

Filed on behalf of Western Digital Technologies, Inc.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WESTERN DIGITAL TECHNOLOGIES, INC.,
Petitioner,

v.

GODO KAISHA IP BRIDGE 1,
Patent Owner.

Case No. IPR2024-01447

U.S. Patent No. 8,405,134

PETITIONER'S OPPOSITION TO MOTION TO STRIKE

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All emphasis is added in quoted material unless otherwise indicated.

After IP Bridge was authorized to file a motion to address “three new exhibits (EX1097-1099)” and related expert testimony, EX3102, 1, it instead filed a merits brief attaching two unauthorized exhibits 2080-2081. IPB’s bait-and-switch Motion should be flatly denied.

Despite the Petition presenting Parkin’s inverted embodiment, IPB asks the Board to remove it from consideration to avoid having to address its impact. IPB further asks the Board to block Petitioner from discrediting Dr. Ross’ opinions regarding the knowledge of one of skill by striking contradictory rebuttal evidence and expert testimony. IPB’s veritable Christmas wish list ignores that responding to arguments and underscoring the Petition is the purpose of a reply. Nor can IPB show prejudice, because it has no answer for why Dr. Ross refused to address EX1097-1099 in her declaration, at her deposition, or both, despite being aware of them.

I. IPB’S MOTION REQUESTS IMPROPER AND UNAUTHORIZED RELIEF

IPB misled the Board and Petitioner by claiming its “request [was] not about Parkin,” and that it “can address it in its sur-reply based on evidence already in the record.” EX2079, 8:1-7. Yet its Motion extensively *addresses the merits of Parkin* (EX1062), devoting less than two pages to its originally requested relief. *See* Paper 31 (“Mot.”), 7, 10. Also, IPB improperly filed EX2080-2081 with its Motion. EX2080-2081 are two patent application publications Parkin incorporated by

reference that IPB now asserts show that Parkin’s express disclosure regarding “‘inverted’ Figs. 3 and 11” does not mean what it says. Mot., 5-6. The Board has now authorized Petitioner’s separate motion to strike and expunge these improper exhibits. EX3103.

IPB also improperly and without authorization includes additional arguments and evidence relating to Parkin beyond its original request, which specified only: Reply (Paper 25) at 5-8, 12-13; EX1105 ¶¶6-22; and EX1097-1099. *See* EX3102, 1.

Specifically, IPB now seeks to strike Dr. Bokor’s deposition testimony that it elicited about Parkin’s Figure 11 embodiment. *See* EX2018, 138:5-11 (“But the questions that you were just asking me where I refer to Figure 11,... ***I was responding to your questions*** about whether or not Parkin discloses growing MgO on top of an amorphous layer.”). The dispute over Parkin’s Figure 11 is the same one the Board expressly “invite[d] the parties to present additional briefing” on in its institution decision. Paper 10 (“ID”), 28-29. Neither in its email nor its argument to the Board did IPB ever identify any deposition testimony in EX2018 as something it sought to strike. *See, e.g.* EX3102, 1; EX2079, 6:22-7:5. Nor could it have, since a motion to strike must be sought “within one week of the allegedly improper submission.” Consolidated Trial Practice Guide (“CTPG”), 81. Not only did IPB itself submit the transcript on July 16, 2025, *see* Paper 19 (“POR”), almost four months before it sought a motion to strike, it also failed to object to it either during

the deposition or even after, precluding a motion to strike, 37 C.F.R. § 42.64(a).

IPB also improperly expanded its request to include Reply pages 2-4 and 14-16. *See* Mot., 1. Most of these Reply arguments directly address **Parkin**. *See* Reply, 1-4 (Section I: “PARKIN INDISPUTABLY DISCLOSED MGO(100) ATOP COFEB”); *id.*, 14-16 (discussing why the “‘cited evidence’ of Parkin undisputably shows MgO(001) atop CoFeB and entirely defeats IPB’s allegation of no reasonable expectation of success”). IPB also inappropriately tries to strike the Reply at 15-16, which refutes IPB’s mischaracterization of Wang EX1055’s antiferromagnetic layer (not an MgO layer), and Petitioner’s rebuttal that IPB “attacks a strawman.” Reply, 15-16. Finally, IPB newly requests Dr. Bokor’s ¶25 also be stricken. *See* Mot., 1. This is his response to Dr. Ross’ reliance on Petrov (EX2065), which includes no disclosure of MgO, *see generally* EX2065, and IPB offers no explanation for why it should be stricken, *see generally* Mot.

