

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NINTENDO CO., LTD. AND NINTENDO
OF AMERICA INC.,
Petitioners,

v.

AMERICAN GNC CORPORATION,
Patent Owner.

Case IPR2024-00668
Patent No. 6,671,648 B2

**PETITIONERS' REPLY IN SUPPORT OF ITS
PETITION FOR *INTER PARTES* REVIEW**

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I. INTRODUCTION

The Petition provided detailed—now un rebutted—evidence (including expert testimony) that claims 1 and 4 of the '648 patent are unpatentable based on the four instituted grounds. Patent Owner (“PO”) responded with attorney argument, unsupported claim constructions, and irrelevant declarations. PO’s declarations left most of Petitioner’s evidence un rebutted, and did not discuss—let alone meaningfully engage with—the prior art or the challenged claim limitations. The claims are unpatentable.

A. Claim Construction

1. The Preamble

It is undisputed that none of the limitations in the body of claim 1 refer back to the preamble, or rely on the preamble for antecedent basis. The Petition thus argued that “**micro inertial measurement unit**” in the preamble should be construed as non-limiting. (Pet., pp.9-11; EX1002, ¶¶87-88.)

The Petition also established that, even if construed as limiting, the prior art rendered obvious a micro inertial measurement unit (“IMU”). (Pet., pp.13-18, 45-46, 59.) The Institution Decision preliminarily found the preamble to be limiting, based on the Board’s view that the specification focused on making a micro-sized

IMU. (Inst. Dec., pp.22-24.)¹

But as the Board recognized, “a preamble is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” (Inst. Dec., p.22 (quoting *Catalina Mktg. Int’l v. Coolsavings.com*, 289 F.3d 801, 808 (Fed. Cir. 2002) (citation omitted)). PO did exactly that; the limitations in the body—*i.e.*, “angular rate producer,” “acceleration producer,” and “angular increment and velocity increment producer”—define a structurally complete invention. (Pet., pp.9-10; EX1002, ¶¶87-88.) The preamble is not limiting.

2. “Angular Rate Electrical Signals” (claim 1) and “Angular Rate Voltage Signals” (claim 4)

PO argues that these terms mean “directly measure and reflect angular rate.” (POR, p.24.) Even if this erroneous claim interpretation were adopted, it would not distinguish the prior art. The Board should nevertheless reject PO’s construction.

PO’s construction is unsupported by the claim language. The term “angular rate electrical signals” appears in claim 1 with no qualification as to whether the signals “directly” measure and reflect angular rate. Claim 1 merely recites the production and receipt of angular rate electrical signals for the X-Y-Z axes, which

¹ PO’s reliance on the district court’s motion to dismiss order is misplaced, because the Court did not construe the claims. (EX1017, p.11.)

are converted into “digital angular increments.” The claims do not require any particular relationship between the angular rate electrical signals and the angular rate. (EX1045, ¶¶46-54.)

Dependent claim 4 further confirms why PO is wrong. Claim 4 recites that the angular rate electrical signals of claim 1 “are analog angular rate voltage signals *directly proportional* to angular rates of a carrier carrying said micro inertial measurement unit.” (emphasis added). Claim 4 confirms that the inventors knew how to specify a desired relationship between the claimed angular rate electrical signals and the underlying angular rate. (EX1045, ¶48.) PO’s construction, in fact, may also render the language in claim 4 superfluous. (*Id.*, ¶¶48-49.)

PO’s limitation that the signals “directly measure and reflect angular rate” is also unclear and inconsistent with the specification. (EX1045, ¶49.) To the extent PO intended the word “directly” to suggest that angular rate must be directly measured—as opposed to being computed from other measured values—the construction fails. The specification discloses angular rate producers that measure *other* forces (torsional Coriolis forces on vibrating tines) that can be used to calculate angular rate. (’648, 16:46-17:18.) This undermines PO’s “directly measure” proposal if PO is suggesting there can be no computation of other values, because such Coriolis force-measuring angular rate producers derive angular rate from a different measured quantity. (EX1045, ¶49.)

II. ARGUMENT

A. The Challenged Claims Are Obvious

1. Ground 1

(a) The Prior Art for Ground 1 Discloses and Renders Obvious “Angular Rate Electrical Signals”

PO acknowledges that Smith discloses the production of a train of pulses that relate to angular rate. (POR, pp.43-44.) The angular rate electrical signals in Smith are shown, by reference to Figure 2, as signals transmitted by gyros **42**, **44**, and **46** to RLG sensor electronics **62**, **64**, and **66**, respectively. (Pet, pp.19-20.)

