

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

THETA IP, LLC,
Patent Owner.

Case IPR2024-00817
U.S. Patent No. 10,129,825

**PATENT OWNER THETA IP LLC'S
REQUEST FOR DIRECTOR REVIEW**

FEE PAYMENT AUTHORIZATION

P-TACTS fee payment was unavailable. Credit card payment form submitted via FAX on 12/29/2025. Please charge all fees required for this submission, including any additional fees that may be incurred, to Deposit Account No. 606715. The undersigned authorizes the United States Patent and Trademark Office to debit the specified deposit account for any amounts due in connection with this request.

/ Aaron R. Hand /
Aaron R. Hand
Reg. No. 80,694

TABLE OF CONTENTS

	<u>Page</u>
I. The Board’s Decision should be reversed, as it is inconsistent with Office policy, the Board’s prior decisions, and the evidence.....	1
II. Apple’s follow-on IPR should have been de-instituted.....	7
A. Apple failed to show material error in the Examiner’s 2003 review of the <i>Behbahani</i> papers and Tsividis article.	7
B. Follow-on Petitions like Apple’s are disfavored, including because they can create inconsistencies and frustrate reliance, as happened here.	10
C. Theta’s settled expectations in its rights under the ’825 patent were frustrated by this proceeding.	12
III. The Board’s interpretation of “in the receiver signal path” is inconsistent with the claims, specification, extrinsic evidence, and the Board’s prior interpretation of “in the receiver signal path.”.....	12
IV. The Board’s Decision fails to find separately “determining an interferer signal strength” in the prior art.	14
V. Conclusion	15

TABLE OF AUTHORITIES

Page(s)

Cases

<i>Advanced Bionics, LLC v. MedEl Elektromedizinische Geräte GMBH</i> , IPR2019-01469, Paper 6 (P.T.A.B. Feb. 13, 2020).....	7, 9
<i>Dabico Airport Sol’ns Inc. v. AXA Power APS</i> , IPR2025-00408, Paper 21 (P.T.A.B. June 18, 2025)	12
<i>Ecto World, LLC v. RAI Strategic Holdings, Inc.</i> , IPR2024-01280, Paper 13, 2025 WL 1441509 (P.T.A.B. May 19, 2025)	8
<i>General Plastic Industrial Co. v. Canon Kabushiki Kaisha</i> , IPR2016-01357, Paper 19 (P.T.A.B. Sept. 6, 2017).....	11
<i>Sling TV, L.L.C. v. Realtime Adaptive Streaming LLC</i> , 2020 WL 261827 (P.T.A.B. Jan. 17, 2020)	9
<i>ZTE (USA) Inc. v. Fundamental Innovation Systems International LLC</i> , IPR2018-00111, 2019 WL 1811121 (P.T.A.B. Apr. 24, 2019)	9

Statutes

35 U.S.C. § 325(d)	7
--------------------------	---

Other Authorities

Memorandum, Interim Processes for PTAB Workload Management (March 26, 2025).....	1
Memorandum, PTAB Consideration of Prior Findings of Fact and Conclusions of Law (Sept. 16, 2025).....	1
Revision to Rules of Practice before the Patent Trial and Appeal Board, 90 FR 48335 (Oct. 17, 2025)	6, 10, 11

