

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMPHENOL CORPORATION,
Petitioner,

v.

CREDO TECHNOLOGY GROUP LTD.,
Patent Owner.

Case No. IPR2025-00835
Patent No. 10,877,233

**PETITIONER'S OPPOSITION TO PATENT OWNER'S
REQUEST FOR DISCRETIONARY DENIAL**

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EXHIBIT LIST

Exhibit	Description
1001	U.S. Patent No. 10,877,233 (“the ’233 Patent”)
1002	Prosecution History of U.S. Patent No. 10,877,233
1003	Declaration of Paul S. Min, Ph.D. (“Min”)
1004	Curriculum Vitae of Paul S. Min, Ph.D.
1005	U.S. Patent No. 9,882,706 (“Lugthart-706”)
1006	U.S. Patent No. 7,233,617 (“Gorecki-617”)
1007	IEEE Std. 802.3-2015, Section 1 (“802.3-2015, Section 1”)
1008	IEEE Std. 802.3-2015, Section 2 (“802.3-2015, Section 2”)
1009	IEEE Std. 802.3-2015, Section 3 (“802.3-2015, Section 3”)
1010	IEEE Std. 802.3-2015, Section 4 (“802.3-2015, Section 4”)
1011	IEEE Std. 802.3-2015, Section 5 (“802.3-2015, Section 5”)
1012	IEEE Std. 802.3-2015, Section 6 (“802.3-2015, Section 6”)
1013	U.S. Patent No. 9,172,578 (“Dabiri”)
1014	U.S. Patent No. 6,975,140 (“Hsu-140”)
1015	U.S. Patent No. 8,990,654 (“Bliss”)
1016	U.S. Pub. No. 2013/0195155 (“Pan”)
1017	U.S. Patent No. 9,806,812 (“Schmidt”)
1018	U.S. Patent No. 9,137,063 (“Zerbe-063”)
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1024	U.S. Patent No. 9,178,542 (“Shimanouchi”)
1025	U.S. Pub. No. 2005/0078758 (“Aziz”)
1026	U.S. Patent No. 7,570,708 (“Laturell”)
1027	Pavan Kumar Hanumolu, et al., “Equalizers for High-Speed Serial Links.” <i>International Journal of High Speed Electronics and Systems</i> , vol. 15, no. 2, 2005, pp. 429-458 (“Hanumolu”)
1028	U.S. Pub. No. 2014/0281068 (“Das Sharma”)
1029	’233 Patent Claim Limitation Comparison Chart
1030	Affidavit of Tanya Zeif including Exhibit B, DS125DF1610 9.8 to 12.5 Gbps 16-Channel Retimer Datasheet, SNLS482B, Texas Instruments Incorporated (January 2017) (“TI-Retimer”)
1031	U.S. Pub. No. 2014/0075076 (“Pillai”)
1032	U.S. Patent No. 8,000,176 (“Bakx”)
1033	Section 337 Statistics: Average Length of Investigations, available at https://www.usitc.gov/intellectual_property/337_statistics_average_length_investigations.htm (visited March 21, 2025).
1034	Federal Court Management Statistic-Profiles for the Eastern District of Texas, available at https://www.uscourts.gov/data-news/reports/statistical-reports/federal-court-management-statistics/federal-court-management-statistics-december-2024 (visited March 21, 2025).

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1035	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Complaint (Mar. 13, 2025).
1036	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Amended Complaint (Mar. 18, 2025).
1037	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Amended Exhibit 34 to Amended Complaint (Mar. 18, 2025).
1038	Dkt. 1, Complaint, <i>Credo Semiconductor Inc. et al. v. Amphenol Corp.</i> , No. 2:25-cv-00296 (E.D. Tex. Mar. 13, 2025)
1039	Dkt. 1-4, Exh. 4 To Complaint, <i>Credo Semiconductor Inc. et al. v. Amphenol Corp.</i> , No. 2:25-cv-00296 (E.D. Tex. Mar. 13, 2025)
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1043	Boalick, Chief APJ, “Guidance on USPTO’s recission of ‘Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation’” (Mar. 24, 2025)
1044	U.S. Patent No. 5,452,333 (“Guo”)
1045	U.S. Patent No. 7,762,727 (“Aronson”)
1046	Proakis, John G., <i>Digital Communication</i> . McGraw-Hill, 4th Edition, 2000, pp. 583-635 (“Proakis”)
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1051	U.S. Pub. No. 2015/0106536 (“Lauby”)
1052	Email chain between Amphenol and Credo (October-December 2023)
1053	Letter from Amphenol to Credo (Oct. 10, 2024)
1054	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Third Supplement to Complaint (Apr. 7, 2025)
1055	Executive Order 14318, “Accelerating Federal Permitting of Data Center Infrastructure” (Jul. 23, 2025)
1056	PTAB Alphabetical Listing of Precedential Decisions, available at https://www.uspto.gov/patents/ptab/decisions-and-opinions/precedential
1057	Executive Order 14179, “Removing Barriers to American Leadership in Artificial Intelligence” (Jan. 23, 2025)
1058	Brad Plumer, “Trump Hails \$90 Billion in A.I. Infrastructure Investments at Pennsylvania Summit,” <i>New York Times</i> (Jul. 15, 2025)
1059	Office Management and Budget (OMB) Memorandum M-25-21 “Accelerating Federal Use of AI through Innovation, Governance, and Public Trust” (Apr. 3, 2025)
1060	Statement from U.S. Secretary of Commerce Howard Lutnick (Jun. 3, 2025)
1061	Arancibia, Juan Carlos, Networker Emerges as Key Player in AI, <i>Investor’s Business Daily</i> , Vol. 42, No. 11 (week of Jun. 16, 2025)

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1062	Credo News Release, “Credo Showcasing AEC PCIe Products for AI Scaling at NVIDIA GTC 2025” (Mar. 12, 2025)
1063	Credo Blog, “Active Electrical Cables (AEC) Becoming an Important Part of Data Center Architectures” available at https://credosemi.com/blog/ (Feb. 27, 2020)
1064	Memorandum to All PTAB Judges on Interim Processes from Coke Morgan Stewart (Mar. 26, 2025)
1065	“Marvell Announces Availability of Active Electrical Cables Powered By Its Industry-Leading PAM4 DSP Technology” Exhibit 23 to <i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Complaint (Mar. 13, 2025) (EX1035)
1066	“Marvell Expands Interconnect Portfolio with Industry’s 1 st Cloud-Optimized 400G/800G PAM4 DSPs for Active Electrical Cables” Exhibit 72 to <i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Complaint (Mar. 13, 2025) (EX1035)
1067	“Marvell Alaska A 800G PAM4 DSP for Active Electrical Cable (AEC)” Exhibit 51 to <i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Complaint (Mar. 13, 2025) (EX1035)
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1070	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-1446, Notice of Institution (Apr. 14, 2025)
1071	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-1446, Notice of Ground Rules (Apr. 18, 2025)
1072	“Winning the Race: America’s AI Action Plan,” issued by Executive Office of the President of the United States (Jul. 23, 2025)

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1082	<i>In re Certain Power Converter Modules and Computing Systems Containing the Same</i> , Inv. No. 337-TA-1370, Notice of Commission Determination, 90 Fed. Reg. 9975 (Feb. 20, 2025)
1083	<i>In re Certain Integrated Circuits, Components Thereof, and Products Containing the Same</i> , Inv. No. 337-TA-1350, Notice of Institution (Jan. 19, 2023)
1084	<i>In re Certain Integrated Circuits, Components Thereof, and Products Containing the Same</i> , Inv. No. 337-TA-1350, Final Case Narrowing Disclosure (Sep. 6, 2023)
1085	<i>In re Certain Marine Air Conditioning Systems, Components Thereof, and Products Containing the Same</i> , Inv. No. 337-TA-1346, Notice of Institution (Dec. 7, 2022)
1086	<i>In re Certain Marine Air Conditioning Systems, Components Thereof, and Products Containing the Same</i> , Inv. No. 337-TA-1346, Final Case-Narrowing Disclosure (Aug. 9, 2023)
1087	<i>In re Certain Audio Players and Components Thereof (II)</i> , Inv. No. 337-TA-1330, Notice of Institution (Sep. 9, 2022)
1088	<i>In re Certain Audio Players and Components Thereof (II)</i> , Inv. No. 337-TA-1330, Final Case-Narrowing Disclosure (May 1, 2023)
1089	<i>In re Certain Graphics Systems, Components Thereof, and Digital Televisions Containing the Same</i> , Inv. No. 337-TA-1318, Notice of Institution (Jun. 1, 2022)
1090	<i>In re Certain Graphics Systems, Components Thereof, and Digital Televisions Containing the Same</i> , Inv. No. 337-TA-1318, Final Case Narrowing Disclosure (Jan. 27, 2023)
1091	<i>In re Certain Mobile Phones and Tablet Computers, All With Switchable Connectivity</i> , Inv. No. 337-TA-1301, Notice of Institution (Feb. 17, 2022)

Exhibit	Description
1092	<i>In re Certain Mobile Phones and Tablet Computers, All With Switchable Connectivity</i> , Inv. No. 337-TA-1301, Notice of Termination Based on Settlement (Mar. 20, 2023)
1093	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-1446, Private Parties' Ground Rule 5.3 Maximum Scope of the Investigation (Jul. 24, 2025)
1094	Dkt. 36, Docket Control Order, <i>Credo Semiconductor Inc. et al. v. Volex PLC</i> , No. 2:25-cv-00298 (E.D. Tex. July 23, 2025)
1095	Docket Report, <i>Credo Semiconductor Inc. et al. v. Volex PLC</i> , No. 2:25-cv-00298 (E.D. Tex. Mar. 13, 2025), retrieved Aug. 11, 2025
1096	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-1446, Commission Investigative Staff's Response to Non-Party Marvell Semiconductor, Inc.'s Motion to Disqualify Fish & Richardson (Public Version) (Jul. 25, 2025)
1097	Dkt. 9, Amended Complaint, <i>Credo Semiconductor Inc. et al. v. Volex PLC</i> , No. 2:25-cv-00298 (E.D. Tex. Mar. 18, 2025)
1098	Dkt. 29, Defendant Volex PLC's Motion to Transfer Venue (Redacted), <i>Credo Semiconductor Inc. et al. v. Volex PLC</i> , No. 2:25-cv-00298 (E.D. Tex. July 11, 2025)
1099	August 7, 2025 correspondence from Volex IPR counsel (Eric S. Lucas) to Credo IPR counsel (W. Karl Renner)
1100	Pages from U.S. App. Ser. No. 16/541,094 File History
1101	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-1446, Document Details of EDIS No. 859233, Order Granting Non-Party Marvell Semiconductor Inc.'s Motion to Disqualify Fish & Richardson P.C. (Aug. 11, 2025)

Patent Owner Credo’s request for discretionary denial (Paper 6, “Request”) disregards multiple factors that decisively weigh against discretionary denial and justify using the Board’s resources to decide the Petition on the merits. The Request should be denied.

I. INTRODUCTION

The ’233 Patent, which issued December 29, 2020, concerns active electrical cables (AECs). AECs include signal processing circuitry that improves the cable’s performance when installed in a data center. AECs are a key infrastructure component and enabling technology for artificial intelligence (AI) data centers. Credo has asserted the ’233 Patent (and two other patents) against four leading domestic AEC suppliers, in five actions, across three jurisdictions. The efficiency and integrity of the judicial system is best served by having the Board address the Petition on the merits to conserve judicial resources and avoid potentially inconsistent results stemming from Credo’s industry-wide multi-jurisdictional assertion campaign on the ’233 Patent.

A. Correcting the Examiner’s Material Errors Warrants Institution

The ’233 Patent issued because the Examiner allowed all claims on the mistaken belief that using transmit filter values stored in non-volatile memory to set pre-equalization filter coefficients was inventive. It was not. The Examiner failed to identify any of the prior art references used in the Petition’s grounds and

none was of record during prosecution. The Petition’s first ground shows the Examiner’s material error. The ground relies on a straightforward combination of two references. As explained below, the “non-volatile memory” limitation does nothing but recite a non-inventive implementation detail that was known. The Examiner materially erred in allowing the ’233 Patent to issue with independent claims 1, 8, and 15 and the claims depending therefrom.

Fixing the Examiner’s material error is an appropriate use of the Board’s resources and outweighs any reasons for discretionarily denying institution.

B. Amphenol Filed Expeditiously and Early in the ’233 Patent’s Life

Petitioner Amphenol Corporation (“Amphenol”) is an American company founded in 1932. Amphenol is a leading supplier of active electrical cables.

The ’233 Patent issued December of 2020. EX1001, code (45). In late 2023, Credo sent Amphenol a letter demanding that Amphenol provide product samples so that Credo—an Amphenol competitor—could evaluate potential infringement of *eleven* identified Credo patents (including the ’233 Patent) and other “issued patents and pending patent applications” that Credo alleged protected its AEC products. EX2002, 1-2.