PO’s arguments rest on its construction of “angular rate electrical signals” addressed above. Because that construction is erroneous, PO’s arguments are meritless. But even if PO’s construction was adopted, the prior art would still disclose and render obvious this limitation. The signals output by gyros **42**, **44**, and **46** directly measure and reflect angular rate because the rate of the pulses varies based on the angular rate. (Pet., pp.19-20 (citing Smith (EX1003), 8:3-6 (“Each ring laser gyro **42**, **44**, and **46** produces an output digital signal having a pulse repetition rate proportional to the rate of angular displacement of each gyro **42**, **44**, and **46** about its coordinate axis.”) (underlining added)); EX1045, ¶¶50-51.)

PO acknowledges that the pulse repetition rate in Smith is proportional to the angular rate, but asserts that the rate is “*not the signal itself[.]*” (POR, p.26 (italics in original).) This is incorrect, as the Petition mapped the pulse repetition signals

output by laser gyros 42, 44, and 46 as the claimed angular rate electrical signals. (Pet., pp.19-20.) The information in these signals is encoded in the repetition of electrical pulses over time. (EX1045, ¶¶50-51.) Further, since a POSITA would have viewed converting between signals that encode based on frequency and amplitude as straightforward, Smith satisfies the “angular rate electrical signals” limitation even under PO’s construction. (*Id.*)

PO’s argument also improperly focuses entirely on Smith. Under Federal Circuit law, “attacking references individually” is insufficient where obviousness is “based upon the teachings of a combination of references.” *Bradium Techs. v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (citation omitted). The Petition relied on Smith in combination with Bernstein, which further described MEMS-based gyroscopes that generate electrical signals proportional to the angular rate. (Pet., p.39; Bernstein (EX1006), 2:57-59, 3:3-5 (“The voltage required to rebalance the gyroscope about the X axis is the measured output of the gyroscope, and is proportional to the input rate.”) (underlining added); EX1045, ¶¶52-54.)

Accordingly, Smith and Bernstein disclose and render obvious an angular rate producer that produces the claimed angular rate electrical signals. And because those signals are proportional to the angular rate, they directly measure and reflect the angular rate and satisfy even PO’s proposed construction.

Petitioner’s evidence for dependent claim 4 further supports obviousness. It

would have been basic knowledge of a POSITA that a sensor for measuring rotation would have produced a signal proportional to the rotation parameter being measured. (Pet., pp.37-43; EX1002, ¶¶139-150.) It would have been apparent and obvious that proportionality in this context refers to “a linear relationship in which the voltage signal varies based on a constant ratio to the measured ... angular rate.” (Pet., pp.42-43; EX1002, ¶148; EX1045, ¶¶53-54.) PO does not dispute this. Accordingly, it would have been obvious that the electrical signals produced by the angular producer would have directly measured and reflected the angular rate of the carrier on which the IMU was mounted. (Pet., pp.38-43.)

(b) Claim 1 is Obvious Over *Smith* in View of *Chan* and *Bernstein*

PO argues that Petitioner has only shown the availability of MEMS accelerometers and gyroscopes, but not a motivation to combine. (POR, pp.29-31.) Not so. The Petition provided evidence that a POSITA would have been motivated to apply MEMS accelerometers and gyroscopes to the invention of Smith, among other reasons, to achieve “reduced size, reduced weight, and reduced power consumption when compared to larger (non-micromechanical) components.” (Pet., pp.16-18 (citing EX1002, ¶¶101-104).)

PO attempts to dispute Dr. Young’s opinions that combining Smith, Chan, and Bernstein would have been “straightforward” and accomplished “without undue experimentation” by arguing that they are unsupported “generalized advantages” or

“convenient assumptions.” (POR, pp.30-33.) But this ignores the evidence. The motivations to combine are supported by extensive analysis by Dr. Young and the prior art. (Pet., pp.16-18; EX1002, ¶¶101-104; EX1045, ¶¶8-24, 28-36, 45.) Dr. Young testified that as early as 1993—six years before the alleged priority date—he had experience working on MEMS inertial sensors that used the types of analog and digital circuitry that the Smith, Chan, and Bernstein combination would have entailed. (EX2020, 23:7-27:6; EX1045, ¶¶4-6.) Dr. Young testified that he worked on simulation of a sigma-delta modulator to provide “digital feedback to provide force-balancing” for MEMS inertial sensors. (EX2020, 23:7-24:14.) He also designed a “motion sensor using a MEMS device[.]” (*Id.*, 26:13-27:6.)