Rules

Patent Owner's Exhibit List	
EX2001	Declaration of Corey Johanningmeier in Support of Motion for <i>Pro Hac Vice</i> Admission
EX2002	"Yannis Tsividis, Path-Breaking Researcher and Educator," IEEE Solid State Circuits Magazine, Fall 2014
EX2003	Y. Tsividis <i>et al.</i> , "Internally Varying Analog Circuits Minimize Power Dissipation," IEEE Circuits & Devices Magazine, Jan. 2003
EX2004	Y. Tsividis, "Signal-to-Noise Ratio, Dynamic Range, and Power Dissipation," IEEE Solid State Circuits Magazine, Fall 2018
EX2005	Declaration of Professor Lawrence Larson, Ph.D. under 37 C.F.R. § 1.68 in support of Patent Owner's Preliminary Response in IPR2024-00816, -00817, -00818, -00819, and -00820.
EX2006	<i>Curriculum Vitae</i> of Professor Larson
EX2007	IPR2023-00694, Paper 10, Decision Denying Institution (P.T.A.B. Oct. 23, 2023)
EX2008	IPR2023-00694, Paper 14, Decision Denying Rehearing (P.T.A.B. Feb. 7, 2024)
EX2009	U.S. Patent No. 5,001,776 (<i>Clark</i>)
EX2010	Excerpts of Invalidity Contentions, <i>Theta IP, LLC v. Samsung Electronics Co., Ltd. et al.</i> , No. 2-16-cv-00527 (E.D. Tex.)
EX2011	Excerpts of Invalidity Contentions, <i>Theta IP, LLC v. Lenovo (United States) Inc., et al.</i> , 1-22-cv-03441 (N.D. Ill.)
EX2012	Excerpts of Invalidity Contentions, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA (W.D. Tex.)
EX2013	Second Amended Scheduling Order, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA (W.D. Tex. Aug. 6, 2024), ECF No. 91

Patent Owner's Exhibit List	
EX2014	Claim Construction Order, <i>Theta IP, LLC v. Samsung Electronics Co., Ltd. et al.</i> , 6:20-cv-00160-ADA (W.D. Tex. Jan. 7, 2021), ECF No. 57
EX2015	March 25, 2024 Email from Court listing Preliminary Constructions, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA (W.D. Tex.)
EX2016	March 25, 2024 Email from Apple to Court re: <i>Markman, Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA (W.D. Tex.)
EX2017	Transcript of <i>Markman</i> hearing, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA (W.D. Tex. Mar. 26, 2024)
EX2018	Minute Order setting <i>Markman</i> hearing, <i>Theta IP, LLC v. Lenovo (United States) Inc., et al.</i> , 1-22-cv-03441 (N.D. Ill. July 2, 2024), ECF No. 104
EX2019	[Reserved]
EX2020	Declaration of Professor Lawrence Larson, Ph.D. in support of Patent Owner's Responses in IPR2024-00816, -00817, -00818, -00819, and -00820
EX2021	Deposition Transcript of Dr. Asad Abidi – March 11, 2025
EX2022	IPR2023-00697, Paper 32, Final Written Decision Determining No Challenged Claims Unpatentable (P.T.A.B. Oct. 16, 2024)
EX2023	IPR2023-00698, Paper 33, Final Written Decision Determining No Challenged Claims Unpatentable (P.T.A.B. Oct. 16, 2024)
EX2024	IPR2023-00694, Paper 11, Rehearing Request (P.T.A.B. Nov. 22, 2024)
EX2025	Claim Construction Order and Memorandum, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA, Dkt. 118 (W.D. Tex. July 2, 2025)

Patent Owner's Exhibit List	
EX2026	Apple's Initial Narrowing of Prior Art, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA (W.D. Tex. May 7, 2025)
EX2027	Order Denying Apple's Motion to Stay, <i>Theta IP, LLC v. Apple Inc.</i> , No. 6:23-cv-00314-ADA, Dkt. 104 (W.D. Tex. February 5, 2025)
EX2028	Order granting Defendants' Motion to Stay, <i>Theta IP, LLC v. Lenovo (United States) Inc., et al.</i> , 1-22-cv-03441 (N.D. Ill. April 23, 2025), ECF No. 127
EX2029	Patent Owner's Hearing Demonstratives

I. The Board’s Decision should be reversed, as it is inconsistent with Office policy, the Board’s prior decisions, and the evidence.

This proceeding should not have gone forward—and should be vacated and dismissed now. This proceeding, and the Board’s resulting decision invalidating an expired, litigated patent—which claims foundational RF circuit power saving inventions by respected Columbia University Professor, Yannis Tsividis—was and is contrary to Office policies for multiple reasons. First, the art at issue in the proceeding was considered by the Examiner, and the Petition failed to show that the Examiner materially erred. Second, this was an admitted follow-on to separate IPR proceeding against the ’825 Patent, in which the Board reached different, irreconcilable results on multiple issues. Yet, the Board issued a Final Written Decision here that fails to explain—as the Office now requires—“why a different outcome is warranted” on either the same “in the receiver signal path” or “determining” issues here. Memorandum, PTAB Consideration of Prior Findings of Fact and Conclusions of Law (Sept. 16, 2025). It was not warranted. Finally, the Board ignored Theta’s settled expectations in its long-held, litigated and recognized patent rights. *See, e.g.*, Memorandum, Interim Processes for PTAB Workload Management (March 26, 2025).

