UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

THETA IP, LLC.,
Patent Owner

Inter Partes Review Case No. IPR2024-00819
U.S. Patent No. 11,564,164

PETITIONER'S OPPOSTION TO
PATENT OWNER'S MOTION TO STRIKE

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I. INTRODUCTION

The Board should deny Patent Owner's ("PO") Motion to Strike ("Motion"). Neither Petitioner's Reply to the POR ("Reply") nor the supporting supplemental expert declaration (Ex. 1042) introduce any improper evidence or arguments. Instead, they properly (1) reiterate and discuss the theories set forth in the Petition and (2) directly respond to issues raised in the Patent Owner Response ("POR").

Regarding Behbahani's filter, PO seeks to relitigate an issue the Board has already decided. PO's Preliminary Sur-Reply insisted that the Petition had not relied on dynamically adjusting Behbahani's Variable BW Adaptive DR BPF[1] ("Variable BPF") but had instead relied on dynamic adjustments occurring within the Variable BPF. Paper 11 at 1–3. The Board correctly rejected this argument at institution, finding "Petitioner clearly relied upon Behbahani's Variable BW Adaptive DR BPF" and further found that Dr. Abidi's supporting opinions were consistent. Paper 12 at 43 n.4. Pre-institution, as here, PO sought to confuse the record, capitalizing on the technical nature of the proceeding. Where Petitioner and its expert have explained *how* and *why* adjustments made within the Variable BPF cause its impedance and bias current to dynamically adjust, PO insists that Petitioner's case is limited to those internal adjustments excludes reliance on the Variable BPF more broadly. The Board

[1] For clarity, Behbahani's variable filter is a Variable Bandwidth [BW] Adaptive Dynamic Range [DR] Bandpass Filter [BPF].

correctly rejected PO's mischaracterization at institution and PO's Motion to Strike provides the Board no reason to find otherwise.

PO's arguments concerning the signal strength measurements fare no better. The Petition established that both Behbahani and the Challenged Patent expressly describe (1) taking signal strength measurements before and after the filter and (2) making dynamic adjustments based on those measurements. Paper 1, 37-40. Neither the Challenged Patent nor Behbahani describes the specific circuit tasked with measuring signal strengths. *Id*. Thus, both Behbahani and the Challenged Patent presume circuit strength measurement circuits are understood in the art and need not be described in detail. *Id*. Dr. Abidi confirmed this on cross examination, explaining that Behbahani did not describe the details of a signal strength measurement circuit specifically because such circuits were so well known. Ex. 2021, 91:23-93:22. PO's expert did not weigh in at all, so PO's critique is advanced through attorney argument. Paper 16, 65-69. But that attorney argument is both technically and legally flawed. Petitioner's expert's supplemental declaration explains *why* PO's attorney argument fails. PO declined to cross examine Petitioner's expert on the supplemental declaration and has therefore declined to engage Petitioner's response on the merits. Instead, PO asks this Board to strike the response. The Board should decline this invitation. As the rules permit, Petitioner and its expert directly responded to

arguments raised in the POR. PO cannot be permitted to mischaracterize the evidentiary record and then escape scrutiny via a motion to strike.

In sum, there is no basis to strike Ex. 1042 or any portion of the Reply. Pursuant to the rules, both align with the Petition and directly respond to the POR.

II. ARGUMENT

A. Petitioner's Theory has Remained Consistent Throughout

In its Motion, PO asserts that the Petition mapped individual filter elements within the Variable BPF to the claimed "component" or "circuit" (collectively the "Claimed Component") that is dynamically adjusted, and that the Reply improperly shifts that mapping to the Variable BPF itself. Paper 23, 2–6. PO is wrong. Both the Petition and the Reply repeatedly and consistently identify the Variable BPF as the Claimed Component. Indeed, the Board's institution decision rejected this same argument that PO raised in its Preliminary Sur-Reply.

