PUBLIC VERSION

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC, and
TEXAS INSTRUMENTS INCORPORATED,
Petitioner,

v.

GREENTHREAD, LLC,
Patent Owner.

Case: IPR2023-01242[1]
U.S. Patent No. 11,121,222

PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW OF FINAL WRITTEN DECISION 37 C.F.R. § 42.75

[1] Texas Instruments Incorporated, which filed a petition in IPR2024-00673, has been joined as a petitioner in this proceeding

[redacted]

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Other Authorities

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EXHIBIT LIST

Exhibit No.	Description	Submitted Previously
Ex. 2001	*Greenthread, LLC v. Intel Corp.*, No. 6:22-cv-00105-ADA, Dkt. 7 (summons returned executed) (W.D. Tex. Feb. 7, 2022)	X
Ex. 2002	Email communication from Petitioner's counsel to Patent Owner's counsel October 16, 2023	X
Ex. 2003	Presentation entitled "Accelerating the Journey Towards a Sustainable Ecosystem" (2023) available at Petitioner's website at https://www.onsemi.com/site/pdf/2023_Analyst_Day_Presentation.pdf	X
Ex. 2004	"Clock Devices for Servers" (Aug. 2020) available at https://cdrdv2-public.intel.com/620306/620306_Clock_Devices_For_Server_Rv1p3.pdf	X
Ex. 2005	On Semiconductor Corporation Form 10-K filing with U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016	X
Ex. 2006	ON Semiconductor data sheet entitled "NCP81248 Three-Rail Controller with Intel Proprietary Interface for IMVP8 CPU Applications" (Feb. 2018) available at https://www.onsemi.com/pdf/datasheet/ncp81248-d.pdf	X
Ex. 2007	onsemi data sheet entitled "+ 1 Phase Output Controller with SVID Interface for Computer CPU Applications" (May 2023) available at https://www.onsemi.com/download/data-sheet/pdf/ncp81566-d.pdf	X

Exhibit No.	Description	Submitted Previously
Ex. 2008	Onsemi data sheet entitled "+ 2 Phase Output Controller with SVID Interface for Computer CPU Applications (May 2023) available at https://www.onsemi.com/download/data-sheet/pdf/ncp81567-d.pdf	X
Ex. 2009	Article entitled "If You Invested $1000 in ON Semiconductor Corp. a Decade Ago, This is How Much It'd Be Worth Now," May 8, 2023 available at https://finance.yahoo.com/news/invested-1000-semiconductor-corp-decade-123012312.html	X
Ex. 2010	Onsemi Standard Terms and Conditions of Sale, Rev.08102021 available at https://www.onsemi.com/site/pdf/ONSEMI_T&C.pdf	X
Ex. 2011	Plaintiff's First Set of Common Interrogatories to Defendants ON Semiconductor Corporation and Monolithic Power Services, Inc., Et Al., *Greenthread, LLC v. ON Semiconductor Corp.*, No. 23-443-RGA (D. Del.) (served Sept. 27, 2023)	X
Ex. 2012	Plaintiff's First Set of Common Requests for the Production of Documents to Defendants ON Semiconductor Corporation and Monolithic Power Services, Inc., Et Al., *Greenthread, LLC v. ON Semiconductor Corp.*, No. 23-443-RGA (D. Del.) (served Sept. 27, 2023)	X
Ex. 2013	Definition of "privity" in Black's Law Dictionary (11th ed. 2019) available from Westlaw at westlaw.com	X
Ex. 2014	Email communication from Petitioner's counsel to Patent Owner's counsel October 11, 2023	X
Ex. 2015	Plaintiff's Identification of Accused Products and Asserted Patents, *Greenthread, LLC v. ON Semiconductor Corp.*, No. 23-443-RGA (D. Del.) (served Oct. 12, 2023)	X

