

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. IPR2024-01494
U.S. Patent No. 11,968,909

PETITIONER'S OPPOSITION TO MOTION TO STRIKE

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All emphasis is added in quoted material unless otherwise indicated.

IP Bridge’s exceptional request for a motion to strike should be denied. IPB identifies no brand-new theory in Reply. Instead IPB’s requested relief improperly and untimely asks the Board to strike expert testimony IPB affirmatively relied upon in its Response. Bolstering the Petition’s original motivation to combine while responding by citing additional evidence from Butler contradicting IPB’s expert is proper on reply. IPB’s complaint about having to respond to arguments about Butler’s teachings at the oral hearing, which it will have to do anyway, is not actual prejudice, let alone any “prejudice... so great” as to warrant a motion to strike. PTAB Consolidated Trial Practice Guide (“CTPG”), 80-81. Nor does IPB provide any explanation why this Motion is not mooted by its submission of a sur-reply with a bonus expert declaration.

I. IPB’S MOTION REQUESTS IMPROPER AND UNAUTHORIZED RELIEF

IPB’s Motion asks the Board to strike not only a portion of the Reply and supporting declaration, but also seven excerpts from deposition transcripts IPB itself filed with its POR. Paper 29 (“Mot.”), 1 (seeking to strike portions of EX2013 and EX2014). Neither in its email nor argument to the Board did IPB ever identify any deposition testimony in EX2013 or EX2014 as something it sought to strike. *See, e.g.*, EX3001, 2 (seeking to strike “Petitioner’s reply and its accompanying Reply Declaration from Dr. Bokor”); EX2079, 13:4-7, 14:3-11. Nor could it have, since a

motion to strike must be sought “within one week of the allegedly improper submission.” CTPG, 81. Not only did IPB itself submit both transcripts on July 16, 2025, *see* Paper 18 (“POR”), almost three full months before it sought a motion to strike, it also failed to object to either of them in any manner either during the deposition or even after, precluding a motion to strike, 37 C.F.R. § 42.64(a).

Instead of objecting to these deposition transcripts or timely moving to strike them, IPB affirmatively relied on the testimony it now seeks to strike. *See* POR, 35-36, 49 (relying on the same EX2013 testimony); *id.*, 34, 48, 50-51 (relying on the same EX2014 testimony). Disappointment with how the evidence is stacking up is not a ground to strike it. EX2013-EX2014 are not properly part of IPB’s Motion.

II. THE REPLY ARGUMENTS ARE NOT NEW

IPB identifies no new theory because the Reply properly supports the Petition’s original motivation to combine and identifies additional evidence from Butler contradicting IPB’s expert testimony.

A. Like The Petition, The Reply Shows One Of Skill Would Explore Lower Barrier Heights

IPB criticizes the Petition’s reliance on increasing TMR as a motivation to lower barrier height. Mot., 1-3. IPB ignores that the Petition explained that this motivation would lead one of skill “to *explore lower barrier heights.*” Paper 1 (“Pet.”), 34-35. That is precisely the same motivation offered by Dr. Bokor at his deposition and offered in Reply.

The Petition explained that “Butler and Mathon taught that MgO barriers would achieve higher TMRs due to improved symmetry matching between the MgO barrier and ferromagnetic electrodes, facilitating tunneling of parallel electrons across the barrier compared to antiparallel tunneling.” Pet., 34. Thus, “[o]ne of skill in the art looking to increase TMR of an MgO barrier would have been motivated to explore lower barrier heights to facilitate tunneling of parallel electrons.” *Id.*, 34-35 (citing EX1024 ¶171).

Dr. Bokor testified to the same things in his opening declaration, explaining with reference to Butler and Mathon that “MgO has the special property that tunneling is governed by the majority (parallel) spin electrons.” EX1024 ¶68 (citing Butler and Mathon). Dr. Bokor further explained, “As a 2001 paper by Klaua explained, unlike amorphous Al₂O₃ barriers, for crystalline MgO barriers: ‘The tunneling resistance for the parallel orientation of the magnetic moments is estimated to be **100 times smaller** than that for the antiparallel orientation of the magnetic moments due to the absence of scattering in the barrier.’” *Id.* (emphasis in original) (quoting EX1045, 1). Thus, Dr. Bokor concluded that “skilled artisans would have been motivated to explore lower barrier heights to facilitate tunneling of parallel electrons.” *Id.* ¶171; *see also id.* ¶166 (explaining that “barrier height measures the difference between the Fermi level of the electrode and the bottom of the conduction band of the barrier layer”).