Despite Credo’s commercially unreasonable request, Amphenol attempted to reach a non-judicial resolution. Amphenol indicated that it was willing to provide some product samples to Credo to allay Credo’s concerns about possible

infringement but needed safeguards in place to maintain Amphenol's proprietary information in confidence, and to ensure that Credo did not use the information to draft patent claims onto Amphenol's products. Rather than completing the discussions it had initiated, Credo filed suit.

Credo did not just sue Amphenol. Credo embarked on a litigation campaign against the American AEC industry. Credo filed five actions, in three jurisdictions, against four companies, alleging infringement of the '233 Patent and two other Credo patents. On March 13, 2025, Credo filed an ITC complaint against major domestic AEC suppliers Amphenol, Molex, TE Connectivity, and Volex. Credo simultaneously filed complaints in E.D. Tex. against Amphenol, TE Connectivity, and Volex and a complaint in D. Del. against Molex. On April 7, 2025, Credo amended the ITC complaint to drop Volex from the ITC suit; the E.D. Tex. action against Volex remains pending.

Amphenol expeditiously filed the Petition on April 10, 2025, *just 28 days* after Credo filed against Amphenol in the ITC and E.D. Tex. The Petition demonstrates that every one of the '233 Patent claims is unpatentable. Because the Office took 32 days to grant the Petition a filing date (twice the current 14-day policy), the FWD is expected by November 12, 2026.

After Amphenol filed this Petition, the ITC instituted an investigation involving the '233 Patent. The ITC's *current* October 15, 2026, target

determination date is *only 28 days before FWD is expected*. And the ITC's target determination date may be pushed back because *on August 11, 2025, ALJ Elliott granted third-party Marvell's motion to disqualify Credo's counsel from the ITC case*. EX1101 (EDIS No. 859233, granting motion to disqualify Credo's counsel Fish & Richardson); EX1096, 1 (ITC Staff counsel recommendation to disqualify Fish); EX1068 (Marvell's disqualification motion). That raises uncertainty about whether the ITC's target determination date will need to be pushed back (until after the FWD date) to accommodate new ITC counsel for Credo. Regardless, the FWD in this IPR will issue before the Presidential review period closes for any ITC determination.

C. The Board Is Best Positioned to Conserve Judicial Resources and Resolve Credo's Industry-Wide Multi-Jurisdictional Assertion Campaign by Deciding the Petition on the Merits

The ITC investigation will not resolve the Credo-Volex dispute over the '233 Patent because Credo dropped Volex from the ITC action. The Credo-Volex trial will not occur until after the FWD issues. The court set jury selection for January 11, 2027—60 days *after* the FWD should issue on November 12, 2026. Moreover, under the 25.9 month median-time-to-trial in E.D. Tex. (EX1069, 35), Volex's trial would begin on May 10, 2027—179 days (i.e., six months) *after* FWD. No matter what happens at the ITC, *the trial against Volex on the '233 Patent will not take place after the FWD issues*.

Volex recently filed an IPR petition that “is substantially the same as Amphenol’s petition” and will “file a motion to join” Amphenol’s IPR “as an understudy.” *See Volex v. Credo*, IPR2025-01385, Paper 1, at 1 (Aug. 7, 2025). That Volex is willing to join Amphenol’s Petition as an understudy and be bound by any estoppel that will arise after FWD confirms the strong merits of Amphenol’s Petition. Additionally, Volex filed a *Sotera* stipulation. EX1099. Applying *Fintiv* to the Credo-Volex litigation, which Credo’s Request fatally ignores, makes clear that discretionary denial is not warranted.

Even putting the Credo-Volex litigation aside, historical practice shows that the ITC investigation will not resolve all disputes between Credo and Amphenol (or any of the other ITC respondents) over the validity of the ’233 Patent. As discussed *infra* §VIII.B.2, the ITC will undoubtedly force Credo to narrow its asserted claims and will not have a trial, or reach a decision, on every claim in the ’233 Patent. Thus, even if the ITC were to find some claims of the ’233 Patent invalid, there is substantial risk that Credo will assert ***different claims of the ’233 Patent*** against Amphenol, TE Connectivity, and/or Molex in any or all of the three actions pending in E.D. Tex. and D. Del.

Because this Petition challenges every ’233 Patent claim, the Board can efficiently address the patentability of ***every*** claim in one proceeding. The Director should send this case to a merits panel so that the Board can do just that. That will

prevent the inefficient, duplicative use of judicial resources addressing the unpatentability of claims of the '233 Patent in separate district court actions in E.D. Tex. and D. Del. against Volex, Amphenol, TE Connectivity, and Molex, and avoid potentially inconsistent results. The Board is uniquely positioned to efficiently address the unpatentable claims of the '233 Patent that Credo procured through material Examiner error.

D. Vital Economic and National Security Interests Favor Institution

On January 23, 2025, President Trump promulgated Executive Order 14179, stating that “[i]t is the policy of the United States to sustain and enhance America’s global *AI dominance* in order to promote human flourishing, economic competitiveness, and national security.”¹ EX1057, 1 (Jan. 23, 2025). The Order’s express purpose is “for the United States to act decisively to retain global leadership in artificial intelligence.” *Id.* “[L]osing the A.I. arms race” is an “existential threat” to our nation. EX1058, 2-3 (July 15, 2025 statement of Interior Secretary Burgum). The Trump Administration has declared: “winning the A.I. race with China *is a top priority*.” *Id.*, 2. President Trump has stated that “it is *a national security imperative* for the United States to achieve and maintain unquestioned and unchallenged global technological dominance” in

¹ All emphasis is added unless otherwise noted.

“transformative technologies such as artificial intelligence.” EX1072, i (America’s AI Action Plan, July 23, 2025).

Winning the “A.I. arms race” (EX1058, 2-3) requires building the necessary data centers that will power AI solutions. *See, e.g.*, EX1055 (Executive Order 14318 “Accelerating Federal Permitting of Data Center Infrastructure”). Credo acknowledges that the AECs Credo accuses of infringing the ’233 Patent are key enabling technologies for AI data centers. Request, 4-5. Credo’s assertion campaign against the domestic AEC industry, if left unchecked, will limit the supply and availability of these key components precisely when the country’s national security and economic interests require building more data centers to support AI. That campaign depends on asserting unpatentable claims issued due to the Examiner’s material error.

Consistent with Executive Order 14179 and the policy of the United States to promote the availability of key AI infrastructure components, the Director should deny Credo’s Request and refer the Petition to a merits panel. It is an appropriate use of the Board’s resources to decide the Petition’s patentability challenges and ensure that Credo’s attempt to block the sale of components vital to our nation’s security and economic interests is not based on unpatentable claims. National security and our vital economic interests outweigh any factor that Credo alleges favors discretionary denial.

II. AMPHENOL ATTEMPTED TO REACH A NON-JUDICIAL RESOLUTION THEN FILED EXPEDITIOUSLY AFTER CREDO SUED THE DOMESTIC AEC INDUSTRY

Amphenol is one of the world’s leading suppliers of active electrical cables for highspeed data centers, such as those used for artificial intelligence. Active electrical cables include signal processing circuitry that improves the cable’s performance when installed in a data center. EX1035, ¶18.

The ’233 Patent issued on December 29, 2020. EX1001, code (45).

On September 1, 2023, Credo sent Amphenol a letter asserting that Credo’s allegedly “new product category” of “Active Electrical Cables (AECs)” was “protected by numerous issued patents and pending applications.” EX2002, 1. The letter listed eleven (11) patents that allegedly “protected” Credo’s AECs, including the ’233 Patent, the ’111 Patent,² the ’252 Patent,³ and the ’898 Patent,⁴ but asserted that the patents allegedly protecting Credo’s AECs were “not limited” to the eleven listed patents. EX2002, 1-2. Credo’s letter stated that “Credo

² U.S. Patent No. 11,032,111 is challenged by Amphenol in IPR2025-00699, by Marvell in IPR2025-01220, and by Volex in IPR2025-01387.

³ U.S. Patent No. 11,012,252 is challenged by Amphenol in IPR2025-00834, by Marvell in IPR2025-01219, and by Volex in IPR2025-01386.

⁴ U.S. Patent No. 11,495,898 is challenged by Amphenol in IPR2025-00607.

understands that Amphenol may be making, using, selling, offering for sale, or importing into the United States active electrical cables that compete with Credo's HiWire™ AECs" which "may constitute unlawful infringement of Credo's intellectual property, including the issued patents listed" in the letter. EX2002, 2. Credo concluded its letter by requesting that Amphenol "identify any active electrical cables that Amphenol has made, used, sold, offered for sale, or imported into the United States" and "provide three samples" for "Credo to assess its rights." EX2002, 2.

Amphenol explained that it found Credo's request that Amphenol "share extensive product information with a competitor [] unreasonable, particularly given the nebulous nature of [Credo's] concerns." EX1052, 4. But because Amphenol believed that sharing information would "allay Credo's concerns," Amphenol was open to providing some product information if Credo agreed to keep it "in confidence to be used solely for the analysis mentioned in your letter" and under the condition that Credo would "either confirm for us there is no issue with the representative product or detail Credo's concerns with respect to that product." *Id.*

Credo said it would agree to the confidentiality terms if Credo could share the information with "other outside counsel and technical consultants." *Id.*, 3. Amphenol was open to that proposal but asked who Credo intended to share the

information with. *Id.*, 2. Credo indicated showing Amphenol’s product information to “one of Credo’s outside patent counsel.” *Id.*

In a letter dated December 23, 2023, Amphenol noted that Credo identified a lawyer who “is involved in prosecuting Credo patents” so sharing product information with him carried an “unreasonable risk that it would be used for patent prosecution.” *Id.*, 1. Amphenol remained open to sharing some product information under reasonable conditions and suggested that Credo identify “someone else who is better positioned to limit use of the information to only the contemplated analysis such that we can move forward.” *Id.* Credo never responded. Amphenol followed up in October 2024 seeking confirmation that the matter was closed. EX1053. Once again, Credo never responded.

On March 13, 2025, Credo filed five complaints against Amphenol, Molex, TE Connectivity, and Volex across the ITC, E.D. Tex., and D. Del., alleging infringement of the ’233 Patent. *See* Table 1 (below). On April 7, 2025, Credo withdrew the allegations against Volex at the ITC (but not in E.D. Tex.). EX1054. On April 14, 2025, the ITC instituted an investigation (No. 337-TA-1446) based on Credo’s amended complaint against Amphenol, Molex, and TE Connectivity. EX1070.

Table 1: Credo Infringement Actions on '233 Patent.

Forum	Defendant (Respondent)	Case No.
ITC	Amphenol Corp., Molex, LLC, TE Connectivity PLC	337-TA-1446
D. Del.	Molex, LLC	1:25-cv-00316
E.D. Tex.	Amphenol Corp.	2:25-cv-00296
E.D. Tex.	TE Connectivity, PLC	2:25-cv-00297
E.D. Tex.	Volex PLC	2:25-cv-00298

Amphenol filed this Petition challenging the '233 Patent on April 10, 2025, *before* the ITC instituted No. 337-TA-1446 and just 28 days after Credo sued Amphenol at the ITC and in E.D. Tex. Volex filed a petition challenging the '233 Patent on August 7, 2025 (*Volex*, IPR2025-01385, Paper 1).

III. CORRECTING THE EXAMINER’S MATERIAL ERROR IN ALLOWING THE CLAIMS IS AN APPROPRIATE USE OF THE BOARD’S RESOURCES AND RENDERS DISCRETIONARY DENIAL UNWARRANTED

The Examiner materially erred in allowing the '233 Patent. The '233 Patent concerns “active” cables for communicating signals between components of a computer system. Request, 4. The cables are “active” because they have transceivers that perform signal processing. *Id.* Some active cables “pre-equalize” communication signals prior to transmitting them from one end of the cable to the other to mitigate ways in which the cable’s conductors are expected to distort the signals. *Id.*; Petition, 5-7 (citing evidence). Pre-equalization may include filtering

a signal before transmitting it. Petition, 5-7. Some pre-equalizers store filter coefficients that set the filter behavior and the filter compensates for the expected distortion. *Id.* Such active cables were well-known. *Id.*

The independent claims (claims 1, 8 and 15) in the '233 Patent were all allowed because they share the same feature that the Examiner, without explanation, deemed allowable in the first action on the merits. The prior art used in the Petition's grounds—which the Examiner failed to find and was not of record during prosecution—demonstrates that the Examiner materially erred in deeming the subject matter in claims 1, 8, and 15 allowable.

Because the Examiner materially erred in allowing the '233 Patent, it would be an appropriate and effective use of the Board's resources to correct that error, particularly given that Credo is asserting its facially-unpatentable claims against major domestic suppliers—in five actions, across three jurisdictions—in a manner that will impede the President's initiatives to build AI data centers. *See, e.g.*, EX1055 (Executive Order 14318 "Accelerating Federal Permitting of Data Center Infrastructure").