1. The Petition and the Reply Consistently Mapped Behbahani's Variable BPF to the Claimed "Component" or "Circuit"

The Petition, Reply and both supporting expert declarations consistently identified the Variable BPF as the Claimed Component. The Petition unambiguously mapped the Variable BPF as the Claimed Component that is dynamically adjusted. *See* Paper 1 at 31 ("***Behbahani's Variable BW Adaptive DR BPF satisfies***

the claimed "filter.")[2], 27-28 (annotating Variable BPF as the claimed filter "component[] of a receiver" in the signal path), 45-46 ("[W]hen *Behbahani's* adaptive DR receiver (i.e., power dissipation control system***) switches from its high-power filter to its low-power filter, it increases*** the "opposition to the flow of alternating current" (i.e., ***impedance***) in the analog signal path and results in a reduced current that carries the AC signal through a load (i.e., ***through the filter load***). This switch to a low-power filter ***also reduces the DC bias current applied to the filter stage***."), 57 ("[S]witching from *Behbahani's* high-power filter to its low-power filter changes (***increases) an impedance***, ***and*** changes (***reduces***) of ***the bias current of a component (i.e., the filter) in the signal path***.").

Dr. Abidi's original declaration similarly and consistently mapped Behbahani's Variable BPF as the Claimed Component. *See* Ex. 1003, ¶85 ("***Behbahani's Variable BW Adaptive DR BPF satisfies the claimed "filter***."), 117 ("When *Behbahani's* system (i.e., power dissipation control system) ***switches from its high-power filter to its low-power filter, it increases*** the "opposition to the flow of alternating current" (i.e., ***impedance***) in the analog signal path and results in a reduced current that carries the AC signal through a load (i.e., ***through the filter***

[2] All emphases added unless noted otherwise.

load). This switch to a low-power filter ***also reduces the DC bias current applied to the filter stage***.").

Consistent with these originally advanced theories, the Reply and Dr. Abidi's supplemental declaration also identified the Variable BPF as the Claimed Component, citing to the corresponding discussion in the Petition and Dr. Abidi's original declaration. *See e.g.,* Paper 18, 6 ("The Petition identified Behbahani's Variable BPF block—a "variable bandwidth adaptive dynamic range band pass filter"—as the component or circuit in the signal path whose impedance is dynamically varied, as claimed"); Ex. 1042, ¶4 ("The Petition, and my declaration (Ex. 1003) identified Behbahani's Variable BPF block—a "variable bandwidth adaptive dynamic range band pass filter"—as the component or circuit in the signal path whose impedance is dynamically varied, as claimed.").

Dr. Abidi's supplemental declaration discussed the internals of the Variable BPF, discussing how its impedance and bias current are dynamically adjusted and why Behbahani's operation is not materially different than the Challenged Claims. Ex. 1042, ¶¶4-6). This does not detract from the clear and consistent theory advanced in this case—that Behbahani's Variable BPF is the Claimed Component. As the Federal Circuit has explained, "[p]arties are not barred from elaborating on their arguments on issues previously raised." *Chamberlain Group, Inc. v. One World Techs., Inc.*, 944 F.3d 919, 925 (Fed. Cir. 2019); *see Ericsson Inc. v. Intellectual*

Ventures I LLC, 901 F.3d 1374 (Fed. Cir. 2018) (reversing the Board's decision to exclude the petitioner's reply argument in part because the petitioner had "merely expand[ed] on a previously argued rationale as to why the prior art disclosures are insubstantially distinct from the challenged claims.").