When asked to explain his conclusion at his deposition, Dr. Bokor explained:

The tunneling resistance is a hundred times smaller and is different for the parallel and the antiparallel. It's a different mechanism.

So my opinion is that a person of ordinary skill looking at this and understanding the basic properties of tunneling would understand that lowering the barrier by – would thereby change the energy at which the spins or the electrons are entering the barrier relative to the band structure. And thus, the amount – that factor of a hundred that's referred to in the paragraph 68, as the tunnel barrier is reduced, that factor – it is reasonable to expect that that factor will change. ... And as the tunnel barrier is reduced, that changes the energy alignments of the ferromagnetic electrode and the MgO.

EX2013, 116:16-117:9. Dr. Bokor thus set forth the same theory articulated in his declaration. IPB did not object to this testimony or move to strike it for nearly three months.

Instead, Dr. Ross responded to Dr. Bokor's testimony about Butler by asserting that "Butler's model *predicts nothing about the effect of lowering the barrier height on TMR*—nor could it," EX2053 ¶92, and "Butler *does not provide any data for any structure other than the one the authors modeled* and a POSA would not have drawn any conclusions beyond those reached by Butler, let alone any conclusion that would have motivated a POSA to lower the barrier height in Bowen's or Nagahama's MTJs," *id.* ¶96.

Dr. Bokor then replied to Dr. Ross’ assertions by citing Butler’s Figures 3-4 and the associated discussion, demonstrating the effect of changing the barrier height (“the difference between the Fermi level of the electrode and the bottom of the conduction band of the barrier layer,” EX1024 ¶166) in Butler’s MgO model. EX1105 ¶¶7-12. The Reply, citing both Butler and Dr. Ross’ admissions, explains that “[o]ne of skill could not help noticing that moving the Fermi energy level, for example, by reducing barrier height, would have a significant impact on tunneling conductance for both majority and minority spin channels, thus changing TMR.” Paper 24 (“Reply”), 15.

Both Dr. Bokor and the Reply simply cite additional evidence from Butler that contradicts Dr. Ross’ testimony about Butler while bolstering the Petition’s obviousness theory and Dr. Bokor’s original testimony. *See* Reply, 5-10. 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 Diagnostics v. Alere*, 76 F.4th 1376, 1385 (Fed. Cir. 2023) (citation modified). Indeed, “the introduction of new evidence in the course of the trial is to be expected in IPR trial proceedings and permissible as long as the opposing party is given notice of the evidence and an opportunity to respond to it.” *Id.* at 1384 (citation omitted).

B. Dr. Bokor’s Testimony About Uncertainty Does Not Change The Invalidity Theory

IPB spends the bulk of its Motion asserting that Dr. Bokor’s testimony that one of skill could not predict which way TMR would change with decreasing barrier height but would be motivated to try to increase TMR, somehow is a new obviousness theory that is different from the obviousness theory relied upon in the Petition and Dr. Bokor’s opening declaration. Mot., 3-8. IPB does not explain how Dr. Bokor’s testimony about something one of skill could not predict amounts to a new obviousness theory.

For example, IPB argues that the Reply improperly asserts “that POSAs would have expected ‘TMR would change’ but be ‘*uncertain*’ if TMR would increase or *undesirably decrease* which is ‘*legally sufficient* motivation.’” Mot., 3 (emphases in original) (quoting Reply, 7-8). IPB’s misleading parsing omits that the Reply argument begins by quoting the Petition’s assertion that one of skill would be motivated to “explore lower barrier heights” and Dr. Bokor’s corresponding opening testimony. Reply, 6 (quoting Pet., 34-35; EX1024 ¶¶170-71). It is only in response to “IPB[’s] unfair[] critici[sm] [of] Bokor’s testimony that ‘a POSA would not have known whether lowering the barrier height of the MgO barrier layer in Bowen or Nagahama would have increased or decreased TMR,’” that those statements are made. Reply, 7 (quoting POR, 34). As the passage concludes, “Butler’s predictions

about the behavior of parallel and antiparallel electrons crossing MgO rendered barrier height an identified and predictable (if uncertain) strategy to increase TMR.”

Reply, 7. That is precisely the theory articulated in the Petition and Dr. Bokor’s opening declaration.

IPB next argues that “[t]he *Petition’s* assertion that lowering barrier [sic] would improve TMR did *not* cite Butler” Mot., 4-5 (emphases in original). But that is directly contradicted by the Petition:

Butler and Mathon taught that MgO barriers would achieve higher TMRs due to improved symmetry matching between the MgO barrier and ferromagnetic electrodes, facilitating tunneling of parallel electrons across the barrier compared to antiparallel tunneling. One of skill in the art looking to increase TMR of an MgO barrier would have been motivated to explore lower barrier heights to facilitate tunneling of parallel electrons.