A. The Examiner Allowed the Claims in A First Action Based On A Limitation In Each Independent Claim That Required Pre-Equalization Using Filter Coefficient Values Stored in “*nonvolatile memory*”

Every independent claim (claims 1, 8, and 15) was allowed because it has a limitation that concerns active electrical cables that use pre-equalization filter

coefficient values stored in non-volatile memory. For claim 1's "cable," Limitation [1.f] recites "*the first and second DRR [data recovery and remodulation] devices providing pre-equalization of the electrical transit signals using transmit filter coefficient values stored in nonvolatile memories.*" Claim 8's "cable manufacturing method" has the same language at [8.f] and claim 15's "communication method" has the same language at [15.c]. *See* Petition, Appendix A (claim list).

The Examiner allowed all claims in a first action based on the mistaken belief that what is recited in Limitations [1.f], [8.f] and [15.c] was inventive. EX1002, 107. The applicant then filed a request for continued examination (RCE) to submit an Information Disclosure Statement (IDS) citing Office communications in different cases. EX1002, 134-138. The Examiner allowed the case again and repeated the same reasons for allowance without discussing any information in the new IDS. EX1002, 154.

Thus, the Examiner allowed all claims in the '233 Patent based on the mistaken belief that it was inventive to use transmit filter values stored in non-

volatile memory⁵ to set pre-equalization filter coefficients. That was material error and demonstrably wrong.

B. The Examiner Failed to Appreciate That “*pre-equalization using filter coefficient values stored in nonvolatile memories*” Was Known

The Petition challenges the independent claims in a single ground (Ground 1) which demonstrates those claims (and many others) were obvious over Lugthart-706 (EX1005) and Gorecki-617 (EX1006) (“Lugthart+Gorecki”). Neither Lugthart-706 nor Gorecki-617 was of record during prosecution.

Lugthart-706 discloses an active cable that performs pre-equalization and meets almost every limitation in all 20 claims of the '233 Patent. The only thing Lugthart-706 does not disclose in the claims challenged in Ground 1 is the routine implementation details of how Lugthart-706 sets and stores its disclosed pre-equalization filter coefficients in its transceivers. However, Gorecki-617 discloses storing such pre-equalization coefficients in non-volatile memory and using those stored values to set the filter coefficients for pre-equalization.

⁵ Non-volatile memories were well-known and advantageous because they retain the stored data even when there is no power applied. EX1003, ¶125 (non-volatile memory retains stored values even when no power is applied).

The Petition explains that a POSA had reason to use Gorecki-617's disclosed technique of storing pre-equalization coefficients in non-volatile memory to achieve the well-known benefits of non-volatile memory in retaining stored values even when no power is applied to the memory (Petition, 15-18), and that the Lugthart+Gorecki device that results from this simple combination meets the Limitations [1.f], [8.f] and [15.c] that the Examiner erroneously found inventive. Petition, 33-35 ([1.f]), 49 ([8.f]), 53 ([15.c]).

The Examiner never considered Lugthart-706 or Gorecki-617 and materially erred in finding that Limitations [1.f], [8.f] and [15.c] were inventive.⁶

1. Lugthart-706 Teaches “*the first and second DRR devices providing pre-equalization of the electrical transit signals*”

Lugthart-706 discloses an active electrical cable with conductive lines 111 connecting transceivers 107a/b on opposite ends of the cable connected as shown in Lugthart-706's annotated Fig. 2A reproduced below from the Petition at 30. Transceivers 107a/b provide “adaptive and configurable signal conditioning features such as... *output pre-emphasis*” on the *electrical transit signals* transmitted through the cable's conductive lines to the other end of the cable.

⁶ The Examiner also did not have the benefit of Dr. Paul S. Min's expert testimony (EX1003, “Min”).

Petition, 30 (addressing Limitation ([1.c])); Lugthart-706, Figs. 1A, 2A, 16:11-15, 23:59-24:2, 29:23-28; Min, ¶164. Lugthart-706’s “pre-emphasis” means the same thing as “pre-equalization” in the ’233 Patent claims. EX1050 (Raghavan), 2:39-41 (describing a “technique... known as ‘pre-emphasis’, or pre-equalization”); EX1017 (Schmidt), 7:54-55; EX1018 (Zerbe-063), 3:24-27; EX1019 (McCall), 5:4-8; Min, ¶164.

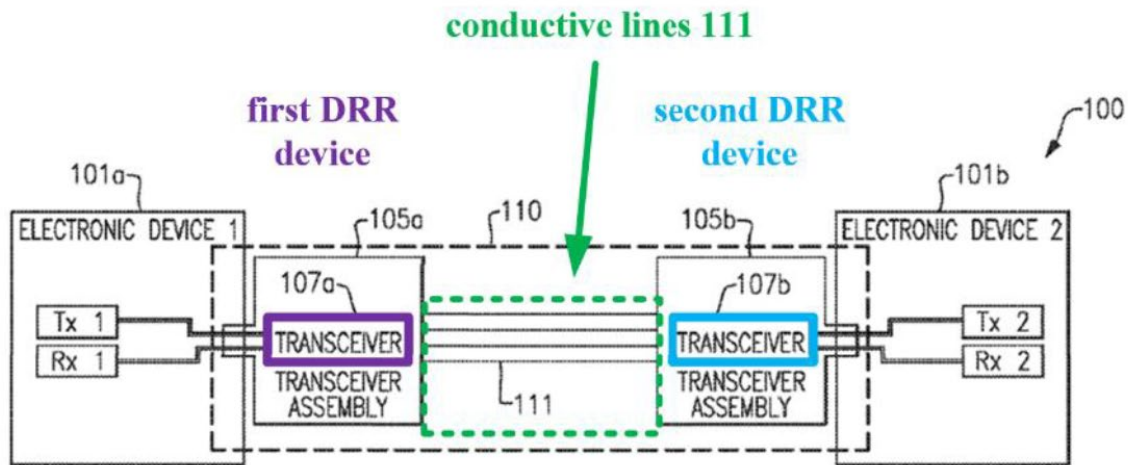


FIG.2A

Lugthart-706 implements the transceivers 107a/107b in the manner shown in Fig. 1A, reproduced below with the Petition’s annotations. Petition, 32, 25-26 (Lugthart-706’s “outbound”/“inbound” labels used in the annotation are from the perspective of the host device to which the cable is connected). Lugthart-706’s transceivers have a digital signal processor (DSP) 13 that provides pre-equalization using a finite impulse response (FIR) filter 17 in the data path for the TX signal

transmitted to the other end of the cable on the LINE SIDE. Petition, 31-32. The claims define “DRR” as data recovery and re-modulation. See Limitations [1.a], [8.a] and [15.a]. Transceivers 107a/107b each is a “DRR device” because it recovers the data received at the “HOST SIDE” and re-modulates it for transmission over the “LINE SIDE” in Fig. 1A below. Petition, 19-22; EX1001, 3:51-55; EX1003 (“Min”), ¶¶135-154. FIR filter 17 is a *transmit filter* because it produces an output signal that is converted into analog form by digital-to-analog converter 14 and then transmitted on the LINE SIDE. Lugthart-706, Fig. 1A (annotated detail below), 23:13-17, 23:59-24:2; Min, ¶165.

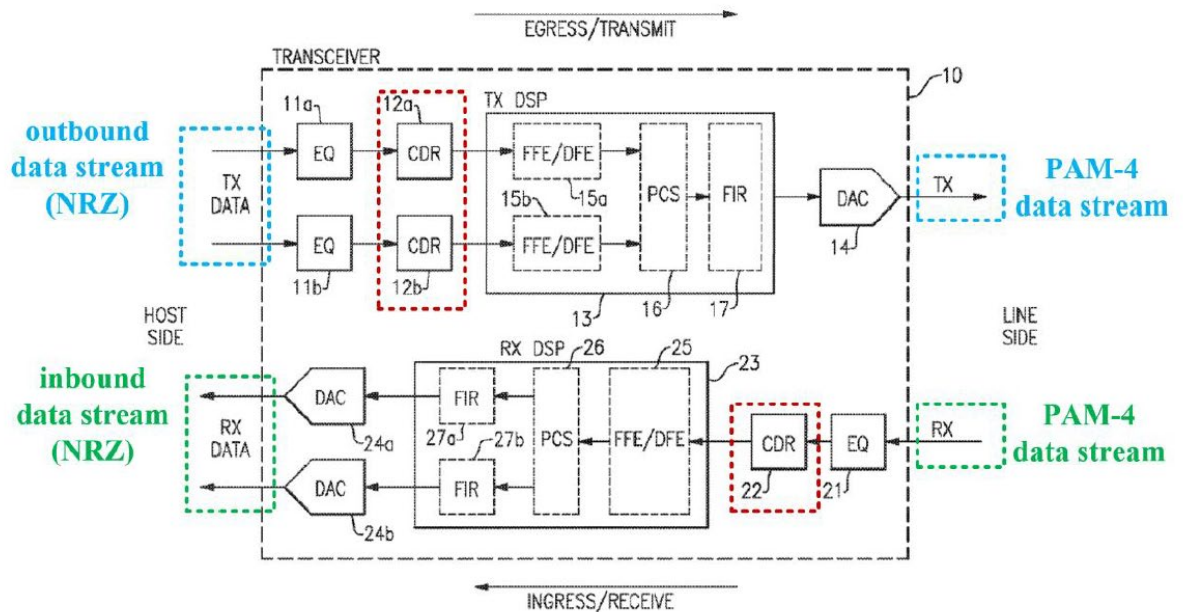


FIG.1A

FIR filter 17 “perform[s] emphasis on the signal to compensate for channel losses” which means that it “pre-equaliz[es] the electrical transit signal” for

transmission over the LINE SIDE. Petition, 34; Lugthart-706, 23:62-64; Min, ¶166. FIR filter 17 forwards conditioned signals to DAC 14 for transmission over conductive lines 111 to the other end of the cable 110 in Fig. 2A. Lugthart-706, Figs. 1A, 2A, 8:19-22, 16:11-15, 23:59-24:2; Min, ¶166. There should be no meaningful dispute that the TX signals transmitted over the cable’s conductive lines are *electrical transit signals*. Petition, 34; Min, ¶166. There should also be no meaningful dispute that FIR filter 17’s tap coefficients are *transmit filter coefficient values*. Petition, 34; Min, ¶167.

2. “using transmit filter coefficient values stored in nonvolatile memories”

Lugthart+Gorecki adopts Gorecki-617’s teaching to store filter coefficient values in nonvolatile memory (i.e., EEPROM) and uses those values to set filter coefficients that provide pre-equalization as taught by Lugthart-706. Gorecki-617, 7:18-33 (“[I]nformation representative of... *the coefficients of the tap(s)*... may be *stored... in... for example... EEPROM*. In this way, the transmitter *may access the memory to retrieve the necessary information during start-up/power-up, initialization or re-initialization.*”); Min, ¶168. An EEPROM [electrically erasable programmable read-only memory] is non-volatile memory. EX1051 (“Lauby”), [0081] (“nonvolatile memory can include... electrically erasable PROM (EEPROM)”); EX1032 (“Bakx”), 2:53-54 (“EEPROM is a non-volatile memory”);

EX1047 (“Lindsay”), [0012] (“non-volatile memory may include... an EEPROM”); Min, ¶¶120, 168.

Thus, Lugthart+Gorecki adopts Gorecki-617’s teaching to program filter 17 coefficients using values stored in non-volatile EEPROM to pre-equalize the TX signal in transceivers 107a and 107b which meets Limitations [1.f], [8.f] and [15.c] that the Examiner erroneously found inventive. Petition, 33-35 ([1.f]), 49 ([8.f]), 53 ([15.c]); Min, ¶¶168-169.

3. POSAs Had Ample Reasons to Use Gorecki-617’s Teachings in Implementing Lugthart-706

There should be no reasonable dispute that a POSA had reasons to configure Lugthart-706’s transmit filters using Gorecki-617’s teachings to use coefficients stored in non-volatile memory. Petition, 15-18. This provides a known way to set filter coefficients at power up (e.g., when the active cable is plugged into a host device) and the non-volatile memory preserves the filter coefficient values when the active cable is powered down (e.g., unplugged) as taught by Gorecki-617. Petition, 15-16. This approach would have allowed default filter coefficients to be set at manufacture and/or would have allowed different default coefficients for various host channels to be preset, both of which were conventional as taught by Gorecki-617 and multiple corroborating references. Petition, 16-17. Ground 1’s Lugthart+Gorecki combination merely combines familiar elements according to known methods to yield predictable results, and arranges known elements with

each performing the same function it had been known to perform. Petition, 17-18. In short, a POSA would have known that Gorecki-617's approach of using non-volatile memory to store equalization coefficients would have improved Lugthart-706's equalization in the same way it improved Gorecki-617's equalization. Petition, 18. A POSA would have a reasonable expectation of success in making this combination because Gorecki-617 and several corroborating references show that implementing the combination was well within the POSA's capabilities. Petition, 18.