United States Patent No. 10,129,825 (“the ’825 Patent”) teaches and claims foundational RF circuit power saving inventions. Response, Paper 15, at 14-20. The claims involve dynamically changing a bias current, *in operation in the receiver signal path*—in response to measured interferer signal *and* desired signal

conditions—to save power. *Id.* at 14-17; EX1001 (claim 3). Professor Tsividis disclosed and taught these inventions to the world, both in the patent and in published articles. *Id.*; EX2002-EX2004. They are used to great benefit in every cellular device today. The '825 Patent was litigated against Samsung to a courthouse steps settlement in 2021, and resulted in Samsung taking a license hours before trial was set to begin. Response, 4. The '825 Patent and two family members then survived on their merits over prior IPRs filed by Lenovo. *Id.* at 4-5; EX2007, EX2008, EX2022, EX2024.

Apple's subsequent challenge here was based on art that Theta and Professor Tsividis put before the Examiner decades ago, with their first application—art that was listed on the face of the patent itself for its entire life. Response, 1. But Apple failed to show material error by any Examiner considering that art, as the Office has precedentially and repeatedly required challengers to do. Indeed, the Director reaffirmed the material error showing requirement during pendency of this proceeding—disallowing the exact rationale the Board had cited in instituting over Apple's failure to show error under Section 325(d). Sur-Reply, Paper 23 at 24-27.

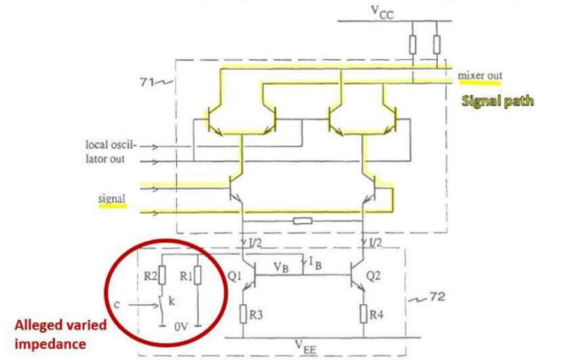
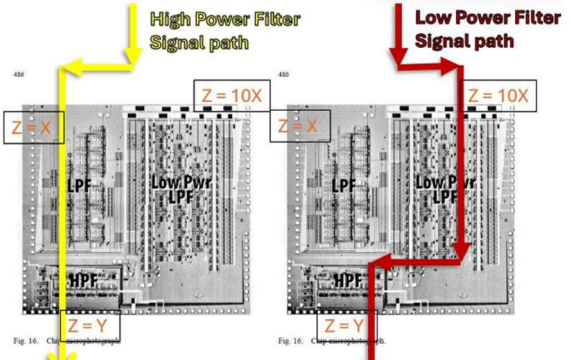
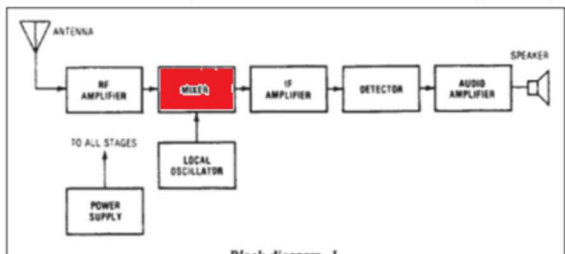
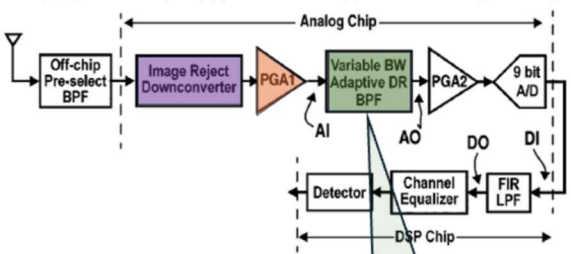
Further, Apple's challenge was admittedly a follow-on to Samsung's unsuccessful district court invalidity contentions and Lenovo's unsuccessful IPRs—road-mapping from failures that, according to Apple, had “plagued prior invalidity challenges.” Response, 12-13. Further, Apple's challenge was filed two days before its statutory deadline, after the patent had expired. Apple's challenge, and the Board's

response, frustrated every settled expectation about this strong patent held by Theta.