Exhibit No.	Description	Submitted Previously
Ex. 2016	Petition (Paper 2) in *Sony Group Corp. v. Greenthread, LLC*, IPR2023-00324	X
Ex. 2017	Petition (Paper 1) in *Sony Group Corp. v. Greenthread, LLC*, IPR2023-00376	X
Ex. 2018	*Greenthread, LLC v. Intel Corp.*, No. 6:22-cv-00105-ADA, Dkt. 1 (Complaint) (W.D. Tex. Jan. 27, 2022)	X
Ex. 2019	*Greenthread, LLC v. Dell Inc.*, No. 6:22-cv-105-ADA, Dkt. 120 (Second Amended Complaint)	X
Ex. 2020	*Greenthread, LLC v. ON Semiconductor Corp.*, No. 23-443-RGA, Dkt. 1 (Complaint with accompanying exhibits) (D. Del. Apr. 21, 2023)	X
Ex. 2021	*Greenthread, LLC v. ON Semiconductor Corp.*, No. 23-443-RGA, Dkt. 24 (Scheduling Order) (D. Del. Sept. 11, 2023)	X
Ex. 2022	Confidential agreement	X
Ex. 2023	Petition (Paper 1) in *Intel Corp. v. Greenthread LLC*, IPR2023-00308	X
Ex. 2024	Petition (Paper 1) in *Intel Corp. v. Greenthread LLC*, IPR2023-00420	X
Ex. 2025	Petition (Paper 1) in *Intel Corp. v. Greenthread LLC*, IPR2023-00552	X
Ex. 2026	Petition (Paper 1) in *Dell Techs. Inc. v. Greenthread LLC*, IPR2023-00506	X
Ex. 2027	Petition (Paper 1) in *Dell Techs. Inc. v. Greenthread LLC*, IPR2023-00509	X

Exhibit No.	Description	Submitted Previously
Ex. 2028	Confidential declaration	X
Ex. 2029	Email communication from Patent Owner's counsel to Petitioner's counsel between May 26 to June 1, 2023	X
Ex. 2030	Web pages from websites of Onsemi (www.onsemi.com), Mouser Electronics, Inc. (www.mouser.com), Rochester Electronics (www.rocelec.com), and DigiKey Corporation (www.digikey.com) (URLs for web pages are indicated on respective pages)	X
Ex. 2031	*Greenthread, LLC v. Intel Corp.*, No. 6:22-cv-00105-ADA, Dkt. 113 (Redacted Memorandum Opinion and Order) (W.D. Tex. Dec. 27, 2022)	X
Ex. 2032	*Greenthread, LLC v. Intel Corp.*, 6:22-cv-00105-ADA, Dkt. 38 (First Amended Complaint for Patent Infringement) (W.D. Tex., filed Apr. 29, 2022)	X
Ex. 2033	*Greenthread, LLC v. Intel Corp.*, 6:22-cv-00105-ADA, Dkt. 38-8 (Greenthread's Amended Preliminary Infringement Contentions) (W.D. Tex., filed Apr. 29, 2022)	X
Ex. 2034	*Greenthread, LLC v. Intel Corp.*, 6:22-cv-00105-ADA, Dkt. 38-12 (Exs. D-1, D-2, D-3, D-6 to Greenthread's Preliminary Infringement Contentions) (W.D. Tex., filed Apr. 29, 2022)	X
Ex. 2035	Plaintiff's Supplemental Identification of Asserted Patents and Accused Products in *Greenthread, LLC v. ON Semiconductor Corp.*, No. 23-443-RGA (served to Petitioner's counsel on Nov. 10, 2023)	X
Ex. 2036	Webpage regarding iFixIt, PlayStation 5 Teardown (https://www.ifixit.com/Teardown/PlayStation+5+Teardown/138280)	X

Exhibit No.	Description	Submitted Previously
Ex. 2037	Webpage from Mouser Electronics, Inc. for NCP252160 (https://www.mouser.com/ProductDetail/onsemi/NCP252160MNTWG?qs=sPbYRqrBIVkc9klNZ2pXbg%3D%3D)	X
Ex. 2038	Webpage from DigiKey for NCP252160 (https://www.digikey.com/en/products/detail/onsemi/NCP252160MNTWG/15859992)	X
Ex. 2039	Webpage from Mouser Electronics, Inc. for NB3L202K (https://www.mouser.com/ProductDetail/onsemi/NB3L202KMNTXG?qs=z6PAvqrnkvR8PcLN2EnUzg%3D%3D)	X
Ex. 2040	Webpage from DigiKey for NB3L202K (https://www.digikey.com/en/products/detail/onsemi/NB3L202KMNTXG/7220446)	X
Ex. 2041	Definition of "agent" in Black's Law Dictionary (11th ed. 2019) available from Westlaw at westlaw.com	X
Ex. 2042	*Greenthread, LLC v. Intel Corp.*, 6:22-cv-00105-ADA, Dkt. 135 (Motion for Admission Pro Hac Vice of L. Popovski on Behalf of Sony) (W.D. Tex., filed January 30, 2023)	X
Ex. 2043	[RESERVED]	
Ex. 2044	Email communication from Patent Owner to Petitioner's litigation counsel dated September 13, 2023	X
Ex. 2045	*Greenthread, LLC v. Intel Corp.*, 6:22-cv-00105-ADA, Dkt. 49 (Notice of Appearance of Additional Counsel) (W.D. Tex., filed June 9, 2022)	X
Ex. 2046	[RESERVED]	