PO points to its own expert Dr. Larson. (POR, pp.33-35.) But Dr. Larson “never designed a MEMS device for inertial navigation applications.” (EX1046, 24:15-18.) His experience rests in the unrelated field of RF MEMS. (*Id.*, 26:1-5, 23:25-24:14 (“not their function to perform inertial navigation”).) He also admitted that he was unaware of relevant prior art, including an article that discusses “a practical MEMS Inertial Measurement Unit (IMU).” (EX1047; EX1046, 34:14-35:3; EX1045, ¶45.)

Dr. Young also rebuts Dr. Larson’s claims—for example, opining that the incorporation of MEMS sensors into Smith would not have been complicated and that there were many examples of MEMS sensors in IMUs in the prior art. (EX1045,

¶¶10-36, 45.) Accordingly, the opinions of Petitioner’s expert should be credited over PO’s expert. PO’s declaration rests on broad generalities and does not even discuss the prior art or how it applies to the claim limitations.

PO also recycles its failed pre-institution argument that Petitioner is using the ’648 patent as a “roadmap.” (POR, pp.31-32.) But the Petition properly cited the *admitted prior art* of the ’648 patent. (Pet., pp.15-18; POR, p.29 (quoting ’648, 2:47-51).) “Admissions in the specification regarding the prior art are binding on the patentee for purposes of a later inquiry into obviousness.” *PharmaStem Therapeutics v. ViaCell*, 491 F.3d 1342, 1362 (Fed. Cir. 2007). PO “does not identify any knowledge Petitioner relies upon that was gleaned only from the ’648 patent’s disclosure, and which was not otherwise within the level of ordinary skill at the time of the invention.” (Inst. Dec., p.34.)

PO attempts to distance itself from the admissions in its own specification by citing other disclosures untethered to the claim limitations. For example, PO selectively quotes an excerpt of the ’648 patent to suggest that a “small size” IMU was “not yet available.” (POR, p.31.) But the cited portion of the patent merely states that small size IMUs that have “high performance” and “low power consumption” are not available—aspirational features that are not claim limitations. (’648, 2:47-50; *id.*, 6:6-40 (not recited in challenged claims), 17:19-36 (same), 2:62-3:13 (same); *see also* EX1045, ¶¶23, 32.)

PO argues that the duration of Dr. Young’s research projects undermines the combination. (POR, pp.35-36.) But Dr. Young testified that the duration of these projects depended on a variety of *other* factors—including changes in funding and training students. (EX2020, 67:9-18, 69:7-11, 78:10-79:19, 80:23-81:5, 34:25-35:11; EX1045, ¶¶26-27.) More importantly, there is no evidence that the duration of a research project has any bearing on whether the use of MEMS sensors would have been *obvious* to a POSITA before the ’648 patent.

PO argues that a POSITA would not have been motivated to incorporate MEMS sensors into Smith’s system, due to “differences in technical operation” with the sensors disclosed in Smith. (POR, pp.38-39, 41.) But as the Petition explained, accounting for the technical differences between MEMS and non-MEMS sensors “would have been regarded as a routine implementation to a skilled artisan[,]” particularly in light of prior art knowledge and commercial availability of MEMS inertial sensors. (Pet., pp.15-19; EX1002, ¶99; EX1045, ¶¶20-24, 28-44.) This is further supported by PO’s own assertion that a POSITA would have possessed “at least a ‘Master’s Degree in Electrical or Electronics Engineering, and approximately five years of relevant experience in the development of control systems for inertial navigation, MEMS semiconductor processing, and analog circuit design[.]” (POR, p.18 (citing EX2019, ¶57); EX1045, ¶¶8-18) (underlining added).) PO has no basis to suggest that a person with these qualifications would have found it technologically

difficult to implement the proposed combination using MEMS-based components. As Dr. Young explained in his opening declaration, “micromechanical accelerometers and gyroscopes are, after all, accelerometers and gyroscopes that serve the same purposes and provide the same types of velocity and angular position information as their non-micromechanical counterparts.” (Inst. Dec., p.33 (quoting EX1002, ¶99).) Dr. Young further explained a POSITA would have been able to account for the differences in the manufacturing processes and signal conditioning electronics between MEMS and non-MEMS based sensors in making the proposed combination. (EX1002, ¶99.)

PO also presents no evidence that these supposed “technical” differences would have made the systems incompatible or the combined system inoperable. PO instead argues that the combination would have required some “complicated” work. (POR, p.39.) But the mere fact that some integration work would have been necessary does not invalidate the ample evidence of motivations to combine provided by Petitioner. (Pet., pp.15-18; EX1002, ¶¶98-105; EX1045, ¶¶8-24, 28-44.)