This includes the expectation that the “in the receiver signal path” language of the claims would be interpreted by the Board correctly, and consistently with how the Board had interpreted and applied it in Lenovo’s failed IPRs. The Board did not do so here. And it includes the expectation that the claimed determinations of interferer signal strength and desired signal strength—carefully explained as separate measures in prior IPRs—would not be deemed taught by a cumulative measure here that cannot determine either individual signal component. The Decision improperly treats these two separate “determining” elements together, and relies only on expert opinion about background knowledge for allegedly disclosing them—in a way inconsistent with caselaw and recent guidance. FWD, Paper 31, at 35; Sur-Reply, 23-24.

As further explained in Section III below, the claims of the ’825 Patent require, *e.g.*, varying “*a* bias current ... *in* the receiver signal path.” EX1001 (claim 3). In other words, something must be and remain *in* the signal path and have its bias current adjusted. Because the prior art “change” alleged by Apple was instead *to* the signal path, accomplished by swapping one signal path for another, it cannot be reconciled to this plain language.

Just as Lenovo had done in its IPRs—when faced with a change that was not in the signal path—Apple attempted to avoid this result by drawing a bigger box around more circuitry, to obscure the distinction created by the actual signal path inside:

Lenovo IPRs	Apple IPRs
EX2008, 9 (Signal Path Diagram)  Fig. 7	EX2020, ¶75 (Signal Path Diagram)  Fig. 16
EX2024, 6 (Lenovo Mixer Diagram)  Block diagram, 1.	Reply, 14 (Apple Bandpass Diagram) 

In the prior round of IPRs, Lenovo argued that the entire mixer was in the signal path and was “not separable into a portion within the signal path and a portion without.” EX2024, 1. This argument was soundly rejected by that prior Board panel. Response, 4-5, 30-32; Paper 31 (Hearing Tr.) at 45-46; EX2008 (Decision Denying Rehearing), 2 (rejecting argument that “the entirety of Figure 7 is a mixer within the signal path”), 8-9.

Here, Apple argued that an entire bandpass block was in the signal path. But inconsistently in this round of IPRs, the Board *accepted* Apple’s invitation to ignore what was inside the entire bandpass box—refusing to be persuaded that the signal path had changed within the block, when every witness admitted that it had. FWD, 53

(“We are not persuaded that different routing *within* the Variable Bandpass Filter Block ‘changes’ or ‘re-routes’ the signal path.”). It was not disputed that the alleged impedance change was accomplished by “switching between two alternative filter paths” inside the bandpass block. Reply, 16-17 (“Petitioner’s core theory: ... impedance is dynamically adjusted by switching between two alternative filter paths ...”); *see also* EX2021 (Abidi Dep.) at 67:5-69:18, 76:16-77:24; EX2020, ¶¶81-83.

Theta’s expert explained, in un rebutted testimony, that: “What the band-pass filter of the *Behbahani* papers does not have is any individual impedance or bias current “in the signal path” that changes dynamically during operation.” EX2020, ¶¶81-83 (“*no impedance remains in the circuit path and is adjusted*”). Just like the mixer in Lenovo’s IPRs, the entire *Behbahani* bandpass is not an inseparable whole, and it is not all in the receiver signal path at all times. This argument was supported, un rebutted, and directly tied to the claims. *Id.*; *see also* Response at 2-3, 5-11, 44-45, 54-59; Sur-Reply at 1-2, 9-11; EX2029 at 11, 14-24; Paper 31 at 48-56, 59-61, 67-69.