4. Marvell and Volex Separately Confirm that the Examiner Erred in Finding Limitations [1.f], [8.f], and [15.c] Inventive

The IPR petitions filed by Marvell⁷ and Volex confirm that Limitations [1.f], [8.f] and [15.c] were not inventive and that the Examiner erred in allowing the claims. Their petitions are supported by testimony of two independent experts—Dr. Michael Shou-Wei Chen for Marvell and Dr. Ayman A. Fayed for Volex—who separately explain that these limitations were not inventive.⁸ Dr. Fayed,

⁷ Marvell makes re-timer chips, e.g., “*DRR devices*,” and is the assignee of Lugthart-706.

⁸ See IPR2025-01218, Paper 2 (“Marvell Petition”), 33-41 ([1.f]), 53 ([8.f]), 58 ([15.c]), citing EX1003 (“EX1003-Marvell,” Decl. of Dr. Chen), ¶¶74-92, 120,

moreover, evaluated Dr. Min’s testimony supporting the Petition’s analysis of limitations [1.f], [8.f], and [15.c] and concluded that it was “accurate and correct.” EX1003-Volex, ¶25.

* * *

In short, three domestic manufacturers (Amphenol, Marvell, and Volex) and three university professors (Drs. Min, Chen, and Fayed) independently reached the same conclusion that Limitations [1.f], [8.f], and [15.c] were not inventive. The Examiner allowing the claims based on these non-inventive limitations was material error.

5. Credo’s Assertion that Amphenol Relies on Expert Testimony to Fill “Gaps” in the Prior Art is Baseless

If the Petition’s ground failed to demonstrate material error in the Examiner’s allowance of the ’233 Patent, Credo had ample opportunity to explain

144; IPR2025-01385, Paper 1 (“Volex Petition”), 16-19 (reasons to combine), 34-36 ([1.f]), 50 ([8.f]), 54 ([15.c]) , citing EX1003 (“EX1003-Volex,” Decl. of Dr. Ayman Fayed), ¶¶124-133, 164-169, 210-211, 226-227.

how and why that would allegedly be so given that Credo represents that its Request used only 9,283 of the 14,000 words authorized.⁹

The best Credo could do was to promise that the upcoming POPR will show that “the proposed combination of Lugthart706 and Gorecki617 fails to disclose or suggest limitation [1.f], rendering Amphenol’s contentions substantively defective,” and to allege that the Petition fails to explain reasons why a POSA would have combined the teachings of Gorecki-617 and Lugthart-706 in the manner alleged. Request, 27-29. Both assertions are baseless.

Credo’s argument amounts to alleging that the Petition’s patentability challenge fails because it relies on a combination of references under 35 U.S.C. §103 rather than anticipation. The argument is baseless. *See, e.g.*, 35 U.S.C. §311(b) (authorizing IPR grounds under §103).

Credo complains that the Petition’s analysis of [1.f] is too concise (Request, 30) but never disputes—because it cannot—that Gorecki-617, 7:18-33 discloses storing filter coefficients in non-volatile memory as recited in [1.f]. Petition, 35. It is undisputed that Gorecki-617 teaches this requirement of [1.f].

⁹ Credo used images extensively to reproduce text and did not count **10,340 words** in the text of various images that Credo pasted into the document. *See, e.g.*, Request, 14-21, 30, 41, 44, 46-47, 50-59, 64.

As explained *supra* §III.B.3, the Petition provides extensive discussion of reasons to use Gorecki-617’s non-volatile memory teachings in Lugthart-706 to set Lugthart-706’s transceiver FIR filter coefficients using values stored in non-volatile memory. The Petition’s reasons to combine are not only supported by Dr. Min’s testimony (EX1003, ¶¶124-133), but by the teachings of Lugthart-706, Gorecki-617 and other corroborating prior art references that Credo ignores. Petition, 15-18 (also citing EX1014 (“Hsu-140”) and EX1020 (“Boccaccio”)). Credo complains that Dr. Min’s testimony “fails to substantiate key assertions” but Credo never even explains what those assertions are, let alone explain why they are allegedly not “substantiated.” Request, 31.

Credo’s suggestion that Dr. Min’s testimony at EX1003, ¶¶68-69 or 125 warrants no weight because it “parrots” the Petition (Request, 30-32) is likewise baseless. Credo appears to be invoking *Xerox v. Bytemark*, IPR2022-00624, Paper 9, at 5 (Aug. 24, 2022) (precedential). *Xerox* was made precedential for its “holding [that a] declaration is entitled to little weight when it contains an exact restatement of the petition’s **unsupported, conclusory** assertions without any additional supporting evidence or reasoning.” EX1056, 8. *Xerox* does not say that all expert testimony that supports a Petition’s argument warrants no weight simply because the Petition presents the argument in language that matches the expert’s language—*Xerox* only says testimony warrants no weight if the testimony restates

an argument made in the Petition that is “unsupported” and “conclusory.” *Xerox*, Paper 9, at 15. That is not the case here.

Dr. Min’s testimony at ¶168 does not “parrot” the Petition’s analysis (Request, 30) because it cites additional corroborating evidence (Hsu-140) and additional discussion of non-volatile memory in Gorecki-617. *See* Petition, 35; Min, ¶168. Dr. Min’s testimony is not “conclusory” because it refers back to his previous explanation about the Lugthart+Gorecki combination, the teachings it uses, and the reasons a POSA had to form the combination. Min, ¶168, citing Min, §VI.A.3 (explaining the combination). That testimony is well-supported by prior art teachings and reasoning. Credo’s complaints about Min, ¶168 are baseless.

The first sentence of Dr. Min’s testimony at ¶125 that Credo calls “conclusory” (Request, 31-32)—“A POSA would have had reasons to configure the transmit filters of Lugthart-706 based on Gorecki-617’s approach of using coefficients stored in nonvolatile memory”—is a topic sentence. Credo ignores the rest of the almost page-long testimony in Min, ¶125 explaining the relevant Gorecki-617 disclosure (*e.g.*, “Gorecki-617’s approach of using coefficients stored in nonvolatile memory”). Credo also ignores the rest of Dr. Min’s testimony at ¶¶126-131, where he explains the relevance of Gorecki-617’s disclosure and why a POSA had reasons to “configure the transmit filters of Lugthart-706 based on”

those disclosures. Dr. Min’s testimony is supported by evidence and reasoning, and is undisputed. Credo’s complaints about Dr. Min’s testimony are baseless.

C. Deeming the Claims Allowable Was Material Error

The Examiner never explained why the claims were found allowable. They were simply deemed allowable in the first action without comment or explanation. EX1002, 107, 154. This makes it “difficult, if not impossible, to discern... how the Examiner might have considered the arguments presented in the Petition, had they been presented to the Examiner.” *BowTech, v. MCP IP*, IPR2019-00379, Paper 14, at 20 (July 3, 2019) (instituting a trial and finding that the Office materially erred by failing to consider a reference never discussed or applied in a rejection).

The Examiner never identified or considered either reference used in Ground 1—*i.e.*, Lugthart-706 and Gorecki-617. Because this prior art was “not before the examiner, the examiner could not have considered the [Petition’s] combination... during prosecution.” *Hamilton Technologies v. Tehrani*, IPR2020-01199, Paper 6, at 21 (Jan. 6, 2021) (granting rehearing and instituting trial; finding that the Office materially erred in allowing claims while failing to consider the petition’s references that were not before the examiner). As in *Hamilton Technologies*, “the examiner did not have the benefit of [the IPR arts’] teachings” and committed material error by failing to identify this prior art during prosecution and by failing

to appreciate that the allowed claims are unpatentable in view of this prior art. *Id.* As the Board’s precedential *Advanced Bionics* framework confirms, correcting material error in examination is an effective use of the Board’s resources and makes discretionary denial unwarranted. *Advanced Bionics v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6, at 8–9 (Feb. 13, 2020) (precedential) (error material to patentability weighs against discretionary denial under §325(d)).

In short, as shown *supra* §III.B.2, the Examiner allowed claims 1, 8, and 15 (and their dependent claims) based on a limitation that was not inventive. Had the Examiner considered Lugthart-706 and Gorecki-617, the Examiner never would have allowed the claims. Doing so was error material to patentability. It is an appropriate and effective use of the Board’s resources to address and remediate this error, particularly where Credo is asserting its unpatentable claims against leading domestic AEC suppliers, in five actions spanning three jurisdictions (ITC, E.D. Tex., and D. Del.), against technology that is critical to the Federal Government’s initiatives to promote the building of data centers to support AI. *See infra* §V.

D. The Examiner’s Material Error in Allowing the ’233 Patent to Issue Weighs Against Discretionary Denial

The Examiner’s error was material to patentability because he allowed the claims based on limitations ([1.f], [8.f], and [15.c]) reciting subject matter that was

not inventive. *Supra* §III.B. That is reason enough why this case should not be discretionarily denied. *Anthony v. ControlTec*, IPR2025-00559, Paper 12, at 2 (Dir. July 16, 2025) (rejecting discretionary denial because material error was shown by the Examiner in overlooking the IPR’s prior art references not cited during prosecution); *Tesla v. Charge Fusion Techs.*, IPR2025-00152, Paper 11, at 2-3 (Dir. June 12, 2025) (same). The material error committed by the Examiner makes discretionary denial unwarranted because “it is an appropriate use of Office resources” to review the claims to correct the Office’s previous error. *Anthony*, IPR2025-00559, Paper 12, at 2.

Correcting the Office’s material error outweighs any factors that might otherwise have favored discretionary denial. In *Microsoft v. Partec Cluster Competence Center GmbH*, the Director rejected discretionary denial and determined that correcting the examiner’s material error outweighed a showing that a trial in a parallel proceeding was expected before FWD. IPR2025-00318, Paper 9, at 2-3 (Dir. June 12, 2025). The Director reached the same conclusion in *Padagis US v. Neurelis*, IPR2025-00464, Paper 12, at 2-3 (Dir. July 16, 2025).

Even if Credo had any settled expectations (it does not as discussed *infra* §VI), correcting the Office’s material error would outweigh them. In *Anthony*, like here, the examiner deemed subject matter allowable in a first action on the merits and the Director determined that the examiner’s material error in overlooking the

references used in the IPR grounds outweighed the fact that challenged patents had been in force for 17 and 18 years. *Anthony*, IPR2025-00559, Paper 12, at 2. In *Xencor v. Merus*, the Director determined that the Office’s material error in allowing the patent outweighed settled expectations for a nine-year old patent. IPR2025-00604, Paper 12, at 2-3 (Dir. July 17, 2025).

Here the Examiner’s material error outweighs the fact that FWD is expected only 28 days after the current¹⁰ target ITC determination date and weighs against discretionary denial. *See Microsoft*, IPR2025-00318, Paper 9, at 2-3; *Padagis US*, IPR2025-00464, Paper 12, at 2-3.

IV. CREDO’S SECTION 325(d) ARGUMENTS ARE BASELESS

Credo’s assertion that discretionary denial is warranted under §325(d) fails. Request, 32-68.

A. *Advanced Bionics* Prong 1 Fails

Neither Lugthart-706 nor Gorecki-617 was of record during prosecution. Thus, *Advanced Bionics* prong 1 fails and discretionary denial under §325(d) is not warranted. *Advanced Bionics*, IPR2019-01469, Paper 6, at 8-9.

¹⁰ The target ITC determination date may need to be extended because on August 11, 2025, the ALJ disqualified Credo’s ITC counsel. *See supra* §I.B, *infra* §VIII.B.1; EX1101; EX1096; EX1068.

1. No Teachings Cumulative of Lugthart-706 Were of Record

Credo argues that Lugthart-706 was “effectively presented” to the Examiner because the Examiner initialed an IDS on which Credo listed a non-final action:

- by a different examiner (Ted M. Wang *rather than* Andrew Jordan),
- in a different case (U.S. App. No. 16/541,094 *rather than* No. 16/698,935),
- from a different patent family,
- rejecting different claims (which did not contain the language in Limitations [1.f], [8.f], [15.c]),
- over a different reference (U.S. Patent No. 9,337,993 (“Lugthart-993”) that Credo argues had a similar disclosure to Lugthart-706.

See EX1002, 166; Request, 34-48.

In that September 9, 2020 Non-Final Action in the unrelated case (EX2018, the “NFA”), the Office rejected claims over Lugthart-993. Request, 41; EX2018. Credo had an obligation to disclose information material to patentability of the ’233 Patent claims. 37 C.F.R. §1.56.¹¹ Credo could have cited Lugthart-993 on the IDS but did not. Credo does not dispute that neither Lugthart-993 nor Lugthart-706 was cited on an IDS during the prosecution of the ’233 Patent.

¹¹ Amphenol reserves the right to argue in litigation that Credo violated this duty.

Nothing in the prosecution history indicates that the Examiner ever considered the disclosure in Lugthart-993. Nothing in EX2018—the NFA in the unrelated case—indicates any pertinence of Lugthart-993 to the claims of the ‘233 Patent because the claims rejected in that NFA had no limitations like Limitations [1.f], [8.f], [15.c]. See EX1100 (claims addressed in the EX2018 NFA).

Credo’s suggestion that the Examiner considered Lugthart-706 (even though it is not of record), or that the Examiner considered similar disclosures in Lugthart-993 (even though that is not of record either), is baseless.