2. Ground 2

PO does not present any separate arguments directed at Ground 2, which established that claim 4 is obvious over Smith in view of Irwin (EX1007) and Merhav (EX1008).

3. Ground 3

(a) The Prior Art for Ground 3 Discloses and Renders Obvious “Angular Rate Electrical Signals”

PO’s arguments largely mirror those presented above for Ground 1. Because PO’s claim construction argument is incorrect, its arguments fail. And even if PO’s construction was adopted, for the same reasons set forth in **Part II.A.1(a)** above for Ground 1, this argument would not distinguish Ground 3.

As PO acknowledges, Tingleff discloses “Gyros **22**” that output error signals that “are also used as the analog rate signals within unit **11**.” (Tingleff (EX1004), 7:3-8; POR, p.48.) As the Petition explained, each of these angular rate error signals from the gyros in Tingleff “represents the difference between the current position of a gyro gimbal and its original (null) position.” (Pet., p.48.) And Bernstein, cited in combination with Tingleff for Ground 3 (*id.*, pp.45-46, 48-49), further describes MEMS-based gyroscopes that generate electrical signals proportional to the angular rate. (Bernstein, 2:57-59, 3:3-5.) And as Petitioner explained above, it would have been basic knowledge of a skilled artisan that an electrical signal generated by a sensor “provides an analog signal proportional to the parameter” (Irwin, §7.3, p.242), such as “[a]cceleration” or “[r]otation.” (*Id.*, Table 7.1, p.241; Pet., p.56; EX1002, ¶140; EX1045, ¶¶53-54.)

(b) Claims 1 and 4 are Obvious Over *Tingleff* in View of *Chan* and *Bernstein*

PO's arguments again largely refer back to the arguments it directed at Ground 1—which Petitioner addressed above. (POR, p.46.) PO further offers attorney argument that because Tingleff already discloses its system had a small size, a POSITA would not have been motivated to use MEMS sensors. (*Id.*, p.47); *ParkerVision v. Vidal*, 88 F.4th 969, 982 (Fed. Cir. 2023) (“Attorney argument is not evidence.”) (citation omitted). But this argument was refuted by the Petition, which explained that smaller size—along with other factors not addressed by PO at all like “reduced weight” and “reduced power consumption”—would have motivated a POSITA to combine Tingleff with Chan and Bernstein. (Pet., pp.45-46; EX1002, ¶¶101-104; EX1045, ¶¶20-36.)

PO also argues that MEMS gyroscopes did not “have the performance for effective use in aircraft.” (POR, p.47.) The teachings of the prior art and the opinions of Dr. Young refute this. (Pet., pp.45-46; EX1002, ¶¶96 (citing Chan (EX1005), 1:33-44), 101, 102 (citing Hulsing (EX1013), 1:36-39 and Doty (EX1014), 1:18-36), 156; EX1045, ¶42.) PO merely cites equivocal statements from the named inventor, who made no representation about “effective” performance and failed to connect any of his discussion to the claim language. Rather, Mr. McCall said that “no one had successfully deployed a small accurate silicon MEMS gyroscope in an aircraft or vehicular navigation product”—without explaining what

he means by “successfully,” “deployed,” “small,” or “accurate,” or how any of this relates to the challenged claims. (EX2023, ¶8; *see also id.*, ¶12 (referencing unclaimed “sufficient stability and performance”).) The evidence supports obviousness in view of Tingleff, Chan, and Bernstein.

4. Ground 4

(a) The Prior Art for Ground 4 Discloses and Renders Obvious “Angular Rate Electrical Signals”

PO’s arguments mirror those presented above for Ground 1, and rely on PO’s erroneous claim construction. But even if PO’s proposed construction was adopted, for the same reasons set forth in **Part II.A.1(a)** above for Ground 1, this argument would not distinguish Ground 4.

PO acknowledges that Yamawaki discloses a “3D gyroscope 13”. (POR, p.55.) This gyroscope “detects the rotational velocity of the diver during underwater movement” and outputs electrical signals to an integrator. (Yamawaki (EX1010), ¶¶[0016], [0029], [0030]; *see also* Pet., pp.60-61; EX1002, ¶¶188-189.) And Bernstein, cited in combination with Yamawaki for Ground 4 (*id.*, p.59), further describes MEMS-based gyroscopes that generate electrical signals proportional to the angular rate. (Bernstein, 2:57-59, 3:3-5.) It would have been basic knowledge of a POSITA that an electrical signal generated by a sensor “provides an analog signal proportional to the parameter” (Irwin, §7.3, p.242), such as “[a]cceleration”

or “[r]otation.” (*Id.*, Table 7.1, p.241; Pet., p.56; EX1002, ¶¶140, 176; EX1045, ¶¶53-54.)

