

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

YANGTZE MEMORY TECHNOLOGIES COMPANY, LTD.

Petitioner,

v.

MICRON TECHNOLOGY, INC.

Patent Owner.

Case IPR2025-00099

U.S. Patent No. 10,872,903

**PETITIONER’S PRELIMINARY REPLY
TO PATENT OWNER’S PRELIMINARY RESPONSE**

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EXHIBIT LIST

Exhibit No.	DESCRIPTION
1001	U.S. Patent No. 10,872,903 (“’903”)
1002	File History of U.S. Patent Application No. 16/716,177 (“’903FH”)
1003	Declaration of Dr. Kelin Kuhn in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 10,872,903 (“Kuhn”)
1004	Certified Translation of Korean Patent Application Publication No. 10-2010-0034612 (“Ahn”)
1005	Korean Patent Application Publication No. 10-2010-0034612
1006	U.S. Patent Application Publication No. 2009/0146190 (“Fukuzumi”)
1007	U.S. Patent Application Publication No. 2009/0283819 (“Ishikawa”)
1008	U.S. Patent No. 5,596,523 (“Endoh”)
1009	U.S. Patent No. 6,765,825 (“Scott”)
1010	U.S. Patent Application Publication No. 2010/0240205 (“Son”)
1011	U.S. Patent Application Publication No. 2009/0242967 (“Katsumata”)
1012	U.S. Patent Application Publication No. 2009/0310425 (“Sim”)
1013	U.S. Patent Application Publication No. 2010/0019310 (“Sakamoto”)
1014	Joint Claim Construction and Prehearing Statement (Patent Local Rule 4-3), <i>Yangtze Memory Technologies Co. Ltd. v. Micron Technology, Inc. and Micron Consumer Products Group, LLC.</i> , No. 3:23-cv-05792-RFL, D.I. 105 (N.D. Cal. August 19, 2024)
1015	“Extended Data Retention Process Technology for Highly Reliable Flash EEPROMs of 10 ⁶ to 10 ⁷ W/E Cycles” by F. Arai et al. (1998)

Exhibit No.	DESCRIPTION
1016	“A High-Endurance (>100K) BE-SONOS NAND Flash With a Robust Nitrided Tunnel Oxide/Si Interface” by S. Wang et al. (2010)
1017	“Flash Memory Reliability NEPP 2008 Task Final Report” by Y. Chen (2009)
1018	Counterclaim Plaintiff Micron Technology’s Disclosure of Asserted Claims and Infringement Contentions and Document Production Accompanying Disclosure (Patent Local Rules 3-1 and 3-2), <i>Yangtze Memory Technologies Co. Ltd. v. Micron Technology, Inc. and Micron Consumer Products Group, LLC.</i> , No. 3:23-cv-05792- RFL (N.D. Cal.)
1019	U.S. Patent Application Publication No. 2008/0116441A1 (Raghuram)
1020	“Growth characteristics and electrical resistivity of chemical vapor-deposited tungsten film” by I-Shun Chang (1998)
1021	Scheduling Order, <i>Yangtze Memory Technologies Co. Ltd. v. Micron Technology, Inc. and Micron Consumer Products Group, LLC.</i> , No. 3:23-cv-05792-RFL, D.I. 141 (N.D. Cal. Sept. 18, 2024)
1022	“Nitride Engineering and the Effect of Interfaces on Charge Trap Flash Performance and Reliability” by Sandhya C. (2008)
1023	Excerpts of “Polycrystalline Silicon for Integrated Circuits and Displays” by Ted Kamins (1998)
1024	Print-out of IEEE webpage (dated November 8, 2024)
1025	U.S. Patent No. 7,425,742 (Nazarian)
1026	U.S. Patent Application Publication No. 2007/0057328 (“Taniguchi”)
1027	“Shrinking Possibilities” by B. Arnold (2009)
1028	Press Release, U.S. Department of Commerce, <i>Department of Commerce Awards CHIPS Incentives to Micron for Idaho and New</i>