2. No Teachings Cumulative of Gorecki-617 Were of Record

Credo’s argument that “Aronson985” is “cumulative” of Gorecki-617 is obfuscation. Request, 62-65. Gorecki-617 teaches storing *pre-emphasis filter coefficients* in nonvolatile memory. Petition, 14-15; *supra* §III.B.2. Credo cites disclosure in “Aronson985” of storing *different* kinds of information in non-volatile EEPROM and then *falsely* alleges that the same two lines of Aronson985 teach “preemphasis.” Request, 65 (citing EX2020, 12:29-31). The quoted “preemphasis” language *does not appear in the cited portion of EX2020*. Aronson985 never says any information used for preemphasis is stored in EEPROM. Because Aronson985 does not disclose storing *preemphasis filter coefficients* in non-volatile storage like Gorecki-671 does, Aronson985 is not cumulative of Gorecki-671.

B. *Advanced Bionics* Prong 2 Fails

Even if the Director were to consider prong 1 to be met (it is not), *Advanced Bionics* prong 2 fails because the Examiner committed material error as shown *supra* §III. Thus, discretionary denial under §325(d) is not warranted. *Advanced Bionics*, IPR2019-01469, Paper 6, at 8-9.

V. VITAL NATIONAL SECURITY AND ECONOMIC INTERESTS WEIGH DECISIVELY AGAINST DISCRETIONARY DENIAL

Credo characterizes the '233 Patent as covering high-speed cables used in the data centers used for artificial intelligence. Request, 4-5. Credo's lawsuits against leading domestic AEC suppliers—before the ITC and in two different federal districts (*supra* §II)—seek to diminish competition and the options for those who are and will be building the AI data centers critical to our nation's national security and economic interests, all based on unpatentable claims. President Trump's Executive Order 14179 on AI, the Director's guidance on discretionary denial, and the vital national security and economic interests at stake, all compel referring the Petition to a merits panel to assess Amphenol's patentability challenges.

The vital national security and economic interests *alone* outweigh Credo's advocated-for discretionary denial under *Fintiv*. When combined with the facts that: (1) there is a mere 28-day difference between the expected FWD and ITC target determination dates that could evaporate given the ALJ's recent granting of

Marvell’s motion to disqualify Credo’s lawyers, (2) the ITC proceeding *will not decide* the patentability of every challenged claim (*infra* §VIII.B.2), and (3) an IPR trial would be an efficient and effective use of the Board’s resources because, regardless of what happens at the ITC, there will be further litigation on the ’233 Patent at least in E.D. Tex. against Volex which is not a party to the ITC proceeding (*infra* §VIII.A), discretionary denial is unwarranted.

A. President Trump’s Executive Order 14179 Makes It the Express Policy of the United States to Sustain and Enhance America’s Global AI Dominance to Promote Economic Competitiveness and National Security

Three days after taking office, President Trump promulgated Executive Order 14179, entitled “Removing Barriers to American Leadership in Artificial Intelligence,” stating that “[i]t is the policy of the United States to sustain and enhance America’s global AI dominance in order to promote human flourishing, economic competitiveness, and national security.” EX1057, 1 (Jan. 23, 2025). The Executive Order’s express purpose is “for the United States *to act decisively to retain global leadership in artificial intelligence.*” *Id.* “[L]osing the A.I. arms race” is an “*existential threat*” on par with “Iran getting a nuclear weapon.” EX1058, 2-3 (July 15, 2025 statement of Interior Secretary Burgum). “[W]inning the A.I. race with China *is a top priority*” for the United States. *Id.*

Office Management and Budget Memorandum M-25-21 requires the heads of all Executive Branch departments—including the Commerce Department—to

“build effective policies and processes for the timely deployment of AI” and states that “*Agencies must remove barriers to innovation* and provide the best value for the taxpayer.” EX1059, 1-2 (Apr. 3, 2025). “Agencies must develop public AI strategies that elevate AI adoption and innovation as a priority, while increasing transparency to the American public, civil society, and industry.” *Id.*, 2.

“Agencies *have a responsibility to identify and remove barriers to further responsible AI adoption and application*[.]” *Id.*, 5. The Commerce Department states that “*AI* holds great potential for transformational advances that *will enhance U.S. economic and national security*” and has committed to using “its vast scientific and industrial expertise to evaluate and understand the capabilities of these rapidly developing [AI] systems and identify vulnerabilities and threats” to them. EX1060, 1-2 (June 3, 2025).

The '233 Patent poses just such a threat to rapidly developing AI systems. The Commerce Department—and the Office—can mitigate that threat by simply letting the Board decide Amphenol’s Petition on the merits. If the merits panel agrees with Amphenol that the challenged claims are unpatentable, then a FWD canceling those claims will remove the damaging threat and innovation barrier that Credo’s weak patent poses to a competitive marketplace needed to supply the exploding demand for active electrical cables (AECs) required to build the AI data centers needed to sustain and enhance America’s global AI dominance and win the

AI arms race. If Credo were to avoid an IPR trial on a patent Credo has asserted against an industry vital to our nation’s security and economic interests, it should be on the merits.

B. The Challenged Claims Involve Components—Active Electrical Cables (AECs)—That Are Key Enabling Technologies for AI

Credo asserts seventeen of the twenty challenged claims against active electrical cables (AECs). Paper 6 (Request), 4; EX1035, ¶¶18-21, 42; EX1037 (accusing AECs); EX1038, ¶31; EX1093, 1 (withdrawing claims 7, 14, and 20 for the ’233 Patent). There is no dispute that AECs are *key enabling technologies* for data centers supporting AI. Request, 4 (Credo identifying “artificial intelligence” as a “meaningful commercial use[]” for its “AEC products” “protected[ed] by” the ’233 Patent). Credo argues that “AECs are used by data centers... *for enabling high-speed data transmission*, for example, in server-to-server and other data distribution applications.” EX1035, ¶¶18-19. “[H]igh-speed connectors are complex designs that can deliver data at... 400 gigabits per second [Gbps][.] Microchips can function only as fast as their connectors will let them, so the race is on to develop connectors that test the limits of technology.” EX1061, 1. AEC products enable “the *critical transition to higher-speed interconnects driven by AI* and cloud computing infrastructure.” *Id.*, 2.

Credo argues that AECs provide “high-performance serial connectivity solutions for... *artificial intelligence*” and “play a significant role in modern data

center architectures.” Request, 4-5, 25 (AECs are “relied on” by “major data center operators”). Credo markets its “AEC... Products for *AI* Scaling” and touts its PCIe retimers at conferences to “highlight[] *their role in enabling scalable AI infrastructure.*” EX1062, 1; EX2006, 1 (Credo marketing “AECs For AI Backend Networks” to “support the lossless backend... network *that AI clusters are built on*”). Indeed, Credo has characterized the high-speed connectivity supported by its AECs as “breakthrough solutions *that enable the next generation of AI-driven applications.*” EX1062, 2. Credo admits that AECs “*are a key enabling technology* for [network] architectures” that “use copper cables as a replacement for the traditional modular chassis backplane” in modern high-density data centers operating at the 400 Gbps data rates used to support AI. EX1063, 2-3; EX2005, 1 (AECs are “the next industry solution to solve the connectivity bottleneck”), 3 (AECs enable “unprecedented” interconnect densities at “75% less volume” than previous technologies).

Credo admits that AECs are superior to alternative cables that could support AI in high-performance data centers because AECs provide short-distance high-data-rate server and switch connections in a data center rack at lower cost (EX1063, 3) while consuming “50% less power” than optical interconnects (EX2005, 3; EX2004, 1-2 (similar)). Credo itself argues that “energy efficiency is a national priority.” Request, 27. Indeed, the Trump administration has declared

the country’s lack of “enough power to meet its growing needs for A.I.” a “national energy emergency.” EX1058, 2. AECs can help mitigate that energy emergency due to their substantially reduced power consumption compared to alternatives.

C. Vital National Security and Economic Interests Weigh Decisively Against Discretionary Denial

The Director’s March 26, 2025 Memorandum on Interim Processes for PTAB Workload Management makes clear that “[c]ompelling economic... or national security interests” can weigh against discretionary denial. EX1064, 2. Here, the ’233 Patent is being asserted against components—Active Electrical Cables—that Credo admits are key enabling technologies for AI. Credo has asserted the ’233 Patent against effectively the entire domestic AEC industry. EX1035, ¶¶2, 14-21; EX1038-1042.

“[I]nter partes review helps protect the public’s ‘paramount interest in seeing that patent monopolies... are kept within their legitimate scope.’” *Cuozzo Speed Technologies v. Lee*, 579 U.S. 261, 279–280 (2016) (citation omitted). Congress intended for IPRs to “weed out bad patent claims efficiently” to avoid “overpatenting and its diminishment of competition.” *Thryv v. Click-To-Call Technologies*, 590 U.S. 45, 54 (2020). By suing and seeking exclusion orders against the domestic AEC industry—based on unpatentable claims the Examiner materially erred in allowing (*supra* §III)—Credo threatens to increase the costs and

reduce the availability of AEC components that are vital to building the AI data centers that are indispensable to President Trump’s stated objective of ensuring that the United States wins the AI arms race and achieves global AI dominance.

Consistent with Executive Order 14179 and the Commerce Department’s “responsibility to identify and remove barriers to further responsible AI adoption and application” (EX1059, 5), the Director should *deny* the Request and refer the Petition to a merits panel. Then the Board can review the patentability of the ’233 Patent to ensure that Credo is not erecting a barrier to building the AI data centers so critical to our nation’s national security and economic interests based on unpatentable claims.

VI. CREDO HAS NO “SETTLED EXPECTATIONS” BECAUSE THE ’233 PATENT ISSUED IN DECEMBER OF 2020

A. The Director’s Decisions Establish That a Patent Owner Has No “Settled Expectations” For a Patent That Issued After 2019

The Director’s decisions establish that Credo has *no* “strong settled expectations that favor discretionary denial” for the ’233 Patent because it issued December 29, 2020. *Berkshire Hathaway Energy v. Birchtech*, IPR2025-00274, Paper 23, at 3 (Dir. July 2, 2025) (rejecting discretionary denial, “[T]he challenged patents *issued in 2019 and 2020*, such that Patent Owner *has not developed strong settled expectations* that favor discretionary denial.”); *Cambridge Indus. USA v. Applied Optoelectronics*, IPR2025-00434, Paper 11, at 2-3 (Dir. June 26, 2025)

(rejecting discretionary denial, no “strong settled expectations” for patents issued in 2019 and 2020); *Webgroup Czech Republic v. Dish Technologies*, IPR2025-00467, Paper 14, at 2 (Dir. July 16, 2025) (no “strong settled expectations” for patents issued in 2019 and 2021); *Zhuhai CosMX Battery Co. v. Ningde Ampere Technology*, IPR2025-00385, Paper 9, at 2 (Dir. July 2, 2025) (rejecting discretionary denial, no “strong settled expectations” for patent issued in 2021).

Credo’s “settled expectations” argument (Request, 24-27) ignores that the Director has *never* granted discretionary denial based on “settled expectations” for a patent issued after 2019. None of Credo’s decisions support a different conclusion. In *Dabico Airport Solutions v. AXA Power APS*, IPR2025-00408, Paper 21, at 2 (Dir. Jun. 18, 2025), “the challenged patent ha[d] been in force almost *eight years*.” The Director further found that 35 U.S.C. §286—providing the six-year recovery period for damages in patent infringement disputes—“align[ed] with other approaches to settled expectations and incentives.” *Id.*, 3. In *iRhythm Technologies v. Welch Allyn*, IPR2025-00363, Paper 10, at 3 (Dir. Jun. 6, 2025), “settled expectations” favored discretionary denial where the patent family had been in force “as early as 2012”—i.e., *more than twelve years*, far longer than the ’233 Patent. Lastly, the challenged patents in *Intel v. Proxense* were “in force *over nine years*.” IPR2025-00327, Paper 12, at 2-3 (Dir. Jun. 26, 2025). None of

these decisions remotely suggest “settled expectations” for the ’233 Patent that issued *less than four years* before Amphenol filed the Petition.

To the contrary, Amphenol challenged the ’233 Patent “early in the life of the patent” which favors “robust, predictable patent rights and weigh[s] against discretionary denial.” *Charles River Laboratories v. Seikagaku*, IPR2025-00440, Paper 9, at 2 (Dir. July 10, 2025). Credo’s “settled expectation” argument is baseless.

B. Credo Misrepresents Its Dealings with Amphenol

Credo’s suggestion that Amphenol’s “knowledge of the ’233 patent, coupled with a failure to seek early review, is an independent ground for discretionary denial” is baseless. Request, 25. So too is Credo’s assertion that “Amphenol’s prior knowledge of the ’233 patent” in September 2023 “undermines any claim of prejudice and strongly supports the denial of institution based on Credo’s ‘settled expectations.’” Request, 25 (citing EX2002).

