

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

IPR2023-01243¹
U.S. Patent No. 10,510,842

**PETITIONER’S MOTION TO STRIKE NEW EXHIBITS SUBMITTED
WITH PATENT OWNER’S SUR-REPLY**

¹ Texas Instruments Incorporated, which filed a petition in IPR2024-00672, has been joined as a petitioner in this proceeding.

TABLE OF CONTENTS

I.	Governing Law	1
II.	Argument	1
	A. Exhibits 2077-2081 Are Improper Under 37 C.F.R. § 42.23(b).....	1
	B. 37 C.F.R. § 42.23(b) Should Not Be Waived	2
	1. Petitioner did not raise any new claim construction arguments that would justify PO filing Exhibits 2077-2081 late.....	3
	2. Petitioner’s new Exhibits are not relevant or admissible.....	7
III.	Conclusion	10

Pursuant to authorization granted during the October 4, 2024, teleconference between the Board and the Parties, and the Order dated October 7, 2024 (Paper 73), Petitioner moves to strike new Exhibits 2077-2081 submitted by Patent Owner (“PO”) with its Sur-Reply (Paper 64).

I. Governing Law

The PTAB’s rules expressly prohibit introducing “new evidence” with a Sur-Reply other than “deposition transcripts of the cross-examination of any reply witness.” 37 C.F.R. § 42.23(b); *see also* PTAB Consolidated Trial Practice Guide (“TPG”), 73-74 (Nov. 2019). When a Sur-Reply “raises new issues, is accompanied by belatedly presented evidence, or otherwise exceeds the proper scope,” the appropriate remedy is a motion to strike. TPG, 80.

II. Argument

A. Exhibits 2077-2081 Are Improper Under 37 C.F.R. § 42.23(b)

Exhibits 2077-2081 are newly filed exhibits and none of them are “deposition transcripts of the cross-examination of any reply witness;” these exhibits are therefore improper and should be stricken. *See* 37 C.F.R. § 42.23(b); *Ford Motor Company v. Safe Driving Technologies LLC*, IPR2021-01446, Paper 28, 82-83 (Mar. 10, 2023) (new sur-reply evidence not permitted).

There can be no dispute that the exhibits in question are not qualifying deposition exhibits under 37 C.F.R. § 42.23(b). Exhibit 2077 is a claim construction order from a district court litigation between PO and Cirrus Logic—not involving

Petitioner—that issued on March 13, 2024; Exhibit 2078 is a claim construction brief filed by PO in that litigation, dated December 14, 2023; and Exhibit 2079 is a claim construction order from a district court litigation between PO and Samsung Electronics—again, not involving Petitioner—that issued on April 20, 2020. *See* EX2077-2079. Exhibit 2080 is excerpts of a deposition transcript of a Cirrus Logic corporate representative from the above-noted district court litigation between PO and Cirrus Logic, obtained by PO on June 7, 2024. *See* EX2080. And Exhibit 2081 is a copy of email communication between the Board and the Parties. *See* EX2081.

The Board routinely strikes improper new evidence like this. *See, e.g., Satco Products, Inc. v. Seoul Semiconductor Co., Ltd.*, IPR2020-00836, Paper 45, 75-77 (Oct. 22, 2021) (granting petitioner’s Motion to Strike exhibits as “new evidence,” not “rebuttal evidence,” because they “were not of record prior to Patent Owner filing them with its Sur-Reply” and are not “deposition transcripts of the cross-examination of any reply witness.”); *Samsung Electronics Co., Ltd. v. Communication Technologies, Inc.*, IPR2022-01221, Paper 85, 6-7 (Sept. 14, 2023); *Lenovo Holding Co., Inc. v. Dodots Licensing Solutions LLC*, IPR2019-01278, Paper 37, 31-33 (Jan. 19, 2021); *Clearone, Inc. v. Shure Acquisition Holdings, Inc.*, IPR2019-00683, Paper 66, 3-5 (Apr. 20, 2020).

B. 37 C.F.R. § 42.23(b) Should Not Be Waived

Because there is no dispute that these exhibits do not comply with 37

C.F.R. § 42.23(b), these exhibits should be struck unless PO can show that it is entitled to have that provision waived. While the Board is permitted to waive the provisions of § 42.23(b), it may only do so “in the interest of resolving [a] proceeding in a just, speedy, and inexpensive manner.” *Liquidia Tech. v. United Therapeutics Corp.*, IPR2021-00406, Paper 50, 5 (PTAB March 3, 2022); 37 C.F.R. §§ 42.5(b), 42.1(b). A waiver is not appropriate here because PO’s purported justification—an alleged new claim construction argument in the Reply—is flawed. Moreover, late action can only be excused for good cause or in the interests of justice, and neither of these excuse PO’s belated submission. 37 C.F.R. § 42.5(c)(3).

