50–51 (citing Ex. 1005 ¶¶ 13, 39). Patent Owner challenges Petitioner's showing, arguing that Toshiba discloses only limited use of a cellular phone—selecting "a room and cleaning mode." Prelim. Resp. 11 (quoting Ex. 1005 ¶ 39). Because "Toshiba identifies no other functionality of the mobile phone," Patent Owner submits that Toshiba's disclosures cannot meet claim 8's requirement that the received data be "indicative of . . . a user selection of a schedule." *Id.* at 11–12.

It is undisputed that Toshiba discloses selecting a room using a mobile phone. Patent Owner's argument that Toshiba fails to disclose selecting a schedule does not adequately consider Petitioner's asserted combination. In the combination, Petitioner relies on Ruffner-556 as teaching operation according to a user-selected schedule. Pet. 29–35, 37–39. Petitioner's asserted combination is therefore a device that includes scheduling functionality—"when the user finishes programming path data, the mobile unit 1 will ask the user for scheduling information." *Id.* at 30 (quoting Ex. 1006 ¶ 231). Moreover, Petitioner specifically asserts that skilled artisans would have incorporated Ruffner-556's scheduling functionality to include its ability for remote access—"[s]cheduling for the mobile unit 1 can

[8] The claimed data is "data indicative of a user selection of one or more rooms in the home and a user selection of a schedule to clean the floor surface in the one or more rooms." Ex. 1001, 19:15–18.

also be programmed remotely." *Id.* at 31 (quoting Ex. 1006 ¶ 233), 34 ("to allow the robot cleaner to wirelessly receive inputs regarding both room selection and a cleaning schedule"). Thus, when Toshiba teaches that a cellular phone may be used for "[s]election of a room and cleaning mode" (Ex. 1005 ¶ 39), in the asserted combination, that would reasonably include a schedule.

Patent Owner does not contest other aspects of Petitioner's showing for claim 8. We have reviewed Petitioner's showing and determine that it is sufficient for institution.

2. Claim 14

Claim 14 depends from claim 1 and recites further that "the processor is configured to create a map of the home while navigating the autonomous robotic cleaning device about the home to perform the one or more cleaning operations." For that limitation, Petitioner relies on Toshiba's teaching that, when there is no map information, the robot "collects room layout information." Pet. 57–58 (citing Ex. 1005 ¶¶ 58, 65). As Patent Owner points out, however, Toshiba discloses that room plan data is created in one operation, "after which cleaning is performed based on this created map information." Ex. 1005 ¶ 65; *see* Prelim. Resp. 5–9. Toshiba's sequential process is not the same as the concurrent process recited by claim 14. Nor does Petitioner account for the differences. *See* Pet. 57–58.

Thus, on the present record, Petitioner has not shown a reasonable likelihood it would prevail with respect to claim 14.

D. OBVIOUSNESS OVER TOSHIBA, RUFFNER-556, AND GONCALVES (CLAIM 10)

Claim 10 depends from claim 1 and recites that the device includes:

> an upward-angled camera directed at least partially away from a ceiling of the home to capture visible points on wall surfaces within the home, wherein the processor is configured to navigate the autonomous robotic cleaning device about the home based on a location of the autonomous robotic cleaning device relative to the points.

Ex. 1001, 20:12–19. Petitioner relies on Toshiba and Goncalves for the additional limitation. Pet. 58–61. Toshiba discloses a "visual sensor" that acquires images. Ex. 1005 ¶¶ 19, 53, Fig. 3. Toshiba's device includes processing to "recognize a position on the map by comparing an image acquired by the visual sensor 9 with an image showing the appearance of the room to be cleaned or image of a particular object in the room stored in the map information memory section 47a." *Id.* ¶ 24. To the extent that Toshiba's visual sensor's "forward field of view" (*id.* ¶ 19) does not satisfy the claimed "upward-angled camera directed at least partially away from a ceiling of the home," Petitioner relies on Goncalves. Pet. 60–61.