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Ex. 2047	[RESERVED]	
Ex. 2048	*Greenthread, LLC v. Intel Corp.*, 6:22-cv-00105-ADA, Dkt. 120-8 (Greenthread's Amended Preliminary Infringement Contentions) (W.D. Tex., filed Jan. 23, 2023)	X
Ex. 2049	Email communications between Petitioner's counsel and Patent Owner's counsel, dated Oct. 31, 2023 - Nov. 1, 2023	X
Ex. 2050	Email communications between Petitioner's counsel and Patent Owner's counsel, dated Nov. 2-7, 2023	X
Ex. 2051	Email communications between Petitioner's counsel and Patent Owner's counsel, dated Nov. 14-15, 2023	X
Ex. 2052	Email communications between Petitioner's counsel and Patent Owner's counsel, dated Dec. 12-13, 2023	X
Ex. 2053	Web page from website of Onsemi (https://www.onsemi.com/products/custom-assp/soc-sip-custom-products)	X
Ex. 2054	Greenthread, LLC v. ON Semiconductor Corp., No. 23-443-RGA, Dkt. 36 (Second Amended Complaint) (D. Del. Nov. 22, 2023)	X
Ex. 2055	Greenthread, LLC v. ON Semiconductor Corp., No. 23-443-RGA, Dkt. 42 (Defendants' Answer, Affirmative Defenses, and Counterclaims to Plaintiff's Second Amended Complaint) (D. Del. Dec. 20, 2023)	X
Ex. 2056	Email communications between the Board, Petitioner's counsel and Patent Owner's counsel dated November 27, 2023	X
Ex. 2057	Declaration of Dr. Alexander Glew	X

Exhibit No.	Description	Submitted Previously
Ex. 2058	Transcript of Deposition of Dr. Travis Blalock in IPR2013-01242, -01243, -01244	X
Ex. 2059	Excerpts from Chen, J. Y., CMOS Devices and Technology for VLSI, Prentice-Hall (1990)	X
Ex. 2060	U.S. Patent No. 5,384,476 ("Nishizawa")	X
Ex. 2061	CV of Dr. Alexander Glew	X
Ex. 2062	U.S. Patent No. 8,421,195	X
Ex. 2063	U.S. Patent No. 9,190,502	X
Ex. 2064	U.S. Patent No. 10,510,842	X
Ex. 2065	U.S. Patent No. 10,734,481	X
Ex. 2066	U.S. Patent No. 11,316,014	X
Ex. 2067	File History of U.S. Patent No. 8,421,195	X
Ex. 2068	File History of U.S. Patent No. 9,190,502	X
Ex. 2069	File History of U.S. Patent No. 10,510,842	X

Exhibit No.	Description	Submitted Previously
Ex. 2070	File History of U.S. Patent No. 10,734,481	X
Ex. 2071	File History of U.S. Patent No. 11,316,014	X
Ex. 2072	Declaration of Phil John	X
Ex. 2073	Statista Information	X
Ex. 2074	Petition in *Sony Group Corp. v. Greenthread*, LLC, IPR2023-00325	X
Ex. 2075	Petition in *Sony Group Corp. v. Greenthread, LLC*, IPR2023-00375	X
Ex. 2076	Declaration of Dr. Travis Blalock in IPR 2023-01242	X
Ex. 2077	*Greenthread, LLC v. Cirrus Logic Inc.*, No. 1:23-cv-369-DC-DTG, Dkt. 53 (Claim Construction Order and Memorandum in Support Thereof) (W.D. Tex. Mar. 13, 2024)	X
Ex. 2078	[RESERVED]	
Ex. 2079	*Greenthread, LLC v. Samsung Elecs. Co.*, No. 2:19-CV-00147-JRG, 2020 WL 1911200 (Claim Construction Memorandum Opinion and Order) (E.D. Tex. Apr. 20, 2020)	X

Exhibit No.	Description	Submitted Previously
Ex. 2080	Exhibit 2022 in *Texas Instruments Inc. v. Greenthread LLC*, IPR2024-00771 (including excerpts of the Deposition Transcript of Scott Warrick taken on June 7, 2024 along with marked Exhibits 3-5 in *Greenthread, LLC vs. Cirrus Logic, Inc.*, 1:23-cv-00369-DC (W.D. Tex.))	X
Ex. 2081	Email communications between the Board, Petitioner's counsel and Patent Owner's counsel dated August 13, 2024	X
Ex. 2082	Email communication to the Board from Petitioner's counsel and Patent Owner's counsel dated August 30, 2024	X
Ex. 2083-2099	[RESERVED]	
Ex. 2100	Demonstratives of Patent Owner Greenthread, LLC	X
Ex. 2101	[REDACTED] Email communication from Patent Owner's counsel to Petitioner's counsel between May 26 to June 1, 2023	X
Ex. 2102	[REDACTED] Email communications between the Board, Petitioner's counsel and Patent Owner's counsel dated November 27, 2023	X
Ex. 2103	Declaration of Matthew Murphy in IPR2023-01242, -01243, -01244; IPR2024-00263, -00264, -00265, -00266	X
Ex. 2104	[SEALED] Deposition Transcript of Matthew Murphy in IPR2023-01242, -01243, -01244; IPR2024-00263, -00264, -00265 and -00266, dated July 23, 2025.	X