1. Petitioner did not raise any new claim construction arguments that would justify PO filing Exhibits 2077-2081 late

PO acknowledges that its submission of Exhibits 2077-2081 is at odds with PTAB rules (Sur-Reply, 4 (FN3)), but nonetheless argues that it should be allowed to submit untimely exhibits “to respond to arguments first introduced in Petitioner’s Reply,” and specifically, due to an alleged “new claim construction” raised by Petitioner. *Id.*, 2-4. This premise fails because Petitioner has been consistent with its claim construction throughout this proceeding.

To falsely create the appearance of a new claim construction dispute, PO wrongly mischaracterizes Petitioner as “argu[ing] that ‘any given electric field will aid electron movement.’” Sur-Reply, 2-3 (italics and underlining in original). PO further alleges that “Petitioner claims that ‘an ‘electric field’ means ‘aided’ in one

direction” and “Petitioner thus seeks to ‘characterize’ (i.e., construe) ‘aid carrier movement’ as satisfied by *any* force that pushes in *any* direction—even if there is no carrier movement or the force pushes opposite to the movement.” *Id.* (italics, underlining, and parenthetical in original). Not only do PO’s assertions misconstrue Petitioner’s arguments, but PO’s assertions are also not “new” in these proceedings. The Patent Owner’s Response (POR) includes nearly identical complaints about the Petition, showing that the Reply and the Petition are aligned. *See, e.g.*, POR (Paper 46), 13-14 (“Petitioner asserts that Greenthread has previously admitted that *any* ‘graded dopant concentration’ will ‘aid carrier movement.’”), 14-21.

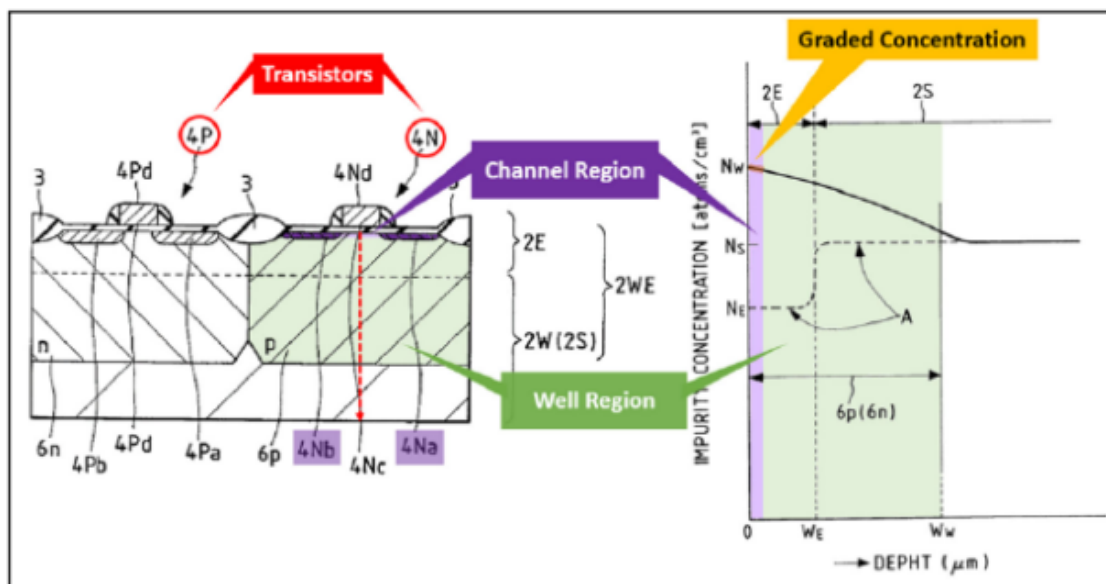
Nothing in the Reply construes or interprets “aid carrier movement” differently from the Petition. The Reply simply responds to PO’s arguments in the POR that similarly mischaracterized the Petition. And—contrary to PO’s incomplete assertion in the Sur-Reply—the statements in the Reply are not claim construction; these are factual explanations that “any given electric field will aid electron movement *in one direction and impede electron movement in the opposite direction.*” Reply (Paper 61), 7 (emphasis added). This does not contradict anything in the Petition, and PO’s expert confirmed in his deposition that this is simply how electric fields work. *Id.* (citing EX1052, 83:13-89:13, 92:2-97:8, 102:2-109:14, 109:25-116:3, 121:19- 123:15); EX1052, 109:7-14 (“[T]he force of the electric field and its direction [] aids movement in the direction of the field...[in] the 180 degree

opposite direction, yes, it [the electric field] will repel, and it pushes [carriers] away.”); 107:16-18 (“the electric field will act on the charge and provide it with an acceleration velocity in the direction of the electric field), 108:20-23 (“a field will provide a force in a direction aiding -- direction -- aiding movement in the direction of the force. That’s just basic physics.”).