Credo relies on the above-discussed letter sent to Amphenol on September 1, 2023. EX2002; *supra* §II. Credo’s assertion that this letter “expressly marked its rights and asserted the ’233 patent by providing Amphenol with actual notice of its infringement in September 2023” (Request, 26) badly mischaracterizes Credo’s letter and the communications that followed.

Credo's September 2023 letter identified the '233 Patent along with at least ten others and additional "pending applications" that allegedly "protect[]" Credo's Active Electrical Cables (AECs). EX2002, 1-2 (alleging that the relevant patents were "not limited to" the eleven expressly-identified patents). Credo's letter speculated that Amphenol "*may* be... selling... active electrical cables that compete with Credo's HiWire™ AECs" which "*may* constitute unlawful infringement." EX2002, 2. The letter asked Amphenol to provide Credo samples and documentation "sufficient to identify the features and functionalities of each such product." EX2002, 2. Contrary to Credo's mischaracterization, the September 2023 letter did not provide Amphenol with "actual notice of its infringement" of *any* Credo patent. Request, 26. It made no allegation of infringement, contained no infringement analysis, and self-evidently sought samples to *evaluate* potential infringement.

Indeed, Credo cannot even keep its story straight. In a different IPR, Credo told the Director that its 2023 letter did not create a "dispute" for another of Credo's patents (the '898 Patent) that the letter identified in the same manner as the '233 Patent. IPR2025-00607, Paper 6 at 4-5 (alleging that "the '898 Patent is... not in dispute" because it "has never been asserted against Petitioner"). Credo's assertion that its 2023 letter "*asserted* the '233 patent" against Petitioner

Amphenol (Request, 26) is directly contradicted by Credo because the '898 Patent is referenced in the 2023 letter in exactly the same way (EX2005).

Table 2 summarizes the communications that followed Credo’s initial September 2023 letter. Those communications show that Amphenol engaged in good faith negotiations with Credo about reasonable conditions under which Amphenol would provide product samples and information so that Credo could identify any infringement concerns. Credo, however, chose to file complaints against Amphenol—and the rest of the domestic AEC industry—rather than respond to Amphenol’s correspondence (EX1052, 1; EX1053).

Table 2: Amphenol Correspondence with Credo.

Date	From	To	Subject Matter
Letter 09/01/2023	S. Laud (Credo)	Legal Dept. (Amphenol)	<ul style="list-style-type: none"> • Identifying the '233 Patent among eleven patents and other unidentified patents (“not limited to”) and “pending patent applications” protecting Credo’s “HiWire™” AEC products and speculating that Amphenol “may” be selling competing products that “may” infringe Credo’s patents. • Requesting that Amphenol “identify any active electrical cables that Amphenol has made, used, sold, offered for sale, or imported into the United States, provide three samples of each such product, and provide product specifications or other documentation sufficient to

Date	From	To	Subject Matter
			<p>identify the features and functionalities of each such product.” EX2002.</p>
Email 10/10/2023	R. Branham (Amphenol)	S. Laud (Credo)	<ul style="list-style-type: none"> Amphenol “acknowledge[ing] receipt” of “letter dated September 1, 2023 regarding Credo’s patents,” “assur[ing]” Credo that Amphenol is “taking this matter seriously and giving it our careful attention,” and committing to “send a more substantive response once we’ve had time to review the situation in more detail.” <p>EX1052, 5-6.</p>
Email 11/07/2023	S. Laud (Credo)	R. Branham (Amphenol)	<ul style="list-style-type: none"> Requesting an update regarding Amphenol’s response to Credo’s September 2023 letter. <p>EX1052, 5.</p>
Email 11/15/2023	R. Branham (Amphenol)	S. Laud (Credo)	<ul style="list-style-type: none"> Amphenol stating that Credo’s “request for Amphenol to share extensive product information with a competitor is unreasonable, particularly given the nebulous nature of your concerns.” Amphenol also stating that “[n]onetheless, we think that sharing some information about Amphenol products would allay Credo’s concerns” and that “Amphenol is willing to loan you a sample of a representative product and associated documentation, if you (on behalf of yourself, your firm and Credo) are willing to retain all provided materials and

Date	From	To	Subject Matter
			<p>any information derived from the provided materials in confidence to be used solely for the analysis mentioned in your letter” and if Credo agreed to “confirm for us that there is no issue with the representative product or detail Credo’s concerns with respect to that product.”</p> <p>EX1052, 4.</p>
<p>Email 11/21/2023</p>	<p>S. Laud (Credo)</p>	<p>R. Branham (Amphenol)</p>	<ul style="list-style-type: none"> • Credo “accept[ing] confidentiality terms... as long as (1) [Credo] can share the cable and documentation with other outside counsel and technical consultants to the extent necessary for the infringement analysis and (2) [Amphenol] provide a list of all AECs Amphenol is offering so [Credo] can understand how the sample you provide is representative of others.” <p>EX1052, 3-4.</p>
<p>Email 12/01/2023</p>	<p>R. Branham (Amphenol)</p>	<p>S. Laud (Credo)</p>	<ul style="list-style-type: none"> • Amphenol remaining “open to [Credo] sharing Amphenol information” based on Credo providing Amphenol a list of “who you want to share the information with.” <p>EX1052, 2-3.</p>
<p>Email 12/13/2023</p>	<p>S. Laud (Credo)</p>	<p>R. Branham (Amphenol)</p>	<ul style="list-style-type: none"> • Credo stating that it will “share Amphenol information with Dan Krueger of Ramey LLP, one of Credo’s outside patent counsel” and requesting that Amphenol “send a sample and documentation for” three identified Amphenol

Date	From	To	Subject Matter
			products “includ[ing] the datasheet, schematics, and CMIS register map.” EX1052, 2.
Email 12/23/2023	R. Branham (Amphenol)	S. Laud (Credo)	<ul style="list-style-type: none"> Amphenol expressing concern that “Dan [Krueger] is involved in prosecuting Credo patents,” that “[s]haring information with Dan carries an unreasonable risk that it would be used for patent prosecution,” and asking Credo to “designate someone else who is better positioned to limit use of the information to only the contemplated analysis such that we can move forward.” EX1052, 1.

In sum, Credo’s September 2023 letter (1) notified Amphenol of Credo’s product line, (2) listed eleven patents that allegedly protect that product line, and (3) requested competing AEC product samples and documentation “to assess its rights.” EX2002, 1-2. On its face, this letter states that Credo did not know if Amphenol infringed any Credo patent and made no such accusation for any Credo patent—let alone specifically for the ’233 Patent. Credo cannot have had “settled expectations” based on its communications with Amphenol because Credo never even alleged that the ’233 Patent was infringed, has admitted that its letter did not “assert” or put in “dispute any listed patent (IPR2025-00607, Paper 6, at 4-5), and

Credo failed to respond to Amphenol’s good faith attempts to resolve any concerns Credo might have had about *any* Credo patent.

Credo alleges there was a “lengthy delay” in filing this IPR because Amphenol was “made aware of the ’233 patent on September 1, 2023.” Request, 25. But Credo ignores Amphenol’s correspondence and efforts to find a non-judicial resolution between receiving Credo’s 2023 letter and Credo suing the AEC industry in March 2025. Furthermore, as discussed *supra* §II and again above, Credo’s letter identified eleven (11) patents, said Credo had other relevant patents (“not limited to”), and noted “pending patent applications.” EX2002, 1-2. Credo requested product samples *to evaluate* potential infringement. *Id.* Credo’s letter did not allege infringement of any Credo patent. Credo’s suggestion that sending Amphenol a letter identifying eleven patents obligated Amphenol to invest substantial resources and immediately file IPRs against *all* eleven or be foreclosed from filing any IPRs later—despite Credo never even alleging infringement of any of those patents—is absurd. The Director should not impose such an onerous burden on a party who receives a letter from a competitor that includes a laundry list of patents. All the more so here given that during the time period where Credo alleges Amphenol “delay[ed],” Amphenol engaged in good faith negotiations with Credo and expressed a willingness to share information under reasonable terms to “allay Credo’s concerns” of infringement. *Supra* §II; EX1052, 1-4.

Amphenol filed the Petition *less than a month* after Credo filed its complaints in the ITC and E.D. Tex. That is the furthest thing from a “lengthy delay.”

VII. AMPHENOL’S EARLY CHALLENGE FAVORS ROBUST, PREDICTABLE PATENT RIGHTS AND WEIGHS AGAINST DISCRETIONARY DENIAL

The Director repeatedly has made clear that early patent challenges favor robust, predictable patent rights and weigh against discretionary denial. *Tesla*, IPR2025-00152, Paper 11, at 2-3; *Shenzhen Root Technology v. Willow Blossom Holdco*, IPR2025-00554, Paper 9, at 2 (Dir. July 17, 2025) (rejecting discretionary denial); *Alliance Laundry Sys. v. PayRange*, IPR2025-00573, Paper 9, at 2 (Dir. July 17, 2025) (same); *Charles River Labs.*, Paper 9, at 2 (same); *Merck Sharp & Dohme v. Halozyme*, PGR2025-00017, Paper 25, at 2 (Dir. July 2, 2025) (same); *Ajinomoto v. AbTis*, IPR2025-00283, Paper 13, at 2 (Dir. July 2, 2025) (same); *ITM Isotope Techs. v. Johns Hopkins Univ.*, PGR2025-00012, Paper 11, at 2 (Dir. June 25, 2025) (same); *GD Energy Prods. v. Kerr Machine Company*, PGR2025-00031, Paper 11, at 2 (Dir. June 25, 2025) (same); *Google v. BrodTi*, IPR2025-00472, Paper 19, at 2 (Dir. June 25, 2025) (same).

An early challenge outweighs *Fintiv* factors favoring discretionary denial. In *Zhuhai CosMX Battery*, the Director found that “the early challenges to the patents *tip the balance against discretionary denial*” even though the FWD was

expected *after* trial in a parallel litigation. IPR2025-00385, Paper 9, at 3. In *ResMed v. Cleveland Med. Devices*, the early challenge outweighed party investment in a parallel litigation. IPR2025-00246, Paper 10, at 2 (Dir. June 12, 2025).

As explained *supra* §VI.A, the Petition challenges the '233 Patent early in its life when there are no settled expectations. That favors rejecting discretionary denial and comports with the very “purpose and design” of IPRs, which is to “weed out bad patent claims efficiently.” *Thryv*, 590 U.S. at 54.

VIII. THE *FINTIV* FACTORS WEIGH AGAINST DISCRETIONARY DENIAL

Discretionary denial under *Apple v. Fintiv* is unwarranted. IPR2020-00019, Paper 11 (Mar. 20, 2020) (precedential) (“*Fintiv*”). Credo’s *Fintiv* arguments rely on a single fact, that—before considering time needed for Credo to find new ITC counsel—the ITC’s target determination date (October 15, 2026) precedes the FWD due date (November 12, 2026) by 28 days. Credo entirely ignores its district court action against Volex. The *Fintiv* factors require a holistic determination of “whether efficiency and integrity *of the system* are best served by denying or instituting review.” *Fintiv*, Paper 11, at 6. Under a holistic assessment of all the *Fintiv* factors, discretionary denial is not warranted.

As explained *supra* §II, Credo sued the domestic AEC industry. Credo has a pending ITC suit against Amphenol, Molex, and TE Connectivity,¹² a pending suit in D. Del. against Molex, and three separate suits pending in E.D. Tex.—one each against Amphenol, TE Connectivity, and Volex. The Board is the most efficient venue to address the unpatentability issues relating to the '233 Patent, rather than having those issues decided separately at the ITC and four district court trials in different jurisdictions. This weighs against discretionary denial. *Berkshire Hathaway*, Paper 23, at 2-3 (addressing patentability before “the Office would be more efficient” than litigation in “several district court trials in different jurisdictions.”).

While the Texas and Delaware district courts stayed the actions against Amphenol, TE Connectivity, and Molex in view of the ITC action, the district court action against Volex is not stayed. As detailed *infra* §VIII.A, the FWD will issue well before any trial occurs in Credo’s Volex litigation. Applying the *Fintiv* factors to the Volex litigation—which Credo’s Request conspicuously ignores—leaves no doubt that discretionary denial is unwarranted.

By filing five actions, in three jurisdictions, Credo imposes a large burden on the judicial system. The ITC will not resolve all the disputes between the

¹² Credo amended its ITC complaint to drop Volex from the ITC action. EX1054.

involved parties and will not moot the need for a trial in the Volex litigation.

Having the Board decide the Petition on the merits would best serve the “efficiency and integrity of the system,” prevent inconsistent outcomes in the different venues, prevent jurisdictional gamesmanship by Credo bringing some claims to trial at the ITC but asserting others in district court, and provide a more efficient resolution to the Volex litigation than a trial in E.D. Tex. (or N.D. Cal. under a pending transfer motion, *see* EX1098). A holistic consideration of the *Fintiv* factors disfavor discretionary denial and favor referring this Petition to the merits panel.