I. INTRODUCTION

Director Review should be granted because the Board ignored the Director's Order and maintained an incorrect claim construction that contradicts *two* District Court rulings. ***First***, the Director ordered the Board to consider the "location of the graded dopant concentration" in the Prior Art, and whether it moves carriers "from the active region." But on remand, the Board did *not* do this. Instead, the Board artificially conflated the "active region" with the underlying "well region" to reach the same conclusion as before. ***Second***, the Director ordered the Board to give "appropriate weight" to two claim construction rulings. But the Board did the opposite and maintained a claim construction that cannot be reconciled with either decision. ***Third***, the Director ordered the Board to grant discovery on whether Petitioner is in "privity" with a time-barred party. But the Board gravely limited discovery, and rewarded Petitioner for hiding key evidence. ***Fourth***, the Board committed legal error by *not* giving appropriate weight to PO's licenses. Eight companies have paid significant amounts to license the Challenged Patent, and this is compelling evidence that the Challenged Claims are non-obvious. For the reasons below, the Director should vacate the ID and FWD, and terminate this proceeding.

II. BACKGROUND

In April 2025, the Director granted review, vacated the FWD, and remanded this IPR for further proceedings. Paper 94. The Director determined that the Board

abused its discretion by (1) denying discovery on the privity issue; (2) refusing to consider the location of the GDC; and (3) excluding two claim construction rulings. *Id*., 3-4, 6. On remand, the Board never fixed these issues.

Regarding the "privity" issue, the Director ordered the Board to "allow discovery, narrowly tailored to the privity issue, such as any indemnification agreements between Petitioner and Intel and the terms and conditions of sale agreements between Petitioner and Intel related to products accused of practicing the challenged claims." Paper 94 at 3. But the Board never gave PO a fair opportunity to obtain additional evidence. While the Order used the open-ended language "such as," the Board read it to mean a strict limit on the scope of PO's discovery. Even worse, the Board permitted Petitioner to carefully craft discovery language that allowed them to hide key evidence.

After considering PO's requested discovery, the Board adopted Petitioner's proposed discovery. *Compare* Paper 108 at 11-12 *with* Paper 111 at 10. The Board limited discovery to just products sold "to Intel," and not other time barred parties, like [redacted] and [redacted]. *Id*. at 6-7. The Board also referenced PO's infringement contentions as listing the "Intel Accused Products" ("IAPs"). *Id*. at 10 n.5.

Using its own language as a shield, Petitioner (and the petitioners in related IPRs) read IAPs to mean final products sold by Intel, and not any components of those products. The petitioners also read "to Intel" to mean directly to Intel, and not

products provided to Intel through a sales agent or reseller. The petitioners then used their narrow reading to submit nearly-identical declarations that they did not sell any of the IAPs to Intel. *Compare* Ex. 2103 at ¶7 *with* IPR2024-00001, Exs. 2080 (¶8), 2081 (¶6), 2082 (¶8) *and* IPR2024-00468, Ex. 2086 (¶8). They also used their narrow reading as an excuse to *not* investigate or produce *any* information for the products they provided to Intel. *See generally* Ex. 2104; Papers 117, 121.

Turning to the merits, claim element [1.5] of the Challenged Patent reads:

> *at least a portion of at least one of the first and second active regions having at least one graded dopant concentration* ***[GDC]*** *to aid carrier movement* ***[ACM]*** *from the first and second active regions* ***[ARs]*** *towards an area of the substrate where there are no active regions*

Ex. 1001 at 4:51-55. It is readily apparent from the face of the claim that: (1) there must be a GDC in one of the ARs; and (2) this GDC must "ACM *from* the…ARs." *Id*. All of the Challenged Claims contain similar language.

In its POR, PO explained that not all GDCs "aid carrier movement" from an active region. *See* Paper 47 at 13-31. For example, the GDC may be in the wrong location. If the GDC is not in the AR, then it will not satisfy the first part of [1.5]. But even if there is a GDC in the AR, it still may not satisfy the second part of [1.5], because it may move carriers in the *wrong* direction, or may *not* move them at all. To use a simple analogy, if a person pushes a parked car, the person doesn't aid the car's movement because it doesn't move. Similarly, if a person tries to push a car

"up" a hill, but the car rolls "down" the hill, then the person doesn't aid the car's movement because the person is pushing in the wrong direction.