IPB later adds the Reply’s reliance on Wulff (EX1036) and portions of Nagahama (EX1027 ¶¶55-59, 61, 67). Mot., 7. Neither of these were in its statement for relief, during the hearing, or in its email to the Board. *See* Mot., 1; *see generally* EX2079; EX3102, 1.

II. THE REPLY ARGUMENTS ARE NOT NEW

A. IPB Ignores The Petition’s Discussion Of Growing MgO(001) Atop CoFeB

IPB first asserts that “the Petition never even alleged MgO(001) would form

on amorphous CoFeB.” Mot., 2. The Petition did precisely that. *See* Reply, 1-5. The Petition cited Parkin’s inverted Figure 3A embodiment in which MgO(001) is formed on amorphous CoFeB. Paper 1 (“Pet.”), 39-41; EX1062, 17:7-10, 19:17-19; EX1024 ¶¶129, 144-48; EX2018, 134:1-138:11; EX1101, 156:17-157:14, 161:7-20 (Dr. Ross explaining that despite its express teaching, Parkin would have had to explain “how the MgO will grow on the amorphous cobalt iron boron” in order to properly disclose MgO(001) on CoFeB). The Board itself recognized as much. ID, 28. An express teaching in a prior art reference provides a reasonable expectation of success. *Elekta v. ZAP Surgical Sys.*, 81 F.4th 1368, 1377 (Fed. Cir. 2023).

IPB acknowledged this disclosure in its POPR, where it challenged Parkin’s inverted Figure 3A, stating, “It is neither explicit nor inherent in Parkin that the ferromagnetic layer formed below the tunnel barrier is formed of crystalline CoFeB,” and relied on Parkin’s description of Figure 11 to assert “although the storage layer and reference electrode are inverted compared to the device of FIG. 3A, ***the electrode beneath the tunnel barrier (540) is amorphous, not crystalline.***” Paper 8 (“POPR”), 47. Thus, IPB took the opposite position in its POPR to its position now and proved Petitioner’s point that Parkin disclosed MgO(001) above amorphous CoFeB. Parkin explained that crystallization of the layer occurs later with annealing. EX1062, 18:47-55 (“a portion of the storage layer 175 adjacent to the MgO tunnel barrier 120’ has crystallized”).

The Motion next asserts that the Petition’s arguments are somehow “new arguments” when cited in the Reply. Mot., 3-8. The Motion challenges the Reply’s reliance on Parkin’s Figure 11, Mot., 4-5, which IPB attacked in its POPR and admitted “shows another representative embodiment of the current invention in which *the structure of the devices shown in FIGS. 3A and 3B is inverted....*” POPR, 47 (quoting EX1062, 22:29-33).

The Motion attempts to avoid the Petition’s reliance on Parkin’s inverted Figure 3A by asserting that the Petition relied upon that embodiment “for a *different* limitation (1[e]) requiring crystallized CoFeB.” Mot., 5 (emphasis in original). But IPB fails to mention that for the argument regarding Claim 1[d] (requiring MgO(001)), “if Sunai’s or *Parkin’s CoFeB electrodes are used as described in Claims 1[e]* and 2 in this Ground, one of skill would understand that the MgO... would still have the same (001) orientation.” Pet., 33.

IPB implores the Board that “striking Petitioner’s argument that Fig. 11’s interface layer 520 is optional *is critical....*” Mot., 5-6 (internal cites and quotation marks omitted). In other words, because it cannot refute that Parkin describes forming MgO(001) over amorphous CoFeB with reference to Figure 11, IPB *needs* the Board to strike it. Aside from baselessly asserting support that the argument is “clearly new,” IPB offers no reason why the Board should do so. See Mot., 5-6.