Accordingly, Yamawaki and Bernstein disclose and render the claimed angular rate electrical signals obvious, even under PO’s construction.

(b) Claims 1 and 4 are Obvious Over Yamawaki in View of Chan, Bernstein and Saubolle

Outside of the same arguments raised for Ground 1, PO again raises attorney argument to suggest that Yamawaki already disclosed a small system and thus would not have benefitted from MEMS-based sensors. (POR, p.51.) This attorney argument does not overcome the evidence from Petitioner and its expert. (Pet., p.59; EX1002, ¶¶101-104; *ParkerVision*, 88 F.4th at 982; EX1045, ¶¶20-36.)

PO also provides attorney argument suggesting that the combination is unsupported because Saubolle’s discussion of the “bends” would only relate to vertical velocity tracking—and not movement in three dimensions. (POR, pp.53-54.) But PO ignores that the Petition (and Petitioner’s expert) directly addressed and rebutted this argument. (Pet., p.71 (“Although the need to prevent decompression effects is primarily concerned with the diver’s velocity in the vertical (Z axis) direction towards the surface, it would also have been obvious and beneficial to record velocity increments across all three (X, Y, and Z) axes.”) (citing EX1002, ¶206).) PO’s attorney argument that Yamawaki and Saubolle are not analogous is not only baseless and unexplained, but contradicted by the evidence. (Pet., p.70;

EX1002, ¶204.)

PO also advances attorney argument that a POSITA would not have combined Yamawaki and Saubolle because Yamawaki includes digital circuitry and Saubolle is an analog-only system that “disparages” a prior art digital system. (POR, p.54.) This argument was contradicted by the unrebutted expert testimony of Dr. Young. (Pet., pp.68-72; EX1002, ¶¶201-207.) This argument also misunderstands the purpose for which Saubolle was cited. The Petition explained that it did not “rely on the particular details of the allegedly inventive ascent/descent rate monitoring system in Saubolle, but on his general disclosure of the need to carefully monitor the rate of ascent or descent in a diving scenario[.]” (Pet., pp.69-70 (citing EX1002, ¶203).) “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference[.]” *Allied Erecting & Dismantling v. Genesis Attachments*, 825 F.3d 1373, 1381 (Fed. Cir. 2016).

PO has not identified anything in Saubolle that would teach away from or discourage a combination with Yamawaki. The passage cited by PO merely states a particular circuit in the prior art is “a relatively complex digital counter circuit”—saying nothing about digital circuitry *generally*, as PO suggests. (Saubolle (EX1011), 1:43-52.)

B. No Secondary Considerations of Nonobviousness

PO raises arguments relating to two alleged secondary considerations of non-obviousness: alleged commercial success (including alleged licensing) and failure of others. (POR, pp.2-4, 39.) But PO fails to provide the requisite evidence.

First, PO fails to show nexus. To rely on secondary considerations such as commercial success, the Federal Circuit requires PO to show that “the evidence of secondary considerations is the ‘direct result of the unique characteristics of the claimed invention.’” *Fox Factory v. SRAM*, 944 F.3d 1366, 1373-74 (Fed. Cir. 2019) (citation omitted). PO provides no evidence that it had a product that embodied the challenged claims, let alone that any alleged success was due to the claimed features.

Second, PO provides no relevant evidence of its alleged success or the failure of others. PO cites to its own allegations in an unsworn complaint in the underlying litigation—which are not evidence. (POR, p.4 (EX2007).) PO cites to generalized statements by its inventor about Draper Labs and Analog Devices—with no indication of the basis for his beliefs. (EX2023, ¶¶21-23; EX1048, 18:16-17, 17:9-19.) PO also relies on a generalized inventor declaration, which is untethered to the claim limitations. (Compare POR, pp.2-4, with EX2023; see also EX1045, ¶¶37-44.)

PO’s reliance on its own inventor declaration highlights another problem—

the lack of any *objective* evidence of secondary considerations. As the Federal Circuit has explained, “[i]nstead of ascertaining what was subjectively obvious to the inventor at the time of invention, the court must ascertain what would have been objectively obvious to one of ordinary skill in the art at such time.” *Ryko Mfg. v. Nu-Star*, 950 F.2d 714, 718 (Fed. Cir. 1991); *Hoechst Celanese v. BP Chems.*, 846 F. Supp. 542, 547 (S.D. Tex. 1994) (“‘subjective obviousness’ to the inventor ... is direct evidence of nothing”).