This proper reading of the claims is problematic for Petitioner because the Prior Art was *not* concerned with the ARs, and there is absolutely *no* mention (*nor* suggestion) of moving carriers *from the AR*. The Prior Art is silent about carriers in the AR, and it is impossible to determine what direction they would move, if at all. Paper 47 at 21-25, 30-31. Faced with this, Petitioner relied on a misreading of the prosecution history to make a belated claim construction argument that "any given electric field will aid carrier movement." Paper 62 at 7, 2 ("disagree[ing] with PO's characterization of the [ACM] limitation"). But two District Courts have already said otherwise. More specifically, Judge Gilliland acknowledged that a GDC must be "sufficiently graded" to ACM. Ex. 2077 at 39-40. And Judge Gilstrap said that a GDC must have the right direction *and* magnitude to ACM. Ex. 2079 at *9.

Throughout this proceeding, the Board has not been receptive to arguments that contradict its ID, and there has been a clear bias for Petitioner. ***First***, the Board allowed Petitioner to make a new claim construction argument in its Reply because it aligned with the ID. *See* Paper 65 at 2-6. ***Second***, the Board excluded the claim construction rulings that undercut Petitioner's claim construction, and PO was not permitted to rely on them during the hearing. ***Third***, the Board falsely claimed in its FWD that PO made a new argument about the location of the GDC, and refused to

consider it. Paper 84 at 45. Not surprisingly, the Director determined the Board abused its discretion and ordered the Board to (1) "consider and address [PO's] arguments concerning the location of the graded concentration," and (2) "admit Exhibits 2077 and 2079 and reconsider the parties' arguments in view of these two exhibits." Paper 94 at 4, 6. But on remand, the Board never gave PO an opportunity to be heard on these issues. Instead, the Board issued a second FWD that goes to great lengths to reach the same decisions as before. *See generally* Paper 125.

Finally, there is compelling evidence of non-obviousness. PO's patents have generated substantial licensing revenues—over $50 million (Ex. 2072 at ¶2)—that strongly support the patents' validity. Paper 47 at 36-39. Eight major semiconductor companies (Intel, Micron, and AMS-OSRAM) paid substantial amounts for a single patent family. These licenses confirm that the Challenged Patent is widely recognized in the industry as valid and valuable.

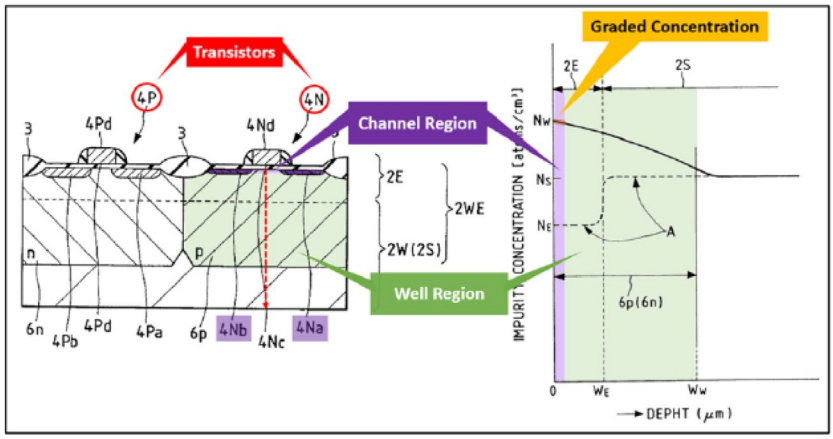
III. ARGUMENT

A grant of Director Review is appropriate because the Board's conduct and its FWD commit numerous "abuse[s] of discretion" and relate to "important issues of law or policy." USPTO, Director Review process, §§ 2.B, 5.A. The Board relied on an incorrect claim construction in its ID, and it allowed the Petitioner to expand on the erroneous claim construction in its Reply. The Board has demonstrated it is unwilling to reconsider its positions, even when ordered to do so. The Board has

gone to great lengths to exclude or dismiss PO's arguments, and the Board has demonstrated a clear bias for the Petitioner. The Challenged Patent has been validated by some of the largest companies in the world. Yet the Board has repeatedly refused to give any weight to PO's licenses. When, as here, the Board has relied on inconsistent claim constructions that are at odds with District Court rulings, and there is strong objective indicia of non-obviousness, the appropriate remedy is to vacate both the ID and FWD. *See Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.*, IPR2025-00632, Paper 20 (PTAB Nov. 3, 2025) (precedential).