Exhibit No.	DESCRIPTION
	<i>York Projects and Announces Preliminary Memorandum of Terms for Virginia DRAM Project to Secure Domestic Supply of Legacy Memory Chips</i> (Dec. 10, 2024) available at: https://www.commerce.gov/news/press-releases/2024/12/departments-commerce-awards-chips-incentives-micron-idaho-and-new-york (last accessed Apr. 9, 2025)
1029	IPR2025-00245 (<i>Micron Technology, Inc., v. Yangtze Memory Technologies Company, Ltd.</i>), Paper 1 (excerpt)
1030	IPR2024-00370 (<i>Micron Technology v. Netlist Inc.</i>), Paper 1 (excerpt)
1031	Printout, Bureau of Industry and Security, <i>Entity List FAQs</i> (2024) available at: https://www.bis.doc.gov/index.php/component/fsj_faqs/cat/33-entity-list-faqs (last accessed Apr. 9, 2025)
1032	87 Fed. Reg. 77505 (December 19, 2022), <i>Additions and Revisions to the Entity List and Conforming Removal From the Unverified List</i>
1033	Printout, Yahoo Finance, <i>Micron Technology Inc. (MU)</i> , available at https://finance.yahoo.com/quote/MU/holders/ (last accessed Apr. 9, 2025)
1034	Printout, Slashgear, <i>The Real Owners Behind the World's Biggest Tech Companies</i> , available at: https://www.slashgear.com/1669177/biggest-tech-companies-who-really-owns/ (last accessed Apr. 11, 2025)

Patent Owner Micron asserted the Challenged Claims against Petitioner YMTC, not the Chinese government, in District Court. In response, YMTC filed its petition. Micron's POPR raises three arguments about whether YMTC can file a petition and whether the Board should discretionarily deny the petition due to alleged Chinese government investment in YMTC. These arguments should be rejected. First, YMTC is a "person" that can file an IPR consistent with binding precedent. Second, YMTC is a private company, not a state-owned enterprise, and mere investment by certain Chinese government entities does not render China a real party in interest ("RPI"). Indeed, the U.S. government has invested in Micron, but was not identified as an RPI in any Micron IPR. Third, the U.S. government could have, but has not, alleged that YMTC operates on behalf of the Chinese government. YMTC's 2022 inclusion on the U.S. Commerce Department's "Entity List" was exclusively based on the U.S. government's perceived risk that YMTC's products could be "diver[t]ed" to another entity on the list, not on any allegation of Chinese government ownership or control. In sum, Micron's arguments are specious and unsupported by its alleged evidence and adopting them would require the Board to make drastic holdings that are contrary to law and precedent. Micron does not dispute the underlying merits of the IPR, which should be instituted.

I. Micron's Allegations Are Unsupported and Irrelevant

Micron's allegation that the Chinese government controls YMTC is

unsupported by its alleged evidence, which is unreliable and inaccurate. YMTC is a private company with independent control over its actions, including this petition. No other party played a role in YMTC's decision to pursue this IPR, or exercised control over the arguments. None of Micron's alleged evidence shows otherwise.

The sum total of the alleged evidence provided in Micron's POPR is that: (1) the Chinese government has a fund that invests in the integrated circuit field (POPR 3-6); (2) YMTC's parent company (YMT Holding ("YMTH")) has a series of minority investors, and Micron alleges that these investors have taken investment from a diverse range of interests that includes local government branches in China and the integrated circuit investment fund (POPR 6-10); and (3) YMTC has been added to the U.S. Bureau of Industry and Security's ("BIS") Entity List and to the U.S. Department of Defense's ("DOD") Chinese Military Company List ("CMC List") (POPR 10-12). Even if true, Micron never explains how any of these allegations supports its conclusory argument that the Chinese government is an RPI.