The explanations in the Reply (and in the Petition) about how electric fields interact with electrons are not matters of claim construction; these are factual matters about how the prior art meet the plain and ordinary meaning of the “aid carrier movement” limitations.² As the Petition explained with respect to limitation [1.5] and similar limitations, Kawagoe’s Figure 17 (below right) illustrates the doping concentration measured along the red dotted line in Figure 23 (below left), which starts from the top surface of the substrate (depth=0) and includes the doping profile in the channel region (light purple). EX1007 (Kawagoe), 5:41-45; Petition, 26. The experts both agree that the decrease in dopant concentration shown in Figure 17 will result in an electric field, and an electric field will exert a force on carriers in the device. *See, e.g.*, Reply, 2, 8-9 (citing, for example, EX2058, 73:20-76:5, 166:1-6,

² The Petition addressed both a “plain and ordinary meaning” construction for “aid carrier movement,” and an alternative construction advanced by another defendant in a separate proceeding. *See* Petition (Paper 2), 29-32.

167:9-169:7, 189:18-193:14, 196:8-198:8; EX1052, 87:2-94:1, 102:2-109:14), 11-12 (citing EX1052, 110:18-116:3). The parties dispute, however, whether this resulting electric field will “aid carrier movement.” Reply, 1-2; POR, 13-14.



EX1007, FIGS 17/23

In the Reply, Petitioner responded to PO’s arguments suggesting that a gradient must be sufficiently strong to aid carrier movement such that it overcomes unspecified opposing forces, and explained how Kawagoe met the limitation notwithstanding PO’s arguments. Reply, 2-15; Petition, 25-32; EX1007, 16:2-11. None of these Reply arguments contradict the Petition. For example, the Petition explained how Kawagoe explicitly describes downward-sloping graded dopant concentration aids the movement of carriers from the top surface of the epitaxial layer (claimed “first surface”) to the bottom surface of the substrate (claimed “second surface”). EX1007, 16:2-11 (“the electrons produced by the α -ray are

attracted to the substrate body 2S by that concentration gradient and prevented from entering the p-well 6p”); Petition, 25-32. The Petition also identified prosecution history statements that “a unidirectional drift (electric) field necessarily affects *all* the present minority carriers in the same way[.]” Petition, 30-31 (quoting EX1016, 289, emphasis added). Every argument in the Petitioner’s Reply is consistent with this analysis of Kawagoe and the challenged claims. *See, e.g.*, Reply, 1-15.

2. Petitioner’s new Exhibits are not relevant or admissible

Because there are no new claim construction arguments, there is no justification for waiving 37 C.F.R. § 42.23(b) for Exhibits 2077-2081. But, even ignoring the flaw in PO’s original premise, these exhibits should still be struck.

a) Exhibits 2077-2079 and 2081 are untimely and not necessary

As noted above, Exhibits 2077 through 2079 are documents that issued on March 13, 2024, December 14, 2023, and April 20, 2020, respectively. *See* EX2077-2079. PO thus had possession of these documents for months prior to filing its POR on May 20, 2024, with ample opportunity to submit them with that brief, if they were relevant. PO instead did nothing and now attempts to belatedly submit them as evidence, prejudicing Petitioner because Petitioner’s opportunity for merits briefing has closed. No “good cause” or any other interests support PO’s submission of these exhibits now, approximately a month before Oral Argument and without Petitioner having had a chance to respond. TPG, 74 (“It is also improper for a reply to present

new evidence [...] that could have been presented in a prior filing”); *see also* 37 CFR §42.5(c)(3); *Liquidia Tech.*, IPR2021-00406, Paper 50, 5. And regarding Exhibit 2081, which is a copy of email communication between the Board and the parties, the Board is already in possession of this email, rendering its submission as evidence with the Sur-Reply unnecessary and improper.