A. The Board Did Not Follow the Director's Order to Consider the Location of the Graded Dopant Concentration and Whether it Moves Carriers from the Active Region

In its Petition, Petitioner relied on the following two figures from Kawagoe:



Paper 1 at 19 (FIG. 23, left; FIG. 17, right). Petitioner's reliance on Kawagoe is misplaced because FIG. 17's GDC was used solely to "prevent" electrons from "entering the p-well 6p." Paper 47 at 23 (quoting Ex. 1007 at 16:7-11). As seen above, the bottom of the p-well is in the *wrong* location, and it is nowhere near the

"channel region." *Id.* at 24-25. *Preventing* an electron from entering the well region (green) is clearly different from *moving* an electron *from* the channel region (purple).

A GDC does not necessarily ACM, and there is no evidence that the GDC in FIG. 17 would ever ACM, or even be capable of ACM "from the [AR]." Paper 47 at 13-18 (§ VI.A). Kawagoe never mentions the AR or any carriers in the AR. *Id.* at 22-25. When discussing FIG. 17, Kawagoe *never* says it would have any effect whatsoever on an electron in the AR. In fact, Kawagoe says something very different: electrons are *prevented* from entering the p-well. Ex. 1007 at 16:7-11. Thus, there is no way of knowing what effect, if any, FIG. 17 would have on an electron in a different location (*i.e.*, the AR). Paper 65 at 9-11. In fact, it would not have made sense to move an electron from the AR, because, in FIG. 23, electrons are needed to make the transistor work.

The Director ordered the Board to consider PO's arguments about the location of the GDC and whether it moves carriers from the AR. Paper 94 at 4 (discussing PO's prior arguments "concerning the location of the [GDC]" and "that the prior art's carriers are not in the active regions"). The Board purports to do this. *See* Paper 125 at 71 (referencing Paper 65 at 9, 11). But then the Board never addresses this critical issue that is fatal to the Board's decision.

In its Sur-Reply, PO explained: "All of Kawagoe's (purported) teachings about a gradient that 'aids carrier movement' refer to gradients and carriers *outside*

the [AR]," and "Petitioner points to no evidence that Kawagoe's field is the same throughout and is not 'negated or reversed' *in the [AR]*." Paper 65 at 9, 11. There is no discussion of these sentences (or arguments) anywhere in the Board's FWD. Instead, the Board introduces an illogical argument—that PO and Petitioner never made—in order to dodge the very issue the Director ordered the Board to address.

To avoid the location issue, the Board alleges that PO previously "argue[d] that the active region is the well region." Paper 125 at 71. This is *not* true, and it is certainly not a valid reason to *not* comply with the Director's Order. While the AR may be formed in the surface of the well region, the AR and the well region are different. As seen in Kawagoe's FIG. 23, the AR (or channel region) is only at the top of the p-well. Whatever happens at the bottom of the p-well (green above) is nowhere near the channel region (purple above).

In its first FWD (Paper 84), the Board went to great lengths to avoid this issue, even claiming it was a belated, new argument. This error was vindicated by the Director, but now the Board has gone even further by introducing an argument that was never made by either party. These actions further demonstrate: (1) the Board's bias against PO; (2) its inability to fairly consider the evidence and change its positions after instituting an IPR; and (3) its disregard for the Director's Order.

Turning to the other primary reference, Wieczorek, the Board made the same error. Because there are no units on Wieczorek's FIG. 2b, it is impossible to tell

where the AR is located, and whether there is even a GDC in the AR. Paper 47 at 29-31; Paper 65 at 14-15. Like Kawagoe, there is no evidence of what effect, if any, FIG. 2b would have on a carrier in the AR. Because there is no evidence that Kawagoe, Wieczorek, or any of the secondary references would ACM (or even be capable of ACM) "from the AR," the Director should vacate the ID and FWD, and terminate this proceeding.

B. The Board Did Not Follow the Director's Order to Give "Appropriate Weight" to the Claim Construction Orders

To reach the conclusions in its FWD, the Board embraced Petitioner's faulty claim construction that "any given electric field will aid carrier movement." But this contradicts previous constructions by two District Courts ***confirming*** that *not* all GDCs aid carrier movement from the ARs. "Given the importance of uniformity," the Board "would be remiss to overlook a[] district court's construction of the same claim terms." *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1329 (Fed. Cir. 2008). Not only did the Board overlook these rulings, but it excluded them from the record entirely. The Director corrected this error by ordering the Board to give the rulings "appropriate weight." Paper 94 at 5-6. But on remand, the Board recommitted to its previous positions, and tried to discredit these well-reasoned orders that each explain how a gradient alone does *not* satisfy the ACM limitation.