Additionally, while the ITC will not address every claim of the ’233 Patent (discussed *infra* §VIII.B.2), the Petition does. Thus, because “the patentability disputes before the ITC will [not] resolve all or substantially all of the patentability disputes between the parties,” discretionary denial under *Fintiv* based on the ITC case is not warranted. *Fintiv*, Paper 11 at 8-9.

A. Applying the *Fintiv* Factors to the Volex Litigation Makes Clear that Discretionary Denial is Unwarranted

Volex is not a party to the ITC action. EX1054, 1-2; EX1070, 3. Credo’s action against Volex in E.D. Tex. has not been and will not be stayed in view of the ITC action. On August 7, 2025, Volex filed a copycat petition (IPR2025-

01385)—as well as copycats of Amphenol’s petitions against Credo’s other two asserted patents¹³—and a *Sotera* stipulation. EX1099.

1. FWD Will Beat the Volex Trial Date and There Has Been Little Investment in the Volex Litigation So Factors 2 and 3 Weigh Against Discretionary Denial

Fintiv factor 2 considers “proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision” and factor 3 considers “investment in the parallel proceeding by the court and the parties.” *Fintiv*, Paper 11, at 5-6.

Amphenol filed this Petition *less than a month* after Credo filed its infringement complaints against Amphenol, Molex, TE Connectivity, and Volex on March 13, 2025. EX1035; EX1038; EX1040; EX1041; EX1042. Because Amphenol filed so expeditiously, the FWD will issue before any trial in the Volex litigation. Thus, factor 2 weighs against discretionary denial. *See e.g., Berkshire Hathaway*, IPR2025-00274, Paper 23, at 2; *Amazon.com v. NL Giken*, IPR2025-00250, Paper 14, at 2 (Dir. May 16, 2025); *Twitch Interactive v RazDog Holdings*, IPR2025-00307, Paper 18, at 2 (Dir. May 16, 2025); *BrodTi*, IPR2025-00472, Paper 19, at 2.

¹³ IPR2025-01386 (’252 Patent), IPR2025-01387 (’111 Patent).

Judge Gilstrap’s July 23, 2025 initial docket control order set jury selection for January 11, 2027. EX1094. The FWD will issue by November 12, 2026, and precede that trial date **by at least 60 days**. To the extent the Director considers median-time-to-trial data to be a more reliable indicator of when trial will occur, under the 25.9 month median-time-to-trial in E.D. Tex. (EX1069, 35) the Volex trial will not begin until May 10, 2027, and will be preceded by the FWD **by six months**. Moreover, Volex’s pending motion to transfer venue to N.D. Cal. (EX1098) places any trial in E.D. Tex. in doubt.

Using either the currently-scheduled trial date or the median-time-to-trial in E.D. Tex., or if the case is transferred (in which case there is no trial date), discretionary denial is not warranted under *Fintiv* factor 2 because the FWD will issue before Volex’s trial. This means that an IPR trial on the ’233 Patent would be an efficient alternative to trying the ’233 Patent’s validity in the Volex litigation regardless of what happens at the ITC. *E.g., RØDE Microphones v. Zaxcom*, IPR2025-00557, Paper 11, at 2 (Dir. July 17, 2025) (rejecting discretionary denial where FWD will issue before parallel trial occurs).

Amphenol’s expeditious filing also weighs against discretionary denial under *Fintiv* factor 3. *See Fintiv*, Paper 11, at 11 (“If the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority

to deny institution”); *id.* (petitioner filing “the petition expeditiously” weighs “against exercising the authority to deny institution”); *Savant Technologies v. Feit Electric*, IPR2025-00260, Paper 16, at 3 (Dir. June 12, 2025) (rejecting discretionary denial: “Petitioners acted diligently in filing this Petition **less than three months** after Patent Owner asserted claims 11 and 12 in district court.”); *Berkshire Hathaway*, IPR2025-00274, Paper 23, at 3 (rejecting discretionary denial because “Petitioners were diligent in filing the Petitions”)¹⁴; *Nikon v. Optimum Imaging Techs.*, IPR2024-01373, Paper 17, at 18-19 (Apr. 23, 2025) (petitioner diligently filed “approximately **three months after** [petitioner] was served” with the complaint, which weighed against discretionary denial); *Hanwha Sols. v. Maxeon Solar*, IPR2024-01198, Paper 17, at 32-34 (Feb. 26, 2025) (instituting IPR where petition was filed “**fewer than four months** after [the] complaint” thereby constituting “evidence that Petitioner filed its Petition expeditiously”).

Because Amphenol filed expeditiously, the Volex litigation is just beginning. Volex has not answered and challenges venue. EX1098. The Court

¹⁴ The *Berkshire* petitioner demonstrated diligence by filing most petitions 60 days before receiving the patent owner’s infringement contentions and the “final two Petitions were filed twenty-one days... after receiving the contentions.” *Berkshire*, IPR2025-00274, Paper 18, at 35, 46-47 (Jun. 9, 2025).

only recently issued its initial docket control order on July 23, 2025. EX1094. No substantial investment in addressing validity of the '233 Patent in the Volex litigation weighs factor 3 against denial.

When applied to the Volex litigation, *Fintiv* factors 2-3 weigh strongly against denial.

2. Because Amphenol's Petition Challenges Every Claim and the Volex Litigation is in its Infancy, Credo Fails to Demonstrate that the Volex Litigation Will Be Duplicative of the Petition's Unpatentability Challenges So Factors 1, 4 and 5 Weigh Against Discretionary Denial.

Fintiv factor 1 considers whether a parallel proceeding is stayed which address issues of “inefficiency and duplication of efforts,” factor 4 considers “overlap between issues raised in the petition and in the parallel proceeding,” and factor 5 considers whether the petitioner and defendant in the parallel litigation are the same parties. *Fintiv*, Paper 11, at 5-6, 12-14. A difference in the parties weighs against discretionary denial unless the same issues will be addressed in the litigation. *Id.*, 13-15. Credo alleges that these and other *Fintiv* factors favor discretionary denial (Request, 8-24) but fails to even allege—let alone substantiate—that these factors favor discretionary denial with respect to the Volex litigation.

Amphenol's Petition addresses every claim of the '233 Patent using two grounds of unpatentability. Because Credo ignored the Volex litigation, Credo

made no showing that this IPR would be duplicative because the same unpatentability issues will be addressed in the Volex litigation. Nor could it have. The Volex litigation involves a different party with no relationship to Amphenol. Given that the Volex litigation is just beginning, Volex has not identified any potential invalidity theories.

Moreover, Volex's *Sotera* stipulation eliminates any risk of duplicative effort between the Board and the Volex district court. *Volex*, IPR2025-01385, Paper 1, at 61-62; EX1099. That weighs heavily against discretionary denial. *Sotera Wireless v. Masimo*, IPR2020-01019, Paper 12, at 19 (Dec. 1, 2020) (precedential as to §II.A) (stipulation "weighs strongly in favor of not exercising discretion to deny institution"); EX1043, 2-3 (March 24, 2025 Boalick Guidance: *Sotera* stipulation "is highly relevant" to Fintiv analysis).

Moreover, Amphenol's Petition challenges all twenty claims of the '233 Patent. Credo does not even allege, let alone establish, that every claim of the '233 Patent will be at issue in the Volex litigation. Nor could it have. Credo's complaint in the Volex litigation identified a single claim—claim 1—as purportedly infringed by Volex. EX1042, ¶16; EX1097, ¶16. Credo could have represented to the Director that it would assert all twenty claims of the '233 Patent against Volex in the E.D. Tex. litigation but decidedly did not do so. Credo fails to establish that the Volex litigation will be duplicative and address all the same

unpatentability issues as this IPR and thus fails to establish that any of *Fintiv* factors 1, 4, or 5 favors discretionary denial with respect to the Volex litigation.

3. Factor 6: Other Circumstances, Including Credo Suing the Domestic AEC Industry in Multiple Venues and the Petition’s Overwhelming Demonstration of Unpatentability, Weigh Against Discretionary Denial.

Fintiv factor 6 considers “[o]ther circumstances that impact the Board’s exercise of discretion, including the merits.” *Fintiv*, Paper 11, at 5-6. As discussed *supra* §III, the Examiner’s material error in allowing the ’233 Patent, the Examiner’s failure to identify any of the prior art relied upon in the Petition’s grounds, and the Petition’s strong merits all weigh against denial.

National security and economic interests further weigh against denial given Credo’s assertion of the facially-unpatentable ’233 Patent poses an obstacle to the building of AI data centers that are in our nation’s vital interests. *See supra* §V.

Moreover, Credo filing suit against virtually the entire domestic AEC industry—in five actions brought across three jurisdictions against four defendants (*supra* §II)—and the Petition challenging every claim weigh against discretionary denial. The Board is uniquely positioned to efficiently address the unpatentability of every claim of the ’233 Patent in a single matter and avoid potentially inconsistent results reached by different tribunals. Because the district court actions in E.D. Tex. and D. Del. against Amphenol, TE Connectivity, and Molex were stayed early, and because the Volex litigation is in its infancy, Credo has

taken no binding positions about which claims it will ultimately allege are infringed by particular defendants/respondents. And it is not clear whether Credo will assert a common set of claims against every defendant/respondent. The Board can have a single IPR trial that addresses the unpatentability of every claim of the '233 Patent which is far more efficient than having piecemeal litigation and adjudications across multiple different proceedings against different claims.

Berkshire Hathaway, IPR2025-00274, Paper 23, at 2 (denying discretionary denial: “Because the litigation between the parties would proceed to several district court trials in different jurisdictions, resolving the dispute between the parties at the Office would be more efficient.”).

Volex copying Amphenol’s Petition and moving to join this IPR in an understudy role (IPR2025-01385, Paper 1, at 1) further weighs against discretionary denial because the Board can, in one proceeding, efficiently reach a decision on the patentability challenges of both Amphenol and Volex against the '233 Patent.

Regardless of what happens in the parallel ITC proceeding, litigation involving the '233 Patent will move forward against Volex.¹⁵ Having a merits panel address the unpatentability of every claim would be an appropriate and highly effective use of the Board's resources because it will serve as an alternative to litigating the same unpatentability issues in district court. Given the importance of active cables to the building out of AI data centers that the Trump Administration has identified as a top priority for our nation, the Board should ensure that the '233 Patent claims covering active cables are patentable.

* * *

Applying the *Fintiv* factors to the Volex litigation—which Credo ignored—leaves no doubt that discretionary denial is not warranted under *Fintiv*. Even if the Director were to reach a different conclusion based on the ITC case alone, the “efficiency and integrity of the system” considerations that lie at the heart of *Fintiv* “are best served” by instituting review so that the Board can efficiently address all the '233 Patent claims and avoid the possibility of inconsistent results in the various actions in E.D. Tex., D. Del., and the ITC. *Fintiv*, Paper 11, at 6.

¹⁵ There is also substantial risk that litigations against Amphenol, Molex, and/or TE Connectivity in E.D. Tex. and/or D. Del. will include claims uninvolved in the ITC action as discussed *infra* §VIII.B.2.

B. Applying the *Fintiv* Factors to the ITC Proceeding Also Demonstrates that Discretionary Denial is Unwarranted

1. Because Amphenol Filed Its Petition So Expeditiously Factors 2 and 3 Weigh Against Discretionary Denial

Credo's request for discretionary denial relies on the ITC Investigation's target date, which is projected only 28 days before the FWD. Request, 8-12. Credo's discretionary denial cases involved dramatically different timing between the ITC target date and the FWD than the 28 days at issue here. In *Biofrontera v. Sun Pharmaceutical Indus.*, IPR2025-00287, Paper 10, at 2 (Dir. July 2, 2025), the ITC target date projected **6 months** before FWD. In *Ringconn v. Ouraring*, PGR2025-00018, Paper 11, at 2 (Dir. June 25, 2025) and *Ultrahuman Healthcare SP v. Ouraring*, IPR2025-00411, Paper 12, at 2 (Dir. June 25, 2025), the ITC target date projected **11 months** before FWD.

The 34-day gap between the FWD and the ITC trial in *Caihong Display Devices v. Corning*, IPR2025-00439, Paper 18, at 2 (Dir. July 10, 2025) is closer to this case, but the "holistic assessment of all the evidence" in *Caihong* included "strong settled expectations" because the challenged patents had "been in force for more than 14 years." There are no such settled expectations here because the '233 Patent issued only four years ago. *Supra* §VI.

Moreover, the ITC's target determination date is uncertain. On August 11, 2025, the ALJ granted Marvell's motion to disqualify Credo's now-former ITC

lawyers Fish & Richardson (EX1068) after Credo sought an exclusion order against products using chips made by Marvell,¹⁶ a client of Credo’s now-former lawyers in the ITC action. EX1101 (EDIS No. 859233); EX1035, ¶¶69, 78 (citing EX1065); 92 (citing EX1066); EX1067; EX1096, 14 (staff counsel recommending disqualification). The disqualification may require the ITC to push back its target date to accommodate new ITC counsel for Credo. Given the small gap (28 days) between the FWD and current ITC target dates due to Amphenol’s expeditious filing, even a modest delay of the ITC’s target date could cause it to fall after the FWD date.