Pet., 34-35 (citations omitted).

Acknowledging this reliance, the Motion next asserts that the “Petition’s challenge to the barrier height claims cited just the *first page* of each of Butler and Ma[t]hon” instead of “Figs. 3-4 and pages 2-4.” Mot., 5 (emphasis in original); *see also id.*, 5-8. But merely citing additional evidence in a reply to respond to IPB’s arguments about that same reference does not prove it asserts a new theory. *Rembrandt*, 76 F.4th at 1384 (“[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).

Exhibit 1106 (Giordano) is similar. Dr. Bokor cited this exhibit merely to illustrate “one of skill’s knowledge in 2004 that introducing oxygen vacancy defects” would increase the Fermi energy and thus decrease the barrier height. EX1105 ¶9. This citation directly responds to Dr. Ross’ inaccurate statements, not to advance any new theory. *See Rembrandt*, 76 F.4th at 1384. Further, Petitioner is allowed to “introduce new evidence after the petition stage... if it is used to document the knowledge that skilled artisans would bring to bear in reading the prior art identified as producing obviousness.” *Anacor Pharms. v. Iancu*, 889 F.3d 1372, 1380-81 (Fed. Cir. 2018) (citation and internal quotation marks omitted).

IPB asserts that relying on Butler’s “symmetry matching” alone is a different theory than is articulated in the Reply with respect to Butler’s Figures 3 and 4, Mot., 5-6, but that ignores the rest of the Petition’s sentence: “Butler and Mathon taught that MgO barriers would achieve higher TMRs due to improved symmetry matching between the MgO barrier and ferromagnetic electrodes, *facilitating tunneling of parallel electrons across the barrier compared to antiparallel tunneling.*” Pet., 34. As explained above, the difference in mechanisms for parallel versus antiparallel tunneling is what led to the conclusion that changing Fermi level relative to barrier

conduction band (*i.e.*, barrier height) would change TMR, thus motivating one of skill to explore lower barrier heights. *See, e.g.*, Pet., 34-35; EX2013, 116:16-117:9. And IPB’s reliance on *Ariosa* is inapposite, *see* Mot., 7, because *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)).

IPB’s final argument that Dr. Bokor’s deposition testimony represented a new theory divorced from the Petition, Mot., 7-8, is refuted in this section. IPB does not explain why it could not object to that testimony, or move to strike it, until three months after IPB filed it and after receiving Petitioner’s Reply. *See id.*

III. IPB IDENTIFIES NO PREJUDICE

IPB fails to show “prejudice [that is] so great” to warrant granting its Motion. CTPG, 80-81. IPB asserts only that “IPB will be prejudiced by having to devote substantial time at oral hearing explaining why Petitioner’s new arguments fail on the merits,” yet spends the rest of its Motion articulating why it believes Petitioner’s argument fails on the merits. *See* Mot., 9-10. Even if Petitioner and Dr. Bokor were wrong on the merits, that would not show prejudice. As is plainly evident from the Petition, Dr. Bokor’s opening declaration, and even IPB’s characterization of the Petition’s arguments, *e.g.*, Mot., 5-6 (attacking Petition’s reliance on Butler), Butler already will be a focal point of discussion at the hearing. IPB cannot legitimately

claim prejudice by responding to discuss Butler’s teachings. Moreover, even if it could, it does not explain why this Motion, sur-reply, or requesting additional argument time have not cured any prejudice.

IV. IPB’S SUR-REPLY DECLARATION MOOTS ITS MOTION

Finally, IPB’s submission of a sur-reply with an expert declaration moots this Motion. *See Apple v. Uniloc*, IPR2017-01993, Paper 18 at 3 (P.T.A.B. Sept. 14, 2018) (“Patent Owner seeks both a sur-reply and a motion to strike. We are not persuaded that granting both requests would be in the interest of justice”). IPB has now had a full and fair opportunity to respond to Petitioner’s arguments, rendering a separate motion to strike superfluous. The Board denies motions to strike when the patent owner was permitted to respond through a sur-reply and declaration. *See Life Spine v. Globus Med.*, IPR2022-01434, Paper 49 at 124 (P.T.A.B. Mar. 20, 2024) (denying motion to strike allegedly new obviousness theories raised on reply because the patent owner was allowed to file a sur-reply brief and expert declaration addressing them). IPB offers no explanation why it is entitled to both a bonus sur-reply declaration and also having the material to which it responds struck.

V. CONCLUSION

Petitioner respectfully requests that 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 13, 2025 to the following counsel for Patent Owner to the following email addresses:

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