First, the WDTX recognized that *not* all GDCs will aid carrier movement. In fact, the court held that GDCs must be "***sufficiently graded***" to create a field that

will aid movement. *See* Ex. 2077 at 39-40 ("The Court concludes that … the [GDC] has to be sufficiently graded to result in a 'static unidirectional electric drift field to [ACM].'…This establishes a minimum [GDC], *i.e.*, a [GDC]…below this minimum will not aid in the movement of minority carriers and thus is not graded.").

Second, Judge Gilstrap (EDTX) recognized that the mere direction of a GDC—as Petitioner points to—is not enough to prove whether a given GDC actually moves carriers. The court held that to ACM, "the slope has [to have] both a direction and a ***magnitude***." Ex. 2079 at *9. In fact, the court rejected the very argument Petitioner now makes. *See id.* ("Defendant suggests that the direction of the drift electric field depends solely on ***the direction*** of the slope of the [GDC]. This is not justified by the prosecution history statements that Defendant cites."). Further, this prosecution history does not support the Board's position that a GDC "facing in the appropriate direction" satisfies the ACM limitation. Paper 125 at 62-63.

In fact, the prosecution history confirms that a GDC must have a sufficient magnitude to overcome other forces and fields acting within the device and actually move the carriers. *See* Ex. 1016 at 270 (Examiner: carrier movement is "affected by multiple forces and fields, and it does not appear that simply the presence of a unidirectional drift field in itself can achieve drawing all minority carriers"). Yet the Board turned prosecution against PO (Paper 125 at 61-63), even though prosecution

statements "cannot enlarge" claim scope beyond the plain language. *See Biogen, Inc. v. Berlex Lab'ys, Inc.*, 318 F.3d 1132, 1140 (Fed. Cir. 2003).

The Board also discredited both claim construction decisions and found them inapplicable to the present dispute. Paper 125 at 72-75. To do this, the Board offered its *own interpretation* of the WDTX order (*id.* at 75), despite affording PO zero opportunity to explain either order after they were admitted. This further demonstrates (a) the Board's bias and inability to fairly consider new information, and (b) the frailty and inconsistency of the Board's claim construction. When, as here, the Board has relied on inconsistent claim constructions that are at odds with District Court rulings, the appropriate remedy is to vacate both the ID and FWD. *See Revvo*, IPR2025-00632, Paper 20 (precedential).

C. The Board Abused Its Discretion by Issuing a Discovery Order that Prevented a "Full Record"

In addition to erring on the merits, the Board never provided PO with a fair opportunity to address privity. The Board's overly restrictive discovery order enabled Petitioner to entirely avoid the real issue—whether IAPs include ***components*** made and sold by Petitioner—and precluded any discovery related to [redacted] and [redacted]. The Director ordered discovery on the privity issue so that the Board could decide the issue on the "full record" (Paper 94 at 3), since privity is a "highly fact-dependent question." *Apps. in Internet Time, LLC v. RPX Corp.*, IPR2015-01750, Paper 128 at 7 (PTAB Oct. 2, 2020) (precedential).

But the Board prevented PO from developing a "full record." For example, the Board narrowly defined "products accused of practicing the challenged claims" (Paper 94 at 3) as *only* the specific products listed in PO's preliminary infringement contentions against Intel (Ex. 2048). Paper 111 at 10 n.5. This interpretation makes no sense, however, because the idea that Petitioner sells complete, assembled processors back to Intel is illogical. Further, the infringement contentions to which the Board refers clearly state that the IAPs "include all CPUs designed or manufactured (in whole ***or in part***) by Intel…." Ex. 2048 at 4. PO has alleged (and offered more than enough evidence) that components made and sold by Petitioner are incorporated into Intel's CPUs. Ex. 2006; Paper 117 at 2-3.

Instead, Petitioner submitted a declaration with two ***conclusory*** sentences (and ***zero*** supporting evidence) that it does not supply components of the IAPs. This bare, self-serving declaration is hardly the type of evidence the Director envisioned when ordering Petitioner to produce "documents sufficient to show the asserted privity relationship." Paper 94 at 3; *see also* Paper 117 at 14-15. Of course, there was no explanation for these statements since the declarant simply rubber-stamped Petitioner's previously-rejected attorney arguments. Over the course of his deposition, the declarant admitted that:

- All he did was "read Exhibit [2048,]" and "***did nothing after that***," Ex. 2104 at 15:21-16:11, 18:4-12. He quickly reviewed the list of IAPs and recognized that Petitioner does not sell those products. *See id.* at 20:21-21:21 (agreeing

that this "did [not] really even require" reviewing the list, since he "kn[e]w for a fact that onsemi doesn't actually sell Intel processors back to Intel.").