Micron cannot support its argument because it is inaccurate. That YMTC's parent company allegedly has a series of minority investors, including various government entities, does not imply control, nor is such investment structure unusual for private Chinese companies. Micron does not purport to explain how this set of entities exercises any level of control over YMTC's actions. Indeed, Micron's briefing cites no case in which the Board has held that a passive investor in any

company (let alone one three levels removed) should prevent a party from being able to file an IPR petition, and YMTC knows of no such case. Moreover, in District Court, Micron chose to sue YMTC (Pet. 4)—not the Chinese government or any alleged investors that it argues are state-owned entities. Assuming *arguendo* that Micron truly believes that YMTC is “an entity created, owned, and controlled by the Chinese government” and is therefore “not a statutorily authorized ‘person,’” it should have named the Chinese government, not YMTC, in District Court. POPR 1. YMTC similarly identified RPIs at the District Court and Micron never challenged the fact that YMTC did not name the Chinese government in that forum. Ex. 2021.

Following Micron’s own argument, the U.S. government would be an RPI when Micron files IPR petitions, at least because Micron took a \$6.165 billion U.S. government investment as part of the 2022 CHIPS Act. Ex. 1028. Like the Chinese integrated circuit fund, the CHIPS Act constitutes state investment in Micron and was intended to “help the U.S. grow its share of advanced memory manufacturing” and to “strengthen U.S. economic resiliency by bolstering a reliable domestic supply of leading-edge DRAM chips.” *Id.* If taking passive investment from a government source makes the government an RPI, then Micron’s direct investment from the U.S. government would mean that it should identify the U.S. government as an RPI when it files or defends against IPRs—something that it has never done in its 30+ IPRs filed since the CHIPS Act passed. *See, e.g.,* Pap. 3; *see also* Exs. 1029, 1030.

Micron’s Entity List and CMC List allegations (both of which YMTC disagrees with and is currently disputing through the entities tasked with those determinations) are similarly misleading. The Entity List identifies entities “subject to specific license requirements for the export, reexport and/or transfer (in-country) of specified items.” Ex. 1031. YMTC’s inclusion on the Entity List does not state or suggest that it is owned or controlled by the Chinese government—rather, BIS explained that the reason for YMTC’s inclusion is exclusively the alleged “risk of diversion to [other] parties on the Entity List.” Ex. 1032 at 77506. Neither ownership nor control are a reason for inclusion on the Entity List. *See* 15 C.F.R. § 744.11 (listing criteria). With respect to the CMC List, Micron inaccurately argues that inclusion means that a company is an alleged “entity that is owned and/or controlled by the Chinese government.” POPR 12. Micron strategically omits that there is an alternative reason for inclusion on the list that is unrelated to ownership or control. *See* H.R. 6395, 116th Cong. § 1260H(d)(1)(B)(II) (2021). For example, a company may be added to the CMC List on a finding that it is “affiliated with the Chinese Ministry of Industry and Information Technology, including research partnerships and projects.” *Id.* § 1260H(d)(2)(B). The DOD has not specified the reason for YMTC’s inclusion on the CMC List, which may be wholly unrelated to any alleged ownership/control by the Chinese government, and thus irrelevant to this IPR.

In aggregate, Micron’s allegations are not only unsupported, but irrelevant.

Micron's evidence does not suggest that the Chinese government has control over YMTC or that it has any involvement at all except as a passive investor in the investors in YMTC's parent. Because YMTC functions as an independent, private company, with sole control over how it conducts itself in this proceeding, and there is no evidence to the contrary, Micron's arguments should be rejected.

II. Micron's POPR Arguments Are Contrary to Law

A. YMTC Is a "Person" Entitled to File an IPR

Micron's argument that YMTC is not a "person," based solely on *Return Mail* (POPR 15-18), is misguided. *Return Mail* was largely based on statutory restrictions against suing the U.S. government for infringement that do not apply to YMTC, and Micron's argument was rejected by the Federal Circuit in analogous circumstances.