2. The Motion Asks the Board to Reverse its Preliminary Finding on this Exact Issue

The Preliminary Patent Owner Response ("POPR") argued that the Petition failed to show that the Behbahani papers teach the Claimed Component. Paper 8, 34-44. In its Reply to the POPR, Petitioner noted that the Petition had in fact identified Behbahani's Variable BPF as the Claimed Component and cited the corresponding discussion in the Petition. *See e.g.*, Paper 10, 1 ("The Petition relied on Behbahani's variable filter block—a "variable bandwidth adaptive dynamic range band pass filter"—as the dynamically varied circuit/component in the signal path."). In its Preliminary Sur-Reply, PO raised the same argument as it does here, arguing that the Petitioner's identification of Behbahani's Variable BPF as the Claimed Component was an impermissible new theory. *See* Paper 11 at 1–3 (arguing that "Petitioner's Reply improperly presents an entirely new argumentative theory . . . arguing for the first time that Behbahani['s] . . . 'variable filter block'" is the claimed component/circuit that is dynamically adjusted).

The Board correctly rejected PO's argument at institution, "disagree[ing] with Patent Owner's arguments in the Preliminary Sur-reply that Petitioner raised a new

theory in the Preliminary Reply." Paper 12 at 43 n.6. The Board found that "Petitioner clearly relied upon Behbahani's Variable BW Adaptive DR BPF to teach a filter," and that Dr. Abidi's supporting opinions were consistent with the theories presented in the Petition. *Id*. Accordingly, PO is attempting to relitigate an issue already decided by the Board. The Board correctly rejected PO's mischaracterization of the record at institution and PO's Motion to Strike provides no reason to find otherwise.

B. The Reply's Discussion of the Claimed Signal Strength Indicator Circuit Is Proper and Directly Responsive to the POR

PO's argument concerning the claimed signal strength measurement circuit fares no better. It is well established that a petitioner may introduce arguments at the reply stage in response to arguments raised in a POR. *Anacor Pharm., Inc. v. Iancu*, 889 F.3d 1372, 1380-81 (Fed. Cir. 2018); 37 C.F.R. § 42.23(b). "[T]he very nature of the reply . . . [is] to respond (whether to refute, rebut, explain, discredit, and so on) to prior raised arguments within the confines of 37 C.F.R. § 42.23(b)." *Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1384 (Fed. Cir. 2023). Indeed, "the introduction of new evidence in the course of the trial is to be expected in [IPR] trial proceedings" and permissible "as long as the opposing party is given notice of the evidence and an opportunity to respond to it." *Genzyme Therapeutic Prods. Ltd. P'ship v. Biomarin Pharm. Inc*., 825 F.3d 1360, 1366 (Fed. Cir. 2016). Entirely consistent with the rules, Petitioner's expert responded to attorney argument

that mischaracterized his opinions and the prior art. The Motion does not establish that Dr. Abidi's responses exceeded the permissible scope for such a response and does not come close to justifying the exceptional remedy of striking this portion of the Reply entirely. *PTAB Consolidated Trial Practice Guide* ("CTPG") at 80-81 (84 Fed. Reg. 64,280 (Nov. 21, 2019)) ("[S]triking the entirety of a portion of a party's brief is an exceptional remedy that the Board expects will be granted rarely.").

The Petition established that both Behbahani and the Challenged Patent expressly describe (1) taking signal strength measurements before and after the filter and (2) making dynamic adjustments based on those measurements. Paper 1, 37-40. Neither the Challenged Patent nor Behbahani describes the specific circuit tasked with measuring signal strengths. *Id*. Thus, both Behbahani and the Challenged Patent presume circuit strength measurement circuits are understood in the art and need not be described in detail. *Id*. Dr. Abidi confirmed this on cross examination, explaining that Behbahani did not describe the details of a signal strength measurement circuit precisely because such circuits were so well known. Ex. 2021, 91:23-94:14. He also explained that the prototype built by the authors of the Behbahani paper did not implement on-chip signal strength measurement circuits because that was well understood circuitry and building them would have increased the workload for no benefit. *Id*. Finally, he explained that the Tan paper—an express component of the proposed combination—described signal measurement circuits that could be used to

obtain signal strengths before and after Behbahani's filter and that his declaration discussed other well-known circuits for measuring signal strengths, including Khorram, which accommodated "much wider ranges of signal strengths" than Tan's design. *Id*.