- This took "[n]ot very long"—"[l]ess than an hour" (19:18-20:6).
- He "didn't think it was necessary to investigate whether" the IAPs "include an onsemi product" (25:15-21, 26:9-27:1).
- He did not "know specifically what parts Intel buys from onsemi" (53:9-11) or whether any of the IAPs "include[] any parts or elements [] manufactured and sold by onsemi" (62:3-17). He had never "seen a parts list" for any of the IAPs (88:15-89:9) and had no "understanding of what these … processors include physically" (87:8-10).
- There are members of his sales team "responsible for communicating with Intel" (38:10-13) and "better positioned" to answer questions concerning Petitioner's relationship with Intel (24:20-25:2). These people "communicate with … Intel regarding issues related to onsemi products" (52:8-11). However, he never "consult[ed] with any of [them]" (25:5-8).
- He did not even know "how to find documents showing the terms and conditions of sales" to Intel, but that somebody else would (65:11-14).
- He never contacted Intel nor asked his "team member who works with Intel to reach out to Intel." *Id.* at 98:16-20. When asked if he "contact[ed] Intel *at all* as part of [the] investigation," he answered clearly: "***No***." *Id.* at 89:13-15.

Petitioner has failed to provide any "actual evidence" to satisfy its burden of proving a lack of privity. *See* Paper 117 at 4-6; Paper 121 at 3-6; *see also Worlds Inc. v. Bungie, Inc.*, 903 F.3d 1237, 1244 n.8, 1246 (Fed. Cir. 2018). Petitioner has failed to satisfy its discovery obligations, yet the Board seemingly chastised PO for suggesting that Petitioner should (and could) have conducted a more thorough investigation. *See* Paper 125 at 25 ("We did not order a particular style or depth of

investigation, nor do we discern that Petitioner's investigations were in any way insufficient. In particular, we disagree with [PO's] position that compliance with our Discovery Order required Petitioner's Declarant to contact Intel to determine whether IAPs include components sold or manufactured by Petitioner…").

Petitioner has thus failed to meet its burden that there is no privity with a time-barred party, despite the Board continually lowering the bar. This has made a mockery of the Director's remand instructions and this IPR unnecessarily inefficient. As a result, the Board's ID should be vacated and this IPR dismissed. USPTO Memo, Precedential designation of *Crning Optical Commc'ns RF, LLC v. PPC Broadband Inc.*, IPR2014-00440, Paper 68 (PTAB Aug. 18, 2015) (memo Oct. 28, 2025).

D. The Board Did Not Give Appropriate Weight to PO's Licenses as Objective Indicia of Non-Obviousness

The Board also erred when it disregarded PO's substantial licensing and evidence of objective indicia of non-obviousness. Paper 47 at 36-39; Paper 65 at 22-24. For example, the Board erred in "declin[ing] to give significant weight to the RPX license." Paper 125 at 35. The Board found PO's argument "that [redacted] and [redacted] entered a license under no apparent threat of litigation [to be] not persuasive because it ***may*** reflect the value of RPX as a risk mitigation service." *Id.* But the Board's view of the licenses is entirely speculative. The more reasonable view is that the licensees knew they infringed PO's claims—which are valid—and, therefore, the prudent business decision was to take a license on favorable terms before

litigation. RPX paid ***$30 million*** on behalf of [redacted] [redacted] and [redacted]. Ex. 2072 at ¶6; *see also* Paper 47 at 36, 41. This amount was not funded by RPX, but rather by the sub-licensees, and certainly exceeded the cost of litigation. This is compelling evidence of "the merits of the claimed invention." Paper 125 at 35.

Moreover, the Board simply ignored that PO has granted licenses to several major semiconductor companies besides the RPX sub-licensees—Intel, [redacted] Micron, Western Digital, and AMS-OSRAM. *See* Paper 47 at 39; Ex. 2072 at ¶2. These are highly sophisticated companies, some of which filed IPRs that were then terminated upon entering these licenses. The Board overlooked that these companies collectively paid over $50 million for licenses covering ***a single patent family***. *Id.*; Paper 125 at 33-37. And for the first RPX license, the Board found "[in]sufficient evidence that the amount paid…is due exclusively to the licensed technology rather than some other economic reason." *Id.* at 36. It is unclear how the Board arrived at that conclusion, since value is not absolute but rather is driven by the licensee's perception. This is true for all 8 licensees—7 of which paid ***multiple millions of dollars*** to obtain a license. These companies attributed significant value to being able to freely use PO's patented technology, and not infringe a valid claim.

IV. CONCLUSION

For at least the foregoing reasons, PO respectfully requests the Director grant review, vacate the ID and FWD, and terminate this proceeding.

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Respectfully submitted,
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PUBLIC VERSION

CERTIFICATION OF SERVICE

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