In *Return Mail*, the Supreme Court held a U.S. government agency (the U.S. Postal Service) was not a "person" and thus could not file an IPR because "federal agencies face lower risks [so] it is reasonable for Congress to have treated them differently" than an individual or a private party. 587 U.S. 618, 625, 635-636 (2019). Non-government actors "face greater and more uncertain risks if they misjudge their right to use technology" including because 28 U.S.C. § 1498 places several restrictions on patent owners suing the Government, which are not applicable to shield non-government actors from patent infringement claims. *Id.* (listing restrictions). None of these restrictions applies to Micron's infringement

counterclaim against YMTC, which faces all of the same potential liability as any other private company, particularly given Micron’s decision to bring its allegations of Chinese control at the PTAB but not at the District Court.

A more apt comparison is *Bozeman Fin. LLC v. Fed. Rsrv. Bank of Atlanta*, in which the Federal Circuit determined that Federal Reserve banks were “persons” under the AIA in the aftermath of the *Return Mail* decision:

It is significant that the Banks are subject to suit for patent infringement in any court. The Supreme Court recognized that federal agencies face less risk for patent infringement than do private entities, and recognized that lessened risk as a reason for Congress to treat federal agencies differently. A patent owner's remedy is limited when it sues the government rather than private entities. Patent owners’ ability to sue the Banks in any district court, and to seek remedies they would be prohibited from in a suit against the government, favors a finding that the Banks are separate from the government and Congress intended the Banks have access to post-issuance proceedings.

955 F.3d 971, 975-76 (Fed. Cir. 2020) (citations omitted). *Bozeman* thus counsels that YMTC, a private entity subject to suit in district court (as shown by the lawsuit that Micron filed against YMTC), is a “person” entitled to file an IPR petition.

The Federal Circuit’s reasoning is even more applicable to YMTC than it was to the banks in *Bozeman*. There plaintiff argued that the banks were “operating members of the nation’s Federal Reserve System, which is a federal agency, meaning they are government entities” and that they “implement the monetary and

fiscal policies of the United States, conduct important governmental functions, and any profit generated by the Banks is transferred to the United States Treasury.” *Id.* at 975. YMTC is not a government entity and does not have any of the advantages that the U.S. government enjoys to defend itself in court.

Because *Return Mail* is distinguishable and *Bozeman* counsels that YMTC is a statutory “person,” Micron’s argument is legally flawed and should be rejected.

B. The Chinese Government Is Not an RPI

Micron never explains how the Chinese government controlled or could have controlled this proceeding, or how this petition was “filed at another party’s behest.” *Uniloc 2017 LLC v. Facebook Inc.*, 989 F.3d 1018, 1027–28 (Fed. Cir. 2021). To identify RPIs, “[r]elevant considerations may include, whether a party exercises [or could exercise] control over a petitioner’s participation in a proceeding, or whether a party is funding the proceeding or directing the proceeding.” *Id.* (cleaned up).

Micron’s bare allegations that YMTC’s parent company has investors that took investment from the Chinese government do not suggest that the government specifically funded this proceeding or that it had an opportunity to control YMTC’s filing of these IPR petitions against Micron. At most, Micron argues that the Chinese government gets a benefit from this proceeding because it has investors in the company. POPR 18-22. But having investors has never been the standard for identifying RPIs. Accepting this argument would mean that **every investor** (or at

least every major investor) in a company is an RPI, and therefore that the estoppel from a one-year bar or final written decision would infect dozens of companies that had nothing to do with the lawsuit or the IPR. For example, Micron would be an RPI with its investors, which in turn would be RPIs with many of the biggest public technology companies in the U.S. Exs. 1033, 1034 (Micron's biggest investors also invest in many other tech companies). Worse yet, under Micron's argument, when a state invests in a company, every company that the state has invested in would have the same estoppel profile as the state—impacting hundreds of other companies.