But even if the ITC does not push back its target date, the FWD date falls before the close of the Presidential Review period in the ITC investigation. *See* 18 U.S.C. §1337(j)(2) (creating a “60-day period” during which “the President, for policy reasons” may disapprove the ITC’s determination such that the ITC’s determination “shall have no force or effect.”). That is particularly relevant here given that any exclusion order would be contrary to the President’s executive order to remove obstacles to the building of AI data centers. EX1055, 1. The President would greatly benefit from a ruling from the PTAB on the patentability of the ’233

¹⁶ Marvell filed its own IPR2025-01218 challenging all claims in the ’233 Patent on August 1, 2025.

Patent claims before determining whether to approve any exclusion order. That the Commission’s determination would not be final until the Presidential review period closes on December 14, 2026—i.e., 32 days *after* FWD on November 12, 2026—weighs *against* discretionary denial under *Fintiv* factor 2.

Amphenol’s diligence in filing the Petition *less than a month* after Credo filed two infringement complaints (in the ITC and E.D. Tex.) also weighs heavily against discretionary denial under *Fintiv* factor 3. *See Fintiv*, Paper 11, at 11 (petitioner filing “the petition expeditiously” weighs “against exercising the authority to deny institution”); *Savant Technologies*, IPR2025-00260, Paper 16, at 3 (rejecting discretionary denial: “Petitioners acted diligently in filing this Petition *less than three months* after Patent Owner asserted claims 11 and 12 in district court.”); *Berkshire*, IPR2025-00274, Paper 23, at 3 (rejecting discretionary denial: “Petitioners were diligent in filing the Petitions”); *Nikon*, IPR2024-01373, Paper 17, at 18-19 (Apr. 23, 2025) (petition diligently filed “approximately *three months after* [petitioner] was served” with the complaint which weighed against discretionary denial); *Hanwha Sols.*, IPR2024-01198, Paper 17, at 32-34 (Feb. 26, 2025) (instituting IPR where petition was filed “*fewer than four months* after [the] complaint” thereby constituting “evidence that Petitioner filed its Petition expeditiously”).

2. Factors 1 and 4: The ITC Will Not Resolve Substantially All Patentability Disputes—and There Is Minimal Overlap—Because the Petition Challenges the Patentability of All Twenty Claims While the ITC Will At Most Only Test the Patentability of a Small Fraction of the Challenged Claims

Fintiv factor 1 considers whether a parallel proceeding is stayed while factor 4 considers “overlap between issues raised in the petition and in the parallel proceeding.” *Fintiv*, Paper 11, at 5-6.

Credo disregards *Fintiv*’s explanation that for factor 1 “an earlier ITC trial date may favor” discretionary denial “*if* the ITC is *going to decide the same... issues* to those presented in the petition.” *Fintiv*, Paper 11, at 8. Even if the ITC target date beats the FWD date, that does not support discretionary denial because the ITC will *not* decide substantially all the patentability disputes between Amphenol and Credo. *Fintiv*, Paper 11, at 9.

Amphenol’s Petition challenges all twenty claims of the ’233 Patent. As detailed below, the ITC routinely forces patent owners to choose a limited number of patent claims on which the ITC will issue a decision. Thus, it is highly likely that the ITC will issue a validity decision on far *fewer* than the twenty claims the Petition challenges¹⁷ so there will be minimal overlap between the FWD and the

¹⁷ Credo already dropped three claims from the ’233 Patent assertion in the ITC. EX1093, 1. As explained above, historically Credo will drop more before trial.

claims adjudicated by the ITC. An IPR trial would be an efficient alternative to later litigating the '233 Patent's claims that the ITC will not reach in each of the district court actions against Amphenol, Volex, Molex, and TE Connectivity. *Supra* §II (discussing Credo's four district court actions).

The ITC Investigation instituted for fifty-three (53) claims across three Credo patents. EX1070. Less than a month later, Amphenol filed this Petition challenging all claims in the '233 Patent, and petitions in IPR2025-00699 and IPR2025-00834 challenging all claims in Credo's other asserted patents. Credo argues that Amphenol's "preliminary invalidity contentions before the ITC" is sufficient to discretionarily deny this Petition because "Amphenol relies on the same prior art disclosures to address the same claims of the '233 patent (claims 1-20)." Request, 12-13. Credo's reliance on Amphenol's preliminary invalidity contentions purportedly establishing potential overlap is misplaced because it is premised on the suggestion that Credo will try all twenty challenged claims at the ITC. That will not happen. EX1071, 13-14 (ALJ Elliot's "Ground Rules for Section 337 Investigations" require "Final Case-Narrowing Disclosure[s]" to be "equal or less than the number [of claims] set forth in the Maximum Scope"). Consistent with ALJ Elliot's Ground Rules, Credo has already begun narrowing its case at the ITC. On July 23, 2025, Credo dropped claims 7, 14, 20 from the ITC Investigation. EX1093 (listing a maximum scope of 50 claims across three

patents). This tracks standard practice at the ITC where Complainants routinely narrow their asserted claims before trial.

In ALJ Elliot’s ten most recent Investigations, Complainants narrowed their claims on average by 62% and an average trial involved only *four claims per patent*—far fewer than the twenty claims the Petition challenges. *See* Table 3.

Table 3: Number of Claims Actually Tried at ITC Hearing.

ALJ Elliot’s Most Recent Investigations¹⁸					
Inv. No. (337-TA-)	Number Patents	Number Claims Instituted	Number Claims at Hearing	Percent Reduction	Claims / Patent at Hearing
1396	2	28 (EX1073)	11 (EX1074)	61%	5.5
1389	2	29 (EX1075)	6 (EX1076)	79%	3.0
1380	5	102 (EX1077)	19 (EX1078)	81%	3.8
1376	5	51 (EX1079)	7 (EX1080)	86%	1.4
1370	3	17 (EX1081)	15 (EX1082)	12%	5.0
1350	3	15 (EX1083)	13 (EX1084)	13%	4.3
1346	1	13 (EX1085)	11 (EX1086)	15%	11.0
1330	4	50 (EX1087)	39 (EX1088)	22%	9.8
1318	5	36 (EX1089)	13 (EX1090)	64%	2.6
1301	3	23 (EX1091)	6 (EX1092)	74%	2.0
Average	3.3	36.4	14.0	62%	4.2

¹⁸ These statistics were gathered by comparing the Notice of Institution against the final Case Narrowing Disclosures filed in each case, where available.

History shows that the ITC will hold a trial and reach a decision on far fewer than the *twenty challenged claims* that would be addressed in the FWD. Because ALJ Elliot’s last ten Investigations never adjudicated more than thirty-nine claims, it is inconceivable that all fifty claims now asserted by Credo will be decided at the ITC. Even if Credo narrows its other patent assertions more aggressively, it is all but guaranteed that the Petition will challenge more ’233 Patent claims than the ITC. This weighs heavily against discretionary denial. *POSCO v. ArcelorMittal*, IPR2024-01377, Paper 11, at 15-16 (Mar. 18, 2025) (factor 4 “*weighs heavily against* discretionary denial” where the Petition “addresses 16 more claims” than the ITC).

By ignoring the inevitable case narrowing that will be required at the ITC, Credo disregards *Fintiv*’s directive that factor 4 should focus on “claims, grounds, arguments, and evidence *presented* in the parallel proceeding.” *Fintiv*, Paper 11, at 12; *see also id.* at 9 (discussing factor 1: “The parties should also indicate whether the patentability disputes before the ITC will resolve all or substantially all of the patentability disputes between the parties[.]”). Amphenol’s “invalidity grounds have [not] been... presented to the ITC for consideration on the merits” and the ITC will not adjudicate the patentability of any claims Credo removes from the ITC action before trial. *Samsung Electronics v. SiOnyx*, IPR2024-01431, Paper 21, at 16 (Apr. 10, 2025) (factor 4 weighs against discretionary denial where the ITC

will not adjudicate invalidity of claim challenged in petition); *see also Samsung Electronics v. Dynamics*, IPR2020-00504, Paper 16, at 9 (Oct. 13, 2020) (discussing *Fintiv* factor 4: discretionary denial was not warranted because “claims remain in the ’631 Patent” that did not overlap with those addressed by the ITC “and Petitioner has challenged their patentability in this proceeding.”).

3. Factor 6: Other Circumstances Weigh Against Discretionary Denial

The “other circumstances that impact the Board’s exercise of discretion, including the merits” (*Fintiv*, Paper 11, at 5-6) discussed above in applying the *Fintiv* factors to the Volex litigation apply equally when applying the *Fintiv* factors to the ITC case. *See supra* §VIII.A.3.

Those other considerations include: (1) the Examiner’s material errors in allowing the ’233 Patent, (2) the Petition’s strong merits in demonstrating unpatentability, which Volex endorsed by copying Amphenol’s Petition, (3) national security and economic interests given that Credo’s assertion of the facially-unpatentable ’233 Patent against the domestic active cable industry poses an obstacle to the building of AI data centers that are in our nation’s vital interests, (4) Amphenol’s filing early in the life of the ’233 Patent and within 28 days of being sued, (5) the fact that the ITC will not resolve all the patentability disputes on the ’233 Patent, and (6) the fact that regardless of what happens in the parallel ITC proceeding, Credo’s district court litigation involving the ’233 Patent will

proceed against Volex and possibly against Amphenol, Molex, and TE Connectivity as well.

* * *

It would be an effective and efficient use of the Board’s resources to decide the Petition’s patentability challenges on the merits. Under a holistic assessment of the evidence and all the important policy considerations the *Fintiv* analysis weighs against discretionary denial.

IX. A HOLISTIC ASSESSMENT OF ALL THE EVIDENCE AND CONSIDERATIONS WEIGHS DECISIVELY AGAINST DISCRETIONARY DENIAL

Table 4 lists the considerations for and against discretionary denial based on the parties’ respective briefs. Virtually every consideration weighs against discretionary denial. A holistic assessment weighs decisively against discretionary denial.

Table 4: Holistic Assessment of Considerations Weighs Against Discretionary Denial.

Considerations Weighing Against Discretionary Denial	Considerations the Director Has Found to Outweigh Earlier Decision in Parallel Proceeding	Considerations Favoring Discretionary Denial
Fixing material error in examination, without which the '233 Patent would never have been allowed	yes (<i>supra</i> §III)	

Considerations Weighing Against Discretionary Denial	Considerations the Director Has Found to Outweigh Earlier Decision in Parallel Proceeding	Considerations Favoring Discretionary Denial
Complying with President Trump’s Executive Order 14179 to promote compelling national security and economic interests	yes (<i>supra</i> §V)	
Challenge early in the 4-year-old patent’s life	yes (<i>supra</i> §VII)	
No settled expectations	yes (<i>supra</i> §VI)	
Expeditious filing less than a month after Credo filed suit	yes (<i>supra</i> §VIII.B.1)	
Assertions in multiple jurisdictions (ITC, E.D. Tex., D. Del.) against multiple parties make the PTAB the best venue for efficient resolution of patentability	yes (<i>supra</i> §VIII)	
IPR will decide patentability of all challenged claims whereas ITC will not	yes (<i>supra</i> §VIII.B.2)	
<i>Fintiv</i> factors applied to the Volex litigation weigh against discretionary denial because FWD is due well before Volex trial	yes (<i>supra</i> §VIII.A)	

Considerations Weighing Against Discretionary Denial	Considerations the Director Has Found to Outweigh Earlier Decision in Parallel Proceeding	Considerations Favoring Discretionary Denial
FWD due a month before the Presidential review period concludes in the ITC		ITC target date currently 28 days before FWD (may be extended due to Credo’s counsel being disqualified)
The strength of the Petition’s unpatentability showing is overwhelming and endorsed by Volex copying the Petition	yes (<i>supra</i> §VIII.A.3)	

The Director should deny Credo’s Request and refer the Petition to the merits panel.

Respectfully submitted,

Date: August 12, 2025

By: /Richard Giunta/
Richard F. Giunta, Reg. No. 36,149
WOLF, GREENFIELD & SACKS, P.C.

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24, the undersigned certifies that the foregoing **PETITIONER'S OPPOSITION TO PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL** contains 13,944 words excluding; a table of contents, a table of authorities, a certificate of service or word count, or appendix of exhibits or claim listing. Petitioners have relied on the word count feature of the word processing system used to create this paper in making this certification.

Date: August 12, 2025

/Dara Del Rosario/
Dara Del Rosario
Paralegal
WOLF, GREENFIELD & SACKS, P.C.

CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6 (E)(4)

I certify that on August 12, 2025, a copy of the foregoing document, including any exhibits or appendices filed therewith, is being served via electronic mail, as previously consented to by Patent Owner, upon the following:

Fish & Richardson P.C.

W. Karl Renner

Jeremy J. Monaldo

Richard A. Sterba

Brian J. Livedalen

IPR59230-0006IP1@fr.com

PTABInbound@fr.com

Date: August 12, 2025

/Dara Del Rosario/

Dara Del Rosario

Paralegal

WOLF, GREENFIELD & SACKS, P.C.