The Board’s inexplicable statement—that the undisputed path switch in the prior art is somehow not a change to the signal path (FWD, 53)—serves only to avoid applying the distinction made clear in the claims, between swapping paths or instead adjusting something while it remains “in the receiver signal path.” EX1001 (claim 3). It stems from attorney argument—adopted by Apple’s expert only on Reply, and *after testifying to the contrary*. Theta’s long settled patent rights should not fall to attorney

argument about a signal path that one panel rejected and then another credited.

And as further explained in Section IV below, here the Board further erred by failing to find the *separate* claimed determinations of interferer and desired signal strengths—creating further inconsistency with the result of the prior IPR. *See, e.g.,* EX2022, 37-38 (“determining the two required signal strengths”). On both the “in the receiver signal path” and “determining” issues here, the Board’s cursory description of what happened in the prior IPRs fails to adequately explain—as the Office now requires—“why a different outcome is warranted.” Memorandum, PTAB Consideration of Prior Findings of Fact and Conclusions of Law (Sept. 16, 2025).

Theta’s settled expectations, Office policies promoting consistency and difference to prior decisions, and stakeholder confidence in the patent system have all been frustrated by the result in this case. As noted in recent proposed rulemaking, “multiple challenges to the same patent through IPRs jeopardize the reliability of patent rights and incentives to invest in new technologies,” and “[e]ven extremely strong patents become unreliable when subject to serial or parallel validity challenges.” Revision to Rules of Practice before the Patent Trial and Appeal Board, 90 FR 48335 (Oct. 17, 2025) (“Proposed Rule”). This is precisely what happened here, in a particularly egregious fashion, as the Board panel came out the opposite way on two similar questions here, versus the Board panel in prior IPR2023-00697. And despite being required by Office guidance to do so, the Board failed to adequately

explain why this different result could be warranted. Theta's settled expectations, and the Examiner's and Board's prior determinations, deserved more deference here.

II. Apple's follow-on IPR should have been de-instituted.

A. Apple failed to show material error in the Examiner's 2003 review of the *Behbahani* papers and Tsividis article.

Section 325(d), and the precedential *Advanced Bionics* decision guiding its application, both serve valuable policy goals of the Office—giving deference to prior Office determinations in order to protect expectations and reliance, and to avoid inconsistency that undermines stakeholder confidence in the patent system. *See, e.g., Advanced Bionics, LLC v. MedEl Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6 at 9 (P.T.A.B. Feb. 13, 2020) (precedential). The requirement to show material error, when as here the asserted prior art has been previously considered by the Office, directly serves these core purposes. Prelim. Response, Paper 8 at 59-62.

At institution, the Board found that even though Apple had not shown material error by the Examiner in consideration of the *Behbahani* papers, such failure could be avoided “by pointing to the proposed grounds.” Inst. Decision, Paper 11, at 22. Theta had argued that allowing “general and conclusory reference to ‘the strength of the Proposed Grounds’” to substitute for such a material error showing is “inconsistent with the express precedential language of *Advanced Bionics*.” Paper 8, at 57-63.

After institution and Theta's Response, the Acting Director precedentially disagreed with the Board's rationale here. The Director resolved disagreement

between various Board panels applying section 325(d), as to “whether a petitioner must explain how the Examiner erred or whether a petitioner can simply rely on its unpatentability contentions to imply that an error occurred.” *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5, 2025 WL 1441509 (P.T.A.B. May 19, 2025) (precedential). The Director precedentially took the same view that Theta had argued, finding that: “Petitioner’s ***generalized statements as to the strength of its Petition fail to identify sufficiently a material error***. Ordinarily, that would mean a denial of institution.” *Id.* at 5. Here, where that exact Petitioner reliance on “generalized statements” occurred, and was incorrectly used to justify institution, discretionary de-institution was, and remains, warranted.

Theta raised the *Ecto World* decision, and its rejection of the Board’s institution rationale, in its next pleading. Sur-Reply, 24-26 (“Here, Section 325(d) discretion was not exercised, on a disputed basis that was disallowed months later.”). Theta asked for dismissal in the Director’s *ongoing* discretion to efficiently control the Office’s docket, protect settled expectations, and avoid inconsistent results. *Id.* The Director’s ongoing discretion to de-institute is a matter that should have been considered, after *Ecto World* directly refuted the panel’s basis for institution—and that discretion should be exercised now for all the reasons herein. Settled expectations and consistency of results remain important considerations even after a panel Decision.