Goncalves discloses a similar mobile robot that may be an autonomous cleaner. Ex. 1014 ¶ 58. Goncalves's robot may navigate based on input from a visual sensor, and that sensor "can correspond to a generally upward-pointing camera, to a sideways-looking camera, or to positions between forward looking, upward, and/or sideways." *Id.* ¶ 161. Petitioner asserts that skilled artisans would have incorporated Goncalves's camera "to allow the navigation system of Toshiba's robot cleaner to employ a forward field of view including higher-positioned landmarks 'mounted on a wall.'" Pet. 60–61 (citing Ex. 1002 ¶ 155).

Patent Owner argues that claim 10 requires a "specific method of navigation" not taught by Toshiba. Prelim. Resp. 19–22. First, Patent Owner challenges Petitioner's reliance on the assertion that "a common and well-

known approach to comparing images includes identifying common reference points between compared images (e.g., standard image registration)." Pet. 59–60 (citing Ex. 1002 ¶ 153). In Patent Owner's view, Petitioner has not established that Toshiba's robot would use image registration or reference points. Prelim. Resp. 21. Rather, because Toshiba states only that the robot can "recognize a position on the map by comparing an image acquired by the visual sensor 9 with an image showing the appearance of the room to be cleaned," Patent Owner argues that Toshiba does not disclose or involve image registration or reference points. Prelim. Resp. 21. According to Patent Owner, Petitioner fails to make a required showing of inherency. *See id.* at 21–22.

Petitioner asserts that "identifying common reference points between compared images" was "a common and well-known approach to comparing images." *See* Pet. 59–60. Although Petitioner asserts that approach was well known (and therefore obvious), the claim does not require such a particular approach. Rather, the claim language appears to be satisfied by simply capturing an image of the wall, as such an image would include "visible points on wall surfaces." Neither party has argued for a particular construction of "visible points" and we decline to adopt one at this stage. And the claim imposes no further requirement that the processor distinctly identify the points or process them in a certain manner. Thus, even if we were to agree with Patent Owner and ultimately conclude that Petitioner fails to show Toshiba uses image registration or reference points in its robot's navigation, that would not necessarily change our determination regarding obviousness. Rather, claim 10 appears to require nothing beyond capturing

an image of the wall, using it to determine the robot's position, and then navigating based on that position.

Patent Owner argues also that the Petition fails to show that Toshiba discloses navigation "based on a location of the autonomous robotic cleaning device relative to" points that are "visible points on wall surfaces within the home." Prelim. Resp. 22. Patent Owner asserts that claim 10 requires "comparing the location of the autonomous robotic cleaning device relative to the visible points." *Id.* We do not agree. The claim does not recite any direct comparison and instead requires navigating based on relative location; thus, it seems to require some determination of the device's location relative to visible points on wall surfaces, but nothing more specific. Such scope appears to encompass any approach to navigating the device within a room as long as the device determines its position in the room by capturing visible points on wall surfaces. And Petitioner shows that Toshiba's device can "recognize a position on the map" using its visual sensor. Ex. 1005 ¶ 24. On the present record, we determine that is sufficient.

Patent Owner argues further that Petitioner has not adequately justified that skilled artisans had reason to modify Toshiba to use Goncalves's upward-facing camera. Prelim. Resp. 23–24. As mentioned, Petitioner submits that the modification would permit "higher-positioned landmarks 'mounted on a wall'" to be identified. Pet. 60–61 (citing Ex. 1002 ¶ 155). Further, Petitioner submits that "higher-positions landmarks can provide more reliable landmarks for navigation because, for example, such items mounted on a wall are less likely to move compared to lower positioned landmarks such as furniture." *Id.* at 61 (citing Ex. 1002 ¶ 155).

We conclude that reasoning sufficiently justifies the modification Petitioner proposes.

Patent Owner argues that the Petition does not present its challenges against claims 10 and 13–16 with sufficient specificity because it is unclear how Ruffner-556 is used in the combination.[9] Prelim. Resp. 25–29. The Petition asserts that certain limitations undisputed by Patent Owner are taught by both Toshiba and Ruffner-556. Pet. 15–17 (addressing the "processor"), 17–25 (addressing wirelessly receiving data and users selecting a room). We do not view Petitioner's assertions as confusing or ambiguous, or as unduly expanding the scope of our inquiry.