And that subjective evidence carries no weight here, as the inventor admitted that he was offering no opinions about invalidity and did not apply the POSITA standard. (EX1048, 15:7-15, 23:23-24:19; EX1002, ¶14.) Nothing in the declaration is tied to the claim limitations either. *Enova Tech. v. Seagate Tech. (US) Holdings*, 706 F. App’x 987, 994 (Fed. Cir. 2017).

C. No Hindsight is Necessary to Find the Claims Unpatentable

PO incorrectly argues that the Petition hinges on “hindsight” and mere “conclusory statements of generalized advantages.” (POR, pp.56-59.) To the contrary, Petitioner’s expert provided extensive analysis showing what a POSITA knew, and how and why a POSITA would have been motivated to combine, the identified references. (*E.g.*, EX1002, ¶¶203-207, 98-105, 147-148, 156-157, 178, 187, 214.) Petitioner’s expert explained in detail *how* the proposed combination would have been implemented, *what* a POSITA would have appreciated with respect

to concrete benefits from the combination, and *why* a POSITA would have been motivated to combine the references, including based on contemporaneous corroborating evidence. (*Id.*) Petitioner’s expert’s analysis was rooted in the “teachings of the asserted art and other cited references” and the knowledge of a POSITA. (*E.g.*, Inst. Dec., pp.42, 32, 35; *Voice Tech v. Unified Pats.*, 110 F.4th 1331, 1344 (Fed. Cir. 2024).)

PO fails to identify any specific problem with Petitioner’s expert’s analysis. Instead, PO concedes that MEMS gyroscopes were available, but supposedly “difficult and unsuitable for the claimed use.” (POR, p.57.) But nothing PO cites supports PO’s alleged difficulty argument. PO cites a project to create a “wearable component” in military “environments where there is no GPS signal” where the “funding was lost [for] about maybe four/five years.” (EX2020, 32:14-35:6.) PO also cites two conclusory paragraphs from its expert, who suggests that the specification expressed a desire for certain goals. (POR, p.57 (EX2019, ¶¶53-54).) And PO cites an inventor declaration, but that inventor explained that he was not offering any opinions. (EX1048, 23:23-24:19; EX2023, ¶3.) None of the cited testimony undermines Petitioner’s specific motivations to combine.

None of PO’s cases support its argument either. *Belden v. Berk-Tek*, 805 F.3d 1064, 1074 (Fed. Cir. 2015), supports *Petitioner*; the Board found a POSITA would have understood the benefits of modifying the art. In contrast, the *Personal Web*

declarant did not explain how the references *would* be combined. *Pers. Web Techs. v. Apple*, 848 F.3d 987, 993 (Fed. Cir. 2017). The *Virtek* petitioner rested on “common sense” with no evidence. *Virtek Vision Int’l v. Assembly Guidance Sys.*, 97 F.4th 882, 888-89 (Fed. Cir. 2024). *Beasley* lacked evidence. *In re Beasley*, 117 F. App’x 739, 744-45 (Fed. Cir. 2004). And *Contentguard* involved “many particular” unexplained changes. *Apple v. Contentguard Holdings*, IPR2015-00442, 2015 WL 4467397, at *7, *9-10 (P.T.A.B. July 13, 2015).

D. The Petition is Supported by Extensive Analysis by Petitioner’s Expert

Petitioner’s expert’s declaration contains 200+ paragraphs of detailed analysis, annotated figures, cited evidence, and opinions. (EX1002.) As is common in IPRs, Petitioner cited that analysis in the Petition. PO now complains that because the Petition did not paraphrase the declaration but reproduced sentences “verbatim,” the declaration must be “attorney argument” to be ignored. (POR, pp.55-61.) PO’s argument is meritless. None of PO’s cited decisions bear any resemblance to the facts here. (*See* Inst. Dec., p.42.) All of the cited cases related to conclusory testimony, not detailed factually supported testimony like offered here.

E. PO’s Time-Bar Argument Fails as a Matter of Law

PO argues the Petition is time barred under § 315(b) for failure to identify alleged real parties in interest (“RPIs”), *i.e.*, STMicroelectronics N.V. and STMicroelectronics S.R.L. (POR, pp.63-66.) PO claims that the time bar applies

because these entities were defendants in *American GNC v. OnePlus Technology (Shenzhen) Co., et al.*, No. 6:20-cv-00171-ADA (W.D. Tex.) (“2020 action”). This argument fails. PO made an undisputed deliberate decision not to accuse STMicroelectronics N.V. or STMicroelectronics S.R.L. of infringing the challenged ’648 patent in 2020.