The Board’s Final Written Decision declined to apply the *Ecto World*

precedential rule, stating that it would only be appropriate to do so for “subsequent matters.” FWD, 63. ***This was error.*** See, e.g., *Sling TV, L.L.C. v. Realtime Adaptive Streaming LLC*, 2020 WL 261827 at *2 (P.T.A.B. Jan. 17, 2020) (finding post-institution request to be “just such a ‘subsequent matter,’ even if the original Petition is not,” and also applying a rule in the Board’s “‘inherent authority to reconsider [our] decisions,’ regardless of whether Patent Owner filed a request for rehearing.”); see also *ZTE (USA) Inc. v. Fundamental Innovation Systems International LLC*, IPR2018-00111, 2019 WL 1811121 at *3, fn. 3 (P.T.A.B. Apr. 24, 2019) (applying rule made precedential after briefing by the parties). The Director maintains the discretion to prevent invalidation of the strong ’330 Patent now, and should do so.

The claims require a change remaining “in the receiver signal path,” and the *Behbahani* change results instead from swapping the signal path. Crediting this distinction is apparently a question about which reasonable minds can differ. See *Advanced Bionics*, IPR2019-01469, Paper 6 at 9; Proposed Rule, 90 FR 48335 (“Because reasonable minds may, and frequently do, disagree about whether a particular patent claim meets the statutory requirements, patents cannot serve their economic function if they are perpetually subject to *de novo* review.”).

The original Examiner (presumptively), the Board panel reviewing Lenovo’s IPRs, and Theta’s expert all understood that a change that was not made to something in or remaining in the signal path did not meet the “in the receiver signal path” element

as claimed—and understood that this distinction could not be abstracted away by only looking at a higher level description of a block diagram. *See, e.g.*, Sur-Reply, 9-18, 19-20; EX2020, ¶¶ 81-83. The Board here was “not persuaded.” FWD, 53. Allowing a strong patent to fall, under prior art first put before the Examiner more than twenty years ago, and in an admitted follow-on challenge, would frustrate not just the economic value of Theta’s strong patent, but also all of the policies discussed herein and the Director’s goal of promoting a reliable patent system where this sort of thing does not happen to good patents. Response, 12, Sur-Reply, 8, 24-26.

B. Follow-on Petitions like Apple’s are disfavored, including because they can create inconsistencies and frustrate reliance, as happened here.

Here there was no question that this proceeding was merely a follow-on to failed efforts to invalidate the Tsividis Patents by Samsung (in district court litigations) and Lenovo (before the Board). Apple self-described its challenge as trying to correct a gap in the prior art that has “plagued prior invalidity challenges.” IPR2024-00816, Petition, 36. Theta explained why such a proceeding should not be instituted. Prelim. Response, 53-57; Response, 12.

The case against follow-on challenges is well presented in the Office’s recently proposed rulemaking that would amend institution rule 37 C.F.R. § 42.108. *See* Proposed Rule, 90 FR 48335 (“[M]ultiple challenges to the same patent through IPRs jeopardize the reliability of patent rights and incentives to invest in new technologies.”). As the Office noted: “Even extremely strong patents become

unreliable when subject to serial or parallel validity challenges.” *Id.*

In an effort to prevent strong patents from falling to the additive pressure of repeated *de novo* review initiated by accused infringers, the Board has repeatedly disfavored follow-on Petitions. *See, e.g., id.; General Plastic Industrial Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19, 2017 WL 3917706, at *12 (P.T.A.B. Sept. 6, 2017) (precedential as to § II.B.4.i) (“Multiple, staggered petitions challenging the same patent and same claims raise the potential for abuse.”). The Board has repeatedly found Petitions that roadmap from prior challenges to be “unfair to patent owners” and “an inefficient use of the *inter partes* review process.” *Id.*

Yet despite this guidance, “serial and parallel patent challenges, including challenges raising the same or substantially similar prior art and/or arguments, remain a significant problem.” Proposed Rule, 90 FR at 48336. And what happened here shows precisely the harm of letting each accused infringer have its own serial challenge, based on its own selection of art, before different factfinders. Theta seemingly cannot rely on the Office’s considered grant of strong intellectual property rights in Theta’s inventions even at or after the end of the ’825 Patent’s term.