For user selection of a schedule, as required by claim 1, Petitioner asserts that Toshiba and Ruffner-556 teach the limitation in different ways. *See* Pet. 26–32. As discussed above, Patent Owner disputes the ability to control such functionality remotely, which relates only to claim 8. *See supra* at 8–9. At this stage, Patent Owner does not dispute that Toshiba and Ruffner-556 disclose claim 1's scheduling functionality. Although Petitioner asserts redundant teachings that may be viewed as two separate grounds—one relying on Toshiba and one on Ruffner-556 for this limitation—we do not view that increase in complexity as reason to deny institution here. To be sure, a petition may present grounds in a manner such that it would be overly burdensome to address all possible variations (or sometimes even to identify them), but that is not the case here. Moreover, our analysis of Patent Owner's argument regarding claim 8 above relies on Petitioner's assertions

[9] We discuss these arguments here for claim 10. Our analysis and conclusions apply equally to claim 13–16.

relying on Ruffner-556 for the claimed scheduling functionality (*see supra* at 8–9), narrowing the likely scope of disputed trial issues.

Although Patent Owner argues that, based on Petitioner's assertion that Toshiba discloses scheduling functionality, there would be no reason to incorporate Ruffner-556's similar functionality (Prelim. Resp. 28–29), we determine that Petitioner explains how Ruffner-556 discloses substantially more functionality and reasons skilled artisans would have incorporated it in Toshiba's device (*see* Pet. 29–35). Thus, we do not fault Petitioner's overlapping assertions in that regard. At bottom, the minor complexity added by Petitioner's overlapping assertions for claim 1 does not justify denying institution.

As to claim 10 itself, the Petition describes the asserted combination as "the combination of the teachings of Goncalves with the Toshiba robot cleaner modified with the teachings of Ruffner-556." Pet. 61. Petitioner is clear that it relies on Toshiba's and Goncalves's teachings regarding the additional limitations of claim 10 beyond those of claim 1. *Id.* at 58–61. Petitioner's statement regarding the combination simply recognizes that claim 10 depends from claim 1 and therefore a combination of teachings asserted against claim 10 must account for the limitations of claim 1.

Patent Owner does not contest other aspects of Petitioner's showing for claim 10. We have reviewed Petitioner's showing and determine that it is sufficient for institution.

E. Obviousness over Toshiba, Ruffner-556, and Köchel (Claim 13)

Claim 13 depends from claim 1 and recites that "the processor is configured to, responsive to receiving data indicative of a user-selected

command to initiate an area rug cleaning operation, initiate the area rug cleaning operation." Ex. 1001, 20:36–40.

Petitioner asserts that Toshiba and Köchel teach claim 13's additional limitations. Pet. 62–63. As to Toshiba, Petitioner points to its "Priority" mode, where a user may select a portion of the room layout for cleaning in "Extra Care" mode. *Id.* at 62 (citing Ex. 1005 ¶¶ 36, 49). Petitioner further relies on Köchel.

Köchel discloses a vacuum cleaner that includes ultrasonic sensors to recognize different floor coverings, including "soft carpet, carpet, and hard floor." Ex. 1008 ¶¶ 33, 34, 48. Further, Köchel discloses its applicability to "an automatic floor care device," such that the device can change direction when detecting a change in floor coving. *Id.* ¶ 9. Thus, explains Köchel, "it is possible to systematically clean an area having different floor coverings, that is, to travel parallel to edges and transitions." *Id.*; *accord id.* ¶ 10 (disclosing "a method for aligning the displacement movement of an automatic floor care device, such as, in particular, of a vacuum cleaner, along a boundary of a particular floor covering, such as a carpeted floor").

Petitioner reasons that incorporating Köchel's teaching to automatically follow carpeted boundaries would allow Toshiba's robot "to be able to clean a particular area of the floor thoroughly while ensuring neither the floor nor robot cleaner brush become damaged." Pet. 65. Petitioner asserts further that skilled artisans would program the robot "to remain within a boundary of a particular type of floor covering and/or turn its brush on or off based on signals received from the ultrasonic floor sensor." *Id.*

Patent Owner argues that Köchel "does not describe an area rug cleaning operation that is initiated based on a 'user-selected command'" as claimed and instead teaches an automated approach. Prelim. Resp. 13–14. Patent Owner argues that Toshiba's priority mode does not cure this deficiency, because it relates to room portions of uniform size, not portions of a particular covering like an area rug. *Id.* at 14–15.