1. Because the Challenged Patent Was Never Previously Asserted Against Any STMicroelectronics Entity, § 315(b) Cannot Apply

Section 315(b) states: “[a]n *inter partes* review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent.” 35 U.S.C. § 315(b) (emphasis added). The statute on its face only applies to the extent the *challenged patent* was actually asserted against the petitioner, or an RPI or privy of the petitioner. *Id.*

The statute does not apply here because the challenged patent was never asserted against STMicroelectronics N.V. or STMicroelectronics S.R.L. in any previous litigation. PO relies entirely on the 2020 action. (POR, pp.63-64.) But the complaint from that action confirms that PO only sued the STMicroelectronics entities of infringement with respect to two different patents. (EX2012, ¶ 48.) PO also admitted that it “did not include allegations of infringement of the ’122 patent and the ’648 patent by STMicro” in the 2020 case. (EX1049, ¶ 13 (emphasis

added).) The complaint from the 2020 case only accused OnePlus of infringing the challenged patent, and PO does not contend OnePlus is an RPI or privy of Petitioner. Because the complaint from the 2020 action does not qualify as “a complaint alleging infringement of the patent” against STMicroelectronics N.V. or STMicroelectronics S.R.L. under § 315(b), PO’s time-bar argument fails.

Despite the fact that the 2020 complaint did not include any claim of infringement of the challenged patent against any STMicroelectronics entity, PO argues that the complaint nevertheless “provided STMicro with notice sufficient to trigger application of the time bar statute.” (POR, p.64.) This unprecedented expansion of § 315(b) is unsupported and would lead to absurd results. *See IPDatatel v. ICN Acquisition*, IPR2018-01823, 2019 WL 1753603, at *5 (P.T.A.B. Apr. 17, 2019) (“[M]ere notice is not legally effective service.”) (cleaned up).

PO cites three cases, but all are inapposite because they involved complaints that actually accused the petitioner, RPI, or privy of infringing the specific patent challenged in the later-filed IPR. (POR, pp.63-64 (citing *Ventex v. Columbia Sportswear N. Am.*, IPR2017-00651, 2019 WL 764130, at *2 (P.T.A.B. Jan. 24, 2019); *GoPro v. 360Heros*, No. IPR2018-01754, 2019 WL 3992792, at *1-2 (P.T.A.B. Aug. 23, 2019); *Facebook v. Windy City Innovations*, 953 F.3d 1313, 1317 (Fed. Cir. 2020)).)

No authority supports expanding § 315(b) to cover entities that were

not subject to a claim of patent infringement in prior litigation. Expanding § 315(b) to cover any party that happened to be named in a multi-party and multi-patent complaint—irrespective of which specific patents were asserted against which parties—would lead to absurd results. Under PO’s reading, a party could lose all rights to file an IPR petition with respect to a patent for which it was never sued for infringement, simply because it was a party to a lawsuit in which *another* party was accused of infringing that patent.

The Supreme Court has observed that “[p]redictability” is a “primary goal of statutes of limitations[.]” *Owens v. Okure*, 488 U.S. 235, 240 (1989). The goal of predictability is best served here by applying § 315(b) in the way in which the statute was intended, *i.e.*, as only applying to an IPR petitioner (or its alleged RPI or privy) who was ***actually sued*** for infringement of the challenged patent—and not extending it to an IPR petitioner (or its alleged RPI or privy) who happened to have been named in a complaint in which ***other defendants*** were sued for infringement of the challenged patent. This would promote legal certainty and uniformity by allowing parties to determine whether the § 315(b) time bar applies by simply consulting the pleadings in the litigation which, in this case, show that no STMicroelectronics entity was ever sued for infringement of the challenged patent. Any other rule would not invite certainty and complicate § 315(b) inquiries by potentially requiring that the PTAB delve into intricate questions of federal civil procedure and the potentially

complex relationships between the parties named in multi-defendant patent lawsuits. The rule urged by PO would also increase the workload of the PTAB by forcing a defendant to file an IPR petition against a patent that was not actually asserted against it in litigation, for fear that the defendant could be sued for infringement in a later suit but would be forever barred under § 315(b) from challenging the patent in IPR. Finally, the rule PO urges would encourage plaintiffs to tactically and selectively assert patents in multi-defendant cases in an attempt to unreasonably expand the scope of the § 315(b) bar.