b) Exhibit 2080 is untimely and inadmissible hearsay

As noted above, Exhibit 2080 is a deposition transcript from a district court litigation between PO and Cirrus Logic, not involving Petitioner, that PO apparently obtained on June 7, 2024. EX2080. Even if this exhibit were relevant and admissible in this proceeding (it is neither), PO’s submission is untimely; PO had possession of this document just a few weeks after filing its POR on May 20, 2024, and could have contacted the Board at that time to request it be made of record in this proceeding. Had PO alerted Petitioner or the Board about this transcript sooner, then Petitioner would have had the opportunity to address it in its Reply (filed on August 12). But instead, PO did nothing until August 30, when PO emailed the Board asking for a waiver to 37 C.F.R. § 42.23, which was never granted. Allowing PO to belatedly introduce this evidence now would reward PO’s delay and prejudice Petitioner by limiting Petitioner’s opportunity to meaningfully address its substance.

Additionally, regardless of timing, PO’s submission of Exhibit 2080 in this proceeding is improper. First, the testimony in question concerns a Cirrus

representative's understanding of a TechInsights report rather than the prior art at issue in this proceeding, rendering the testimony irrelevant. Sur-Reply, 5-6 (FN4), 23-24; EX2080, 91:19-93:17. Second, Exhibit 2080 is inadmissible hearsay. Exhibit 2080 constitutes incomplete portions of testimony from an unrelated party in a district court litigation that did not and does not involve Petitioner as a party. Petitioner did not sponsor or endorse the testimony, and Petitioner did not have an opportunity to cross examine the witness. Exhibit 2080 is therefore inadmissible hearsay that cannot be used in Petitioner's IPRs.

PO's suggestion that Exhibit 2080 should be admitted as a statement against interest, because Petitioner is allegedly "in a joint defense group" with Cirrus Logic, is wrong both legally and factually. *See* Sur-Reply, 6 (FN4). First, there is no hearsay exception for joint defense groups. Second, even if there was, Petitioner is not part of a joint defense group for this matter, despite PO's baseless assertion. To set the record straight, Petitioner has not entered into any joint defense group for this matter with any other party.

Consistency between IPRs is also no reason to ignore the rules against hearsay. It is unremarkable that proceedings with different parties and different evidence may reach different conclusions. Petitioner is entitled to have these IPR Petitions resolved on their own merits, without having to respond to out-of-court statements by third parties. Moreover, even if admitted, Exhibit 2080 would not

shift the interpretation of the claims at issue, as such third-party statements have minimal bearing on claim construction under the *Markman* framework.

Any argument that Exhibit 2080 should be admitted as “evidence of secondary indicia of non-obviousness” is similarly wrong; there is no hearsay exception for secondary indicia. Finally, Exhibit 2080 is not admissible as “part of the prosecution history” of the subject patent. *See* Sur-Reply, 5-6 (FN4). PO’s statements about the scope of its claims in IPR proceedings can become part of the prosecution history, but district court deposition testimony from third parties does not.

To the extent PO asserts that Petitioner should have deposed the declarant of Exhibit 2080 in advance of filing its Reply in August 2024, such an argument is nonsensical. Before PO filed Exhibit 2080 with its Sur-Reply, the document was not of record in this proceeding or any other proceeding involving Petitioner. A suggestion that Petitioner was obligated to address evidence not raised in this proceeding (or any other proceeding involving Petitioner) is baseless. Nor is it clear how Petitioner even could have cross examined the witness at issue, as a deposition of an unrelated third-party concerning testimony in a separate district court case is not ordinarily permitted under the limited discovery available in these proceedings.

III. Conclusion

For at least the above reasons, Exhibits 2077-2081 should be stricken.

Dated: October 10, 2024

Respectfully submitted,

/Roger Fulghum/

Roger Fulghum

Reg. No. 39,678

*Counsel for Petitioner
Semiconductor Components
Industries, LLC*

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on this 10th day of October, 2024, **PETITIONER’S MOTION TO STRIKE NEW EXHIBITS SUBMITTED WITH PATENT OWNER’S SUR-REPLY** was served by email on the following counsel for Patent Owner and the Joined Petitioner:

Greenthread-OnSemi-MS@mckoolsmith.com

awhitehurst@mckoolsmith.com

nmatich@mckoolsmith.com

ajairam@mckoolsmith.com

smccommas@mckoolsmith.com

nozarkar@mckoolsmith.com

IPR12189-0086IP1@fr.com

PTABInbound@fr.com

griswold@fr.com

bisenius@fr.com

Dated: October 10, 2024

/Roger Fulghum/

Roger Fulghum

Reg. No. 39,678

Counsel for Petitioner

Semiconductor Components

Industries, LLC