On the present record, we find Petitioner has made an adequate showing. Petitioner asserts a combination of Toshiba and Köchel, in which Toshiba's priority cleaning is modified to depend on automated detection of the floor covering and remain within the boundaries of an area rug. *See* Pet. 64–65. Patent Owner attempts to look at the references in isolation, rather than recognizing that the combination would feature Toshiba's user initiation and Köchel's automated boundary detection, such that a user could initiate a cleaning sequence that would follow a rug's boundaries—an "area rug cleaning operation" as claimed.

Other than the redundancy arguments addressed above in connection with claim 10, Patent Owner does not contest other aspects of Petitioner's showing for claim 13. We have reviewed Petitioner's showing and determine that it is sufficient for institution.

F. Real Parties in Interest

Patent Owner argues that we should deny institution under 35 U.S.C. § 312(a)(2) because the Petition does not name all real parties in interest ("RPI"). Prelim. Resp. 29–38. Patent Owner argues that JS Global Lifestyle Company Limited ("JS Global"), "the ultimate corporate parent for all three Petitioners," is an unnamed RPI. *Id.* at 29. According to Patent Owner, the evidence supports that JS Global is involved with Petitioner's disputes with

Patent Owner. *Id.* at 30–31. As noted above, we authorized additional briefing from both parties on this issue. *See* Prelim. Reply; Prelim. Sur-Reply. Petitioner asserts that the Petition correctly names all RPIs and further contends that, if the Board determines that JS Global or others should be named as RPI, then Petitioner should be allowed to amend its Mandatory Notices. Prelim. Reply 1–5.

Section 312(a)(2) requires that the "petition identif[y] all real parties in interest." This provision serves important notice functions to patent owners, to identify whether the petitioner is barred from bringing an IPR due to an RPI that is time-barred or otherwise estopped, and to the Board, to identify conflicts of interests that are not readily apparent from the identity of the petitioner.[10] *See NOF Corp. v. Nektar Therapeutics*, IPR2019-01397, Paper 24 at 6 (PTAB Feb. 10, 2020) (citing Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012); Consolidated Trial Practice Guide 12 (Nov. 2019)[11]). Accordingly, petitioners must comply with these requirements in good faith. *See* 37 C.F.R. § 42.11(a) (2019) (duty of good faith and candor in proceedings).

Whether a non-party is a RPI is a "highly fact-dependent question" and must be considered on a case-by-case basis. *Ventex Co. v. Columbia Sportswear N. Am., Inc.*, IPR2017-00651, Paper 148 at 6 (PTAB Jan. 24, 2019) (Paper 148) (precedential) (citing Office Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012)). In *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336 (Fed. Cir. 2018) ("*AIT*"), the Federal Circuit cited the Board's Trial Practice Guide with approval for its explanation that

[10] The panel confirms that it does not have a conflict with JS Global.
[11] Available at https://www.uspto.gov/TrialPracticeGuideConsolidated.

the RPI inquiry is "fact-dependent" and involves "multiple factors." *See id.* at 1351 (*citing* Trial Practice Guide, 77 Fed. Reg. at 48,759).

On this record, we determine that we need not address whether JS Global is an unnamed RPI because, even if it were, it would not create a time bar or estoppel under 35 U.S.C. § 315. Under the Board's precedential decision in *Lumentum Holdings, Inc. v. Capella Photonics, Inc.*, our jurisdiction to consider a petition does not require a "correct" identification of all RPIs in a petition. IPR2015-00739, Paper 38 at 6 (PTAB Mar. 4, 2016) (precedential); *see also Blue Coat Sys., Inc. v. Finjan, Inc.*, IPR2016-01444, Paper 11 at 10 (PTAB July 18, 2017) ("Evidence [of failure to identify all RPIs] is, at best, suggestive of an issue that is not jurisdictional."). The Federal Circuit agrees that § 312(a)(2) is not jurisdictional. *See Mayne Pharma Int'l Pty. Ltd. v. Merck Sharp & Dohme Corp.*, 927 F.3d 1232, 1240 (Fed. Cir. 2019) ("[I]f a petition fails to identify all real parties in interest under § 312(a)(2), the Director can, and does, allow the petitioner to add a real party in interest." (quoting *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1374 n.9 (Fed. Cir. 2018) (en banc)).