PO's expert did not dispute this portion of the record. He did not dispute that Tan's circuit was capable of measuring signal strength, as claimed. Nor did he dispute that signal strength measurement circuits were well understood. Without expert support, the POR introduced new (and incorrect) attorney argument regarding the signal strength indicator circuit limitation. Paper 16, 65-69. The POR argued that Behbahani in view of Tan fails to teach the claimed "signal strength indicator circuit" because Tan allegedly cannot be used to measure signal strength at nodes A_I and A_O. *Id*.

In response to the POR's attorney argument, the Reply and Dr. Abidi's supplemental declaration explain why PO's attorney argument fails. Paper 18, 23-27. Dr. Abidi's declaration explains *why* PO's attorney argument fails, technically. Ex. 1042, ¶¶12-16. In response to PO's attorney argument that Tan's signal measurement circuits cannot be used to measure signal strength at nodes A_I and A_O because these circuits also provide the separate purpose of measuring peak values, the Reply explained that a POSITA would have understood that Tan's circuit is in fact designed to provide signal strength measurements at individual nodes. Paper 18,

26-27; Ex.1042, ¶¶15-16. Dr. Abidi explains how these circuits work and why a POSITA would have understood that Tan discloses circuitry capable of measuring signal strength at Behbahani's nodes A_I and A_O. Dr. Abidi also points, as he did in his original declaration, to the Khorram circuit, which is similar to Tan's circuit, as additional evidence that other types of signal strength measurements suitable for Behbahani's receiver were also well known. Ex.1042 ¶16; Ex. 1003, ¶113. Dr. Abidi simply adds that, as a co-author of the Behbahani reference, he had contemplated using the Khorram circuit for Behbahani's receiver but did not discuss it at the time because signal strength measurements techniques were so well understood. Ex.1042, ¶16.

Further, the Motion makes much of Dr. Abidi's—an author of these papers—use of the phrase, "it was our intent," to describe the information the papers intended to convey to the reader (i.e., a POSITA). Paper 23, 6-8. If Dr. Abidi were wrong about the information his papers actually conveyed to a POSITA, PO's expert could have weighed in. He has not. Accordingly, the Motion's suggestion that a POSITA would not have understood precisely the information discussed in Dr. Abidi's declaration is without support in the record.

Accordingly, the Reply properly responds to refute POR's attorney argument. *Rembrandt Diagnostics*, 76 F.4th at 1384. Petitioner's legal ground did not change, as it relies on the same prior art references to support the same legal argument in the

Petition and Reply, namely that claims requiring a signal strength indicator circuit are unpatentable as obvious in view of Behbahani and Tan. *See Apple Inc. v. Andrea Elecs. Corp*, 2020 WL 593661, *7 (Fed. Cir. Feb. 7, 2020). Further, Petitioner relies on the same information from those references to form its arguments in the Petition and Reply. *See* Paper 1, 60-62; Ex. 1003, ¶¶179-181 *compare* Paper 18, 23-27; Ex. 1042, ¶¶15-16; *c.f. Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1367 (Fed. Cir. 2015) (affirming the Board's decision that reply arguments were new because petitioner discussed "previously unidentified portions of a prior-art reference to make a meaningfully distinct contention."). While Petitioner's Reply responded to the POR with an explanation of how Tan's circuit provides cumulative signal strength suitable to provide measurements at A_I and A_O, the record reflects that Petitioner raised this concept in the Petition. Paper 1, 60-62; Ex. 1003, ¶¶179-181. "Parties are not barred from elaborating on their arguments on issues previously raised." *Chamberlain*, 944 F.3d at 925. Neither the Reply nor Dr. Abidi's supplemental declaration provide a new rationale for combining the references. *See* CTPG at 74-75; *c.f. Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369–70 (Fed. Cir. 2016) (holding that the reply brief was improper because petitioner relied on an entirely new rationale to explain why one of skill in the art would have combined the references at issue).