Because the Chinese government is not an RPI, and because Micron's argument would drastically expand the definition of RPI and the corresponding requirement to identify RPIs, the Board should reject that argument.

Micron's alternative argument that YMTC should have identified YMTH as an RPI lacks merit because Micron never argues nor provides evidence that YMTH controlled or could control this proceeding. *See VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, 778 F. App'x 897, 903 (Fed. Cir. 2019) (investment manager of petitioner was not an RPI, even after transmitting money to finance the proceedings). Nonetheless, to the extent that the Board determines that YMTH should be identified, YMTC is willing to amend its identification of RPIs to include YMTH. Such an amendment should not change the filing date afforded to the petition. *See Wi-Fi One v. Broadcom Corp.*, 878 F.3d 1364, 1374, n.9 (Fed. Cir. 2018) (en banc)

(“[I]f a petition fails to identify all real parties in interest under § 312(a)(2), the Director can, and does, allow the petitioner to add a real party in interest.”); *Adello Biologics LLC v. Amgen Inc.*, PGR2019-00001, Pap. 11 (precedential). Micron has long been on notice of YMTH’s interest, at least from YMTC’s November 2023 disclosure in district court. Ex. 2021; see *Mayne Pharma Int’l Pty. Ltd. v. Merck Sharp & Dohme Corp.*, 927 F.3d 1232, 1239 (Fed. Cir. 2019) (allowing amendment of RPIs to include a party identified in parallel district court litigation).

C. The Board Should Not Exercise Its Discretion to Deny the Petition

Micron’s POPRs do not challenge (or even address) the prior art grounds identified by YMTC in its petitions that invalidate the asserted patents. Because YMTC presents undisputed grounds that invalidate Micron’s patents, the petition should be instituted. Micron’s failure to identify any substantive argument against the grounds that YMTC presented evidences the soundness of YMTC’s petition.

Instead of addressing the merits, Micron (POPR 27-29) relies on *Microsoft Corp. v. Science Applications Int’l Corp.* to argue that the Board should discretionally deny these petitions, but that case is inapposite. IPR2019-01311, Pap. 35. In *Microsoft*, the patent owner initially sued the U.S. government (not a private company) at the Court of Federal Claims. *Id.* at 3. Microsoft had a contract with the government to produce the allegedly infringing technology, and therefore filed IPR petitions, but these petitions were not filed until more than one year after the lawsuit

against the government was filed. *Id.* at 7-8. The Board concluded that Microsoft would have “no interest” in “seeking invalidity of the challenged claims but for the Contract” and that “the Petition and the infringement claims against the government are intertwined.” *Id.* at 9. The Board also pointed to “evidence of at least some pre-filing communication” and of the relationship between the parties. *Id.* at 1.

In contrast, here the related district court litigation is not a suit against the Chinese government (but directly against YMTC), there is no similar estoppel issue, and there are no allegations, let alone evidence, of any coordination between the Chinese government and YMTC as to this IPR. Instead, YMTC has a clear interest in the district court lawsuit by virtue of being accused there of patent infringement.

Micron’s additional arguments for discretionary denial (POPR 29-31) rely again on its conclusory allegation that the Chinese government owns and controls YMTC, which is unsupported by its alleged evidence, and which is contrary to the position that Micron took at the district court. YMTC further urges the Board to make a political decision—discretionarily denying any IPR petition that is filed by a company that has Chinese (or any other state) investment, no matter how far removed from its day-to-day operations. POPR 30-31. The Board should reject Micron’s attempt to inject its political biases into this IPR.

YMTC respectfully requests that the Board institute.

Respectfully submitted,

Dated: April 11, 2025

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing PETITIONER'S PRELIMINARY REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE was served in its entirety by filing through the Patent Trial and Appeal Case Tracking System (P-TACTS), as well as providing a courtesy copy via e-mail to the following attorneys of record for Patent Owner listed below:

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