2. PO Does Not Present Any Evidence That Either of the STMicroelectronics Entities Named in the 2020 Complaint is an RPI of Petitioner

Even if PO could overcome the substantial threshold obstacles to application of § 315(b), it has failed to make the requisite showing that any STMicroelectronics entity that was both named and served with the complaint qualify as RPIs or privies of Petitioner. “[A] patent owner must produce some evidence to support its argument that a particular third party should be named a real party in interest.” *Worlds v. Bungie*, 903 F.3d 1237, 1242 (Fed. Cir. 2018) (emphasis added).

PO’s prior complaint was directed only to STMicroelectronics, N.V. (in the Netherlands) and STMicroelectronics, S.R.L. (in Italy). But PO fails to show that

the prior complaint was even served on both entities.² The time-bar under § 315(b) requires proof that the “petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent.” 35 U.S.C. § 315(b) (emphasis added); *Wargaming Grp. v. Game & Tech.*, IPR2017-01082, 2018 WL 4278986, at *7 (P.T.A.B. Sept. 7, 2018) (no time bar where “no evidence” of proper service). Even if one or both entities were served, PO does not present evidence of any relationship between Petitioner and the served entity that would render Petitioner an RPI or privy with them.

PO instead focuses on an entirely *different* entity—the “U.S. entity

² PO asserts that “[b]oth parties were subsequently served under the Hague Convention,” citing “D.I. 33 at 7, 2 fn. 2” from the 2020 action. (POR, pp.63-64 & n.4.) But that citation merely refers to PO’s *own brief*. (*Id.*) PO also cites EX2013, but it merely shows papers dropped off in New York. (*Id.*) None of the citations confirms proper service on both entities. Indeed, STMicroelectronics N.V. filed a motion to dismiss based on (among other issues) lack of proper service. (EX1050, pp.7-8.) Tellingly, at Dkts. 48 and 49, PO requested another issuance of a summons against STMicroelectronics N.V., mere days before *dismissing* STMicroelectronics N.V. and STMicroelectronics S.R.L. (EX1051, EX1052.) No proof of summons was filed. Attorney argument is not evidence of successful service.

STMicroelectronics, Inc.,” which was not named in the prior suit, and makes vague representations about an unidentified “STMicro” entity. (*Cf.* EX1050, pp.1, 7-8 (“non-existent entity”).) There is no monolithic entity “STMicroelectronics.” (*E.g.*, EX2014, p.7; EX1050, pp.1, 7-8.) PO provides no evidence of how or why claims of infringement against STMicroelectronics N.V. and STMicroelectronics, S.R.L. are relevant to a different STMicroelectronics entity.

PO attempts to rely on a supplier agreement between Petitioner and yet another different STMicroelectronics entity. (POR, p.65.) But such an agreement is legally insufficient to show a RPI relationship—especially here, where “STMicro has not agreed to indemnify” Nintendo and “[t]here was no coordination on IPRs.” (EX2018, 13:13-14); *ASSA ABLOY AB v. CPC Patent Techs. Pty.*, IPR2022-01094, Paper 19, at 24 (P.T.A.B. Feb. 2, 2023) (“[T]he Board has held repeatedly that an indemnification agreement, without something more, is insufficient to establish a RPI relationship.”); *Luminex Int’l v. Signify Holdings B.V.*, IPR2024-00101, Paper 20 at 11 (P.T.A.B. Nov. 21, 2024) (“[A] customer-indemnatee’s request for indemnification by a manufacturer-indemnitor under a standard, non-exclusive, manufacturer-customer indemnification agreement relating to patent infringement [cannot] be sufficient to support a finding of real party in interest and trigger the one-year time bar.”); *Wi-Fi One v. Broadcom*, 887 F.3d 1329, 1341 (Fed. Cir. 2018). Because this different STMicroelectronics entity was never sued (let alone served)

with the prior complaint, any relationship that other entity has with Petitioner is irrelevant. There is no time bar and PO's futile motion for discovery should be denied.

III. CONCLUSION

Claims 1 and 4 of the '648 patent are unpatentable.

Dated: April 15, 2024

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CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), I certify that this reply complies with the type-volume limits of 37 C.F.R. § 42.24(a)(1)(i) because it contains 5,594 words, according to the word-processing system used to prepare this reply, excluding the parts of this reply that are exempted by 37 C.F.R. § 42.24(a) (including the table of contents, a table of authorities, mandatory notices, a certificate of service or this certificate word count, appendix of exhibits, and claim listings).

Dated: April 15, 2025

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. Section 42.6, that a complete copy of the attached **PETITIONERS' REPLY IN SUPPORT OF ITS PETITION FOR *INTER PARTES* REVIEW** and related documents, are being served via electronic mail on the 15th day of April, 2025, upon Patent Owner by serving Patent Owner's counsel of record in this proceeding as follows:

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