Dr. Abidi's supplemental declaration simply supports the Reply by explaining *why* PO's arguments are incorrect. Such responsive evidence "is to be expected in [IPR] trial proceedings." *Genzyme Therapeutic*, 825 F.3d at 1366; *see also Anacor*, 889 F.3d at 1380–81 (finding that new reply evidence is proper "to document the knowledge that skilled artisans would bring to bear in reading the prior art identified as producing obviousness"); *Acrux DDS Pty Ltd. v. Kaken Pharmaceutical Co., Ltd.*, IPR2017–00190, Paper 81 at 1, 4-5 (PTAB June 6, 2018) (denying motion to strike petitioner's new reply declarations and 147 exhibits).

C. Patent Owner Would Not Be Prejudiced If the Motion is Denied

A motion to strike is an "exceptional" remedy that "will be granted rarely" because, "[i]n most cases, the Board is capable of identifying new issues or belatedly presented evidence when weighing the evidence at the close of trial[.]" *See* CTPG, 80. That the Board is well equipped to identify new issues and properly weigh the evidence is especially true here, where the Board has already determined that there is no new issue concerning Petitioner's mapping of the Claimed Component. *See supra* Section II.A.2. The Motion does not come close to establishing that this proceeding is the rare exception in which striking evidence is merited.

PO would not be unduly prejudiced by the Board's consideration of Petitioner's Reply and Dr. Abidi's supplemental declaration, and the Motion does not suggest otherwise. This is not surprising. PO has had more than a fair opportunity

to respond to the arguments presented in the Petition and the Reply. *See Genzyme Therapeutic*, 825 F.3d 1366. Any failure to engage these issues was solely of PO's making.

PO has already raised on two occasions the argument that Petitioner's identification of Behbahani's Variable BPF as the Claimed Component constitutes an impermissible new theory: once in its Preliminary Sur-Reply and again in its Motion to Strike. The Board correctly rejected this argument at institution, finding that Petitioner's mapping was consistent with the theory set forth in the Petition. Even if there were merit to PO's argument that the Petition relied on components within the Variable BPF, rather than the Variable BPF itself (there is not), PO had an opportunity to cross examine Petitioner's expert and to respond to all theories in its POR, expert declaration in support of the POR, and Sur-Reply. If PO failed to engage the theory the Board has already confirmed that Petitioner advanced, the fault lies solely with PO.

Turning to the signal strength circuit issue, PO declined to take advantage of the opportunities it was provided to engage this argument. As discussed in detail above in Section II.B, PO's expert chose not to engage the issue at all. This strategic choice left PO with nothing but technically incorrect attorney argument. When Dr. Abidi corrected these technically correct arguments in a supplemental declaration, PO could have but did not seek to cross examine Dr. Abidi. Having declined to

engage with the merits of Petitioner's response, PO cannot now claim prejudice. *See QIAGEN N. Am. Holdings Inc. v. HandyLab, Inc.*, IPR2019-00490, Paper 41 at 38–39 (PTAB Mar. 9, 2020) (denying motion to strike and finding no undue prejudice where PO had the opportunity to depose Petitioner's expert and file a sur-reply in response to a reference first introduced in the reply).

III. CONCLUSION

PO has not met its burden to establish that Petitioner's Reply is improper. Petitioner. Accordingly, Petitioner respectfully requests the Board deny PO's motion to strike in its entirety.

Respectfully submitted,

BY: *__/s/ Paul R. Hart_____*
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COUNSEL FOR PETITIONER

CERTIFICATE OF SERVICE ON PATENT OWNER UNDER 37 C.F.R. § 42.6

Pursuant to 37 C.F.R. §§ 42.6, the undersigned certifies that on August 7, 2025, a complete and entire copy of this *Opposition to Patent Owner's Motion to Strike* was served on Patent Owner via email.

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Respectfully submitted,

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