Compounding the follow-on nature of its challenge, Apple chose cumulative prior art references long ago cited to the Examiner—and known to Samsung, Lenovo, Apple, and the rest of the world from the ’825 Patent itself. EX1001, 2-3. Samsung, Lenovo, and Apple each included *Behbahani* in their respective district court

invalidity contentions. *See, e.g.*, EX2010, 2; EX2011, 2-3; EX2012, 3. Apple has also insisted that it can take its arguments about the *Behbahani* papers to jury trial in the Western District of Texas. There was, and there remains, no need for this proceeding. If the Final Written Decision is not reversed, then Theta's settled expectations in its important, oft challenged, and successful patent will have been completely frustrated.

C. Theta's settled expectations in its rights under the '825 patent were frustrated by this proceeding.

The many years over which the '825 patent remained valid, was widely cited, and was asserted against infringers—and overcame their invalidity challenges—created settled expectations of Theta that it could continue to assert the patent family against Apple without bearing the burden of duplicative, and potentially inconsistent, additional proceedings before the Board. *See, e.g., Dabico Airport Sol'ns Inc. v. AXA Power APS*, IPR2025-00408, Paper 21 (P.T.A.B. June 18, 2025). Theta's settled expectations provide yet another reason this proceeding would not have been instituted today, and should be de-instituted in the Director's ongoing discretion now.

III. The Board's interpretation of "in the receiver signal path" is inconsistent with the claims, specification, extrinsic evidence, and the Board's prior interpretation of "in the receiver signal path."

As discussed above, and in Theta's co-pending request for Director Review in IPR2024-00816, The Board acknowledged that the signal path dispute turned on whether swapping a high-power filter for a low-power filter was dynamically adjusting an impedance *in the receiver signal path* as claimed—or instead was just the

different approach of *changing the signal path*. FWD , 44-45, 41-44. There was no dispute that the prior art change involved substituting one path, through one low-pass filter, for another path, through another low-pass filter. *Id.*; Reply, 17; EX2021 (Abidi Dep.) at 67:5-69:18, 76:16-77:24 (“... the transconductance block that the signal is experiencing has been swapped. A. Yes.”); FWD, 38.

Because the change was to the signal path and the signal “experience,” not an adjustment to any individual circuit block, Theta’s expert explained that no bias current both remained in the receiver signal path and changed dynamically during operation. EX2020, ¶¶75-80, 81-83.

Apple instead pointed to a higher-level block diagram and a bandpass block. Reply, 14. The Board (here) accepted Apple’s attorney argument inviting it to ignore the undisputed signal path change within that block. *See* FWD, 53. But looking at the undisputed operation of a circuit from a higher level of abstraction does not change the meaning and application of the claim language to that circuit. *See, e.g.*, EX2020, ¶¶81-83. Contrary to the Board’s statement here, the signal path admittedly *does* switch between one or the other of the low-pass filters, within the block drawn by Apple. *See, e.g.*, Reply, 16-17; Sur-Reply, 9-11, 14-15; EX2020, ¶¶57-63, 81-83; EX2021 at 33:11-15, 77:10-24.

It was error here for the Board to ignore the progress of the signal path *inside* the bandpass block—and the different way that the identified change was

accomplished, by re-routing a signal path instead of making an adjustment to anything remaining “in the receiver signal path.” The Board’s in-one-side-out-the-other interpretation could refer to any arbitrary division or even the whole device. FWD, 53. It would remain contrary to the undisputed evidence.

IV. The Board’s Decision fails to find separately “determining an interferer signal strength” in the prior art.

The Board’s Decision erroneously excludes and never discusses key aspects of the claim language requiring circuits for “determining a signal strength of the interferer signal” *and* “determining a signal strength of the desired signal.” Sur-Reply, 21-24. These are two *separate determinations, of separate signal components* of the received wireless signal. EX1001 (claim 1: “a wireless signal having a desired signal and an interferer signal” and having “a circuit for determining a signal strength of the interferer signal and a circuit for determining a signal strength of the desired signal”). Apple’s modified peak detector circuit makes one cumulative measure.