IPB has known since the Petition was filed that the Petition relied upon

inverted embodiments of Parkin’s Figure 3A. Pet., 40. IPB also knew that Figure 11 is an inverted embodiment of Figure 3A, admitting that Figure 11 showed MgO(001) above amorphous CoFeB. POPR, 47. Its effort to feign surprise that Parkin’s CoFe layer 520 between the tunnel barrier and the amorphous CoFeB in Figure 11 is optional is ridiculous given that there is no such layer in inverted Figure 3A, as distinguished from Figure 3B. *See, e.g.*, Pet., 39 (“Parkin’s CoFeB layer 175 adjoins the ‘MgO crystalline layer 120’ in Figure 3A.”); EX1062, 19:28-32 (describing optional “thin interface layer 170 comprised of a crystalline CoFe alloy” between MgO and CoFeB in Figure 3B), 22:29-33 (describing Figure 11 as an inverted “structure of the devices shown in FIGS. 3A and 3B”); EX2018, 134:24-135:3 (explaining that layer 520 in Figure 11 is optional).

IPB’s assertion that Parkin’s disclosure that layer 520 in Figure 11 is optional represents a “*different* part[] of Parkin,” Mot., 6 (emphasis in original), flies in the face of Parkin’s own disclosure that Figure 11 is an inverted embodiment of Figure 3A, EX1062, 22:29-33, as IPB previously admitted, POPR, 47.

Citing additional evidence in a reply to respond to an argument does not prove it asserts a new theory. *Rembrandt Diagnostics v. Alere*, 76 F.4th 1376, 1384 (Fed. Cir. 2023) (“[T]he introduction of new evidence in the course of the trial is to be expected in IPR trial proceedings....” (citation omitted)). “Parties are not barred from elaborating on their arguments on issues previously raised.” *Apple v. Andrea*

Elecs., 949 F.3d 697, 706 (Fed. Cir. 2020) (citation omitted). Further, IPB’s reliance on *Ariosa* is inapposite, *see* Mot., 6, as *Ariosa*’s petitioner relied on a prior art ***embodiment*** not discussed in the petition, *Rembrandt*, 76 F.4th at 1385 (citing *Ariosa Diagnostics v. Verinata Health*, 805 F.3d 1359, 1367-68 (Fed. Cir. 2015)).

B. MgO(001) Formation On Other Amorphous Surfaces

IPB devotes just one page to its original reason for this Motion that the “Reply’s argument that POSAs reasonably expected MgO(001) to form on CoFeB because [MgO(001)] allegedly formed on different amorphous substrates” is new and relies on new evidence: EX1097-EX1099, EX1105 ¶¶6-22 (omitting ¶25 here). *See* Mot., 7. IPB also appends to its list of alleged new evidence Bokor testimony (EX2018, 134:1-138:11), Wulff (EX1036), and portions of Nagahama (EX1027 ¶¶55-59, 61, 67). *See id.* These additions to IPB’s requested relief are improper for the reasons discussed above in Section I. Dr. Bokor’s written testimony, Exhibits 1097-1099, and Wulff and Nagahama each refute Dr. Ross’ incorrect allegations about the knowledge of one of skill in the art and constitute proper reply evidence. 37 C.F.R. § 42.23(b) (“A reply may only ***respond to arguments raised in the corresponding... patent owner response***, or decision on institution.”).

Dr. Ross inaccurately asserted that “a POSA would have not reasonably expected success in making a crystalline MgO layer for an MTJ (of less than 10 nm) on an amorphous surface.” EX2053 ¶162 (Dr. Ross explaining in detail why she

believed a POSA would not have reasonably expected success in forming the claimed MgO(001) layer on a CoFeB underlayer); *see also* POR, 6, 22-43.

Dr. Bokor responded to Dr. Ross’ assertions by citing EX1097-1099, each of which is prior art cited in the same passages of the Yuasa and Wulff references Dr. Ross relied upon in her declaration, as well as Nagahama. These references directly refute her opinion and show that a skilled artisan would have expected MgO(001) to grow on amorphous surfaces like CoFeB. EX1105 ¶¶6-22. The Reply, citing the prior art, Petition, and Dr. Bokor’s testimony, explains that “Nagahama itself, Parkin, Yuasa, and the references Yuasa cites all demonstrate that one of skill knew how to fabricate <10-nm MgO(001) on an amorphous surface.” Reply, 12 (citing Reply § II).