Here, there are at least twenty pages of pre-institution briefing in three separate briefs (including the two granted for this purpose) on whether JS Global should be named as an RPI because JS Global is intertwined with Petitioner's business and was in a position to fund and exercise control over the Petition. Prelim. Resp. 29–38; Prelim. Reply 1–5; Prelim. Sur-Reply 1–5. There is, however, no allegation that Petitioner's failure to name JS Global as an RPI should result in termination of the proceeding or denial of institution of review for any reason other than for the alleged failure of a procedural requirement that can be corrected under our precedent.

Additionally, there is no allegation or evidence that JS Global is barred or estopped from this proceeding, or that Petitioner purposefully omitted JS Global to gain some advantage.[12] Indeed, Petitioner has offered to update its mandatory notices and identify JS Global as an RPI. Prelim. Reply 5.

Certain Board decisions considering whether other parties should have been named as RPIs have gone through the extensive analysis that such an exercise requires, even where there is no allegation that the failure to name the purported RPI results in time bar, estoppel, or anything else material to the case. *See, e.g.*, *Toshiba Memory Corp. v. Anza Tech., Inc.*, IPR2018-01597, Paper 12 at 6–17 (PTAB Mar. 12, 2018) (instituting review after extensively analyzing the petitioner's corporate structure and relationship to partially owned consortium and concluding that petitioner may file a motion to update its mandatory notices). In other decisions, the Board has determined that such a lengthy exercise is unnecessary for the purposes of rendering a decision on institution of trial. *See, e.g.*, *Intel Corp. v. Alacritech, Inc.*, IPR2017-01391, Paper 8 at 3–6 (PTAB Nov. 28, 2017) (holding that the Board will not address the argument for purposes of institution that a litigation co-defendant should be a named an RPI in the absence of, for example, an allegation that the co-defendant would be time barred under section 315(b)); *T-Mobile USA, Inc. v. Vertical Connection Techs.,* IPR2018-01388, Paper 14 at 18–19 (PTAB Jan. 23, 2019) (holding

[12] We can and do consider specific and narrowly tailored discovery requests if Patent Owner can articulate that it is "already . . . in possession of evidence tending to show beyond speculation that in *fact something useful will be uncovered*." *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (PTAB Mar. 5, 2013) (precedential) (emphasis added). There has been no such articulation here.

that the Board will not deny institution based on the allegation that Petitioner did not name all the RPIs when there was no time bar implication and the parties were negotiating limited discovery on the issue).[13]

The latter approach better serves the interest of cost and efficiency.[14] We understand that "[patent owners] should not be forced to defend against later judicial or administrative attacks on the same or related grounds by a party that is so closely related to the original petitioner as to qualify as a real party in interest." *AIT*, 897 F.3d at 1350. But that is not the case before us. Thus, on this record, we will not consider whether JS Global must be named as an RPI.

III. CONCLUSION

For the reasons discussed above, we conclude Petitioner has shown a reasonable likelihood of prevailing with respect to at least one claim. We have evaluated all of the parties' submissions and determine that the record supports institution.

Our determination at this stage of the proceeding is based on the evidentiary record currently before us. This decision to institute trial is not a final decision as to patentability of any claim for which *inter partes* review has been instituted. Our final decision will be based on the full record developed during trial.

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[13] *Lumentum Holdings* allowed the parties to update their notices without loss of a filing date. *See* IPR2015-00739, Paper 38 (PTAB Mar. 4, 2016) (precedential); *see also Proppant Express Investments, LLC v. Oren Techs., LLC*, IPR2017-01917, Paper 86 (PTAB Feb. 13, 2019) (permitting a post-institution update to mandatory notices to add RPI).

[14] *See* 37 C.F.R. § 42.1(b) ("This part shall be construed to secure the just, speedy, and inexpensive resolution of every proceeding.").

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of claims 8, 10, and 13–16 of the '586 patent is instituted on the grounds set forth in the Petition;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this decision.

PETITIONER:

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