These claims survived Lenovo’s prior IPR because *both* determinations, of each separate signal component, are required. Response, 30, 32-33, 67; EX2022, 35, 37. Here, Apple pointed only to *cumulative* signal measures that include both desired and interferer components, and circuits undisputably incapable of separating or separately measuring them. Response 67-70; Sur-Reply 21-24. Here, the Board failed to acknowledge or apply the requirement of *separate* determinations, and did not find any such thing in the cited art or knowledge. FWD, 35-37 (“a determination of signal

strength” or “a measure of the signal strength”).

At most, in Reply Apple’s expert stated that the disclosed “peak detector” circuit of Tan could be modified by a POSITA to a version that would indicate a *cumulative* signal level “capturing the desired and interferer signals.” EX1042, ¶15 (cited at FWD, 35). Apple never rebutted Theta’s argument that a peak detector—or even several—cannot possibly make the determinations required by the claims. Response, 68-70. A threshold measurement cannot separate components of a signal. *Id.* But Prof. Abidi never argued for, and the Decision never found, more than “a [cumulative] measure of the signal strength” from the modified peak detector circuit identified. FWD, 35. Crediting Prof. Abidi’s Reply testimony about a *cumulative* measure is not a finding that the art teaches or suggests *separately* determining interferer and desired signal components. Sur-Reply 24 (“Apple has not shown any way to determine signal strength of an interferer component, and separately determine signal strength of a desired signal, from threshold crossing indications reflecting only the components together”); EX2029 at 30-34; Paper 30 (Hrg. Tr.) 69-71, 74-75.

V. Conclusion

The Decision misinterprets and misapplies the “in the receiver signal path” language of the claims, and completely fails to discuss the lack of determining, *e.g.*, an *interferer* signal strength in the art. The Decision should be vacated, and this proceeding should be de-instituted in the Director’s ongoing discretion.

Dated: December 29, 2025

Respectfully submitted,

/ Aaron R. Hand /

Aaron R. Hand, Lead Counsel

Reg. No. 80,694

Corey Johanningmeier, Back-Up Counsel
(*pro hac vice*)

BUNSOW DE MORY LLP

701 El Camino Real

Redwood City, CA 94063

Telephone: 650-351-7248

Facsimile: 415-426-4744

ahand@bdiplaw.com

cjohanningmeier@bdiplaw.com

Counsel for Patent Owner

FEE PAYMENT AUTHORIZATION

Please charge all fees required for this submission, including any additional fees that may be incurred, to Deposit Account No. 606715. The undersigned authorizes the United States Patent and Trademark Office to debit the specified deposit account for the amounts due in connection with this filing.

/ Aaron R. Hand /

Aaron R. Hand

Reg. No. 80,694

CERTIFICATE OF SERVICE

Petitioners have consented to e-mail service in this proceeding. Pursuant to 37 C.F.R. §42.6, the undersigned certifies that on December 29, 2025, a copy of the foregoing document was served by email upon the following counsel at the below email addresses:

Paul R. Hart, (Reg. No. 59,646)
Paul.Hart@eriseip.com
ERISE IP, P.A.
717 17th St., Suite 1400
Denver, Colorado 80202
Telephone: (913) 777-5600
Fax: (913) 777-5601

Adam P. Seitz (Reg. No. 52,206)
Adam.Seitz@eriseip.com
ERISE IP, P.A.
7015 College Blvd., Suite 700
Overland Park, Kansas 66211
Telephone: (913) 777-5600
Fax: (913) 777-5601

Dated: December 29, 2025

/ Aaron R. Hand /

Aaron R. Hand
Reg. No. 80,694
BUNSOW DE MORY LLP
701 El Camino Real
Redwood City, CA 94063
Telephone: 650-351-7248
Facsimile: 415-426-4744
ahand@bdiplaw.com

Lead Counsel for Patent Owner