Both Dr. Bokor and the Reply refute IPB’s arguments challenging that Wulff’s (EX1036) and Nagahama’s (EX1027) disclosures did not “establish that a POSA would have had a reasonable expectation of success in achieving the claimed MgO(001) layer.” POR, 38 (attacking the merits of Wulff EX1036); *id.*, 45-46 (describing Nagahama’s MgO double underlayer). EX1097-1098 cited in Yuasa’s EX2006 and EX2008 directly refute Dr. Ross’ opinion regarding growing MgO(001) on amorphous surfaces. EX2053 ¶162. These are quintessential proper “responsive reply arguments” that “involve[] the same legal ground based on the same prior art references and the same legal argument.” *Rembrandt*, 76 F.4th at

1385 (citation modified).

Finally, IPB’s position that Petitioner’s reliance on Nagahama’s and Inaba’s “seed” layer is new because the “Petition mapped the MgO(001) limitations to... barrier layers that are MgO(001) through their entire thicknesses,” misses the point. Mot., 7 (emphases omitted). The MgO(001) is formed on an amorphous substrate, just like what IPB claims Yuasa invented. *See, e.g.*, EX2013, 2 (describing formation of ***amorphous*** MgO on CoFeB until 5 monoatomic layers after which it started to crystallize to MgO(001)); EX2053 ¶45 (describing EX2013 as Dr. Yuasa’s “work on CoFeB/MgO/CoFeB MTJs described in the ’134 patent”); EX1101, 100:12-21 (Dr. Ross unable to say if EX2013’s teaching that MgO starts amorphous when grown on CoFeB is “generally true”).

III. IPB IDENTIFIES NO PREJUDICE

IPB fails to show prejudice at all, let alone “prejudice [that is] so great” as to warrant granting its Motion. CTPG, 80-81. IPB asserts that “[h]aving to respond at oral hearing without the benefit of supporting expert testimony would be prejudicial to IPB,” Mot., 8, but that is true of every sur-reply and cannot show prejudice alone. IPB next asserts that the “prejudice is compounded because the Reply’s new arguments rest entirely on the naked say-so of Petitioner’s expert.” Mot., 8. But if that were true, it would not be seeking to strike EX1097-1099 and the Reply’s reliance on Wulff (EX1036) and Nagahama (EX1027). *See* Mot., 7.

IPB's arguments regarding the merits of Parkin do not even attempt to show prejudice. *See* Mot., 9; EX2079, 8:1-7 (IPB explaining that it would reserve arguments on Parkin for its sur-reply). Indeed, IPB could have addressed Parkin's inverted Figure 3A (including Figure 11), or anything incorporated by reference into Parkin in its POR, but instead chose to stay silent. *See supra* §§ II.A-II.B. IPB is not entitled to try again just because it regrets how its deliberate choice is playing out.

Neither can IPB show it was prejudiced by the filing of EX1097-1099 because they each were cited by IPB's own evidence. In its POR, IPB and Dr. Ross also relied on disclosures in Yuasa's APL 2005 (EX2006) and 2004 Nature Materials (EX2008) wherein Dr. Yuasa cited Wang 1997 (EX1097) and Inaba (EX1098) as support for MgO(001) being grown on amorphous substrates. *See* POR, 26, 61, 65; Reply, 6-8. Dr. Ross also cited to disclosure in Wulff (EX1036) that cites to Tonouchi (EX1099). *See* EX2053 ¶142; Reply, 8. At her deposition, Dr. Ross simply stated that she did not consider EX1097-1099 in reaching her opinion that one of skill would not have expected success in growing MgO(001) on CoFeB and refused to address them. *E.g.*, EX1101, 104:14-105:21, 109:18-110:11, 116:6-16, 123:10-125:8, 141:10-17, 146:9-17.

IV. CONCLUSION

WD respectfully requests the Board deny IPB's Motion to Strike.

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a true copy of the foregoing **PETITIONER’S OPPOSITION TO MOTION TO STRIKE** is being served electronically on November 25, 2025 to the following counsel for Patent Owner to the following email addresses:

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