

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MICRON TECHNOLOGY INC.,

Petitioner,

v.

SONRAI MEMORY LIMITED,

Patent Owner.

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Case IPR2023-00904

Patent 6,920,527

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**PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY**

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## TABLE OF CONTENTS

|                                                                                                                                                                                 |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| I. Introduction .....                                                                                                                                                           | 1 |
| II. Tsunoda does not render obvious a portable memory apparatus copying data from non-volatile memory to volatile memory when the apparatus is coupled to the host system ..... | 1 |
| III. Tomio does not render obvious a portable memory apparatus having a housing.....                                                                                            | 4 |
| A. Petitioner has not provided any support for the claim constructions it purports to rely upon.....                                                                            | 4 |
| B. Petitioner has not shown that Tomio renders obvious a portable memory apparatus having a housing.....                                                                        | 7 |

## TABLE OF AUTHORITIES

### Cases

|                                                                                                          |   |
|----------------------------------------------------------------------------------------------------------|---|
| <i>Boston Scientific Scimed, Inc. v. Cordis Corp.</i> ,<br>554 F.3d 982 (Fed. Cir. 2009) .....           | 6 |
| <i>CareFusion Corp. v. Baxter Int’l, Inc.</i> ,<br>IPR2016-01456, Paper 9 (PTAB Feb. 6, 2017) .....      | 9 |
| <i>Hologic, Inc. v. Enzo Life Sciences, Inc.</i> ,<br>IPR2018-00019, Paper 21 (PTAB Nov. 28, 2018) ..... | 9 |

**PATENT OWNER'S EXHIBIT LIST**

| <b>Exhibit No.</b> | <b>Description</b>                                                                                                                                                                                                                                                     |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2001               | Plaintiff's Notice of IPR Petition, <i>Sonrai Memory Limited v. Micron Technology, Inc.</i> , No. 6:22-cv-0085-ADA, Dkt. No. 40 (W.D. Tex. May 22, 2023)                                                                                                               |
| 2002               | Order Granting Motion for Entry of Scheduling Order, <i>Sonrai Memory Limited v. Micron Technology, Inc.</i> , No. 6:22-cv-0085-ADA, Dkt. No. 40 (W.D. Tex. May 22, 2023)                                                                                              |
| 2003               | Docket Sheet, <i>Sonrai Memory Limited v. Micron Technology, Inc.</i> , No. 6:22-cv-0085-ADA (W.D. Tex. Sept. 10, 2023)                                                                                                                                                |
| 2004               | Law360 Article: <i>West Texas Judge Says He Can Move Faster Than PTAB</i>                                                                                                                                                                                              |
| 2005               | Order Granting Joint Motion for Extension of Time To Extend Venue Discovery and Claim Construction Deadlines, <i>Sonrai Memory Limited v. Micron Technology, Inc.</i> , No. 6:22-cv-0085-ADA, Dkt. No. 51 (W.D. Tex. Aug. 3, 2023)                                     |
| 2006               | Text Order Denying Motion to Stay Pending IPR, <i>Solas OLED Ltd. v. Google, Inc.</i> , Case No. 6:19-cv-00515-ADA (W.D. Tex. June 23, 2020)                                                                                                                           |
| 2007               | Order Denying Motion to Stay Pending IPR, <i>Multimedia Content Management LLC v. DISH Network L.L.C.</i> , Case No. 6:18-cv-00207-ADA, Dkt. No. 73 (W.D. Tex. May 30, 2019)                                                                                           |
| 2008               | U.S. District Courts—Federal Court Management Statistics—Profiles—During the 12-Month Periods Ending June 30, 2018 Through 2023 available at <a href="https://www.uscourts.gov/statistics/table/na/federal-">https://www.uscourts.gov/statistics/table/na/federal-</a> |

| Exhibit No. | Description                                                                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <a href="#">court-management-statistics/2023/06/30-1</a>                                                                                                                                       |
| 2009        | Micron Technology, Inc's Preliminary Invalidity Contentions, <i>Sonrai Memory Limited v. Micron Technology, Inc.</i> , No. 6:22-cv-0085-ADA (W.D. Tex. June 7, 2023)                           |
| 2010        | Preliminary Invalidity Contentions, <i>Sonrai Memory Ltd. v. Kingston Technology Company, Inc. and Kingston Technology Corporation</i> , Case No. 6:21-cv-01284-ADA (Feb. 24, 2022, W.D. Tex.) |
| 2011        | Joint Claim Construction Statement, <i>Sonrai Memory Limited v. Micron Technology, Inc.</i> , No. 6:22-cv-0085-ADA, Dkt. No. 70, (W.D. Tex. October 18, 2023)                                  |
| 2012        | Declaration of Dr. Michael C. Brogioli in Support of Patent Owner's Response                                                                                                                   |
| 2013        | Curriculum Vitae of Michael C. Brogioli, Ph.D.                                                                                                                                                 |
| 2014        | Deposition Transcript of Dr. David Kuan-Yu Liu                                                                                                                                                 |

## **I. Introduction**

Patent Owner Sonrai Memory Ltd. and Nera Innovations Limited (“Patent Owner”) submits this Sur-reply to Petitioner’s Reply to Patent Owner Response (“Reply”) in the *inter partes* review of U.S. Patent No. 6,920,527 (“the ’527 Patent”).

Neither the Petition nor the Reply establish that the challenged claims of the ’527 patent are unpatentable because the prior art does not render obvious any of the challenged claims and Petitioner has fallen far short of its burden to demonstrate unpatentability.

## **II. Tsunoda does not render obvious a portable memory apparatus copying data from non-volatile memory to volatile memory when the apparatus is coupled to the host system**

The Petition makes no assertion that Tsunoda’s third embodiment discloses a memory controller that “copies data from said nonvolatile memory to said volatile memory.” Pet. 20-22. Instead, Petitioner alleges that it would have been obvious to modify Tsunoda’s third embodiment, i.e., Figure 14, to include functionality from Tsunoda’s first and second embodiments. *Id.* But, as explained in the POR, Tsunoda’s third embodiment, which uses an MMC interface, would be incapable of

providing the SDRAM compatible interface included in Tsunoda's first and second embodiments. POR 15-16. The POR further explains that the only disclosure in Tsunoda Petitioner relies on to satisfy copying data from non-volatile memory to volatile memory is part of a power up sequence that only exists in Tsunoda's SDRAM compatible interface embodiments. POR 14-15. In the Reply, Petitioner contends that "other embodiments" describe the power up sequence performed by memory control unit 104 of Figure 1 and then concludes that "Tsunoda's MMC supports a power up sequence in a similar manner as described with respect to FIG. 1." Reply 7. This is wrong for at least two reasons.

First, as admitted by Petitioner's expert during deposition, the portions of Tsunoda on which Petitioner relies as to the purported capability of Tsunoda's MMC to "detect when the MMC is coupled to the host and powered on" and "support a power up sequence" (EX1004 at [0067]-[0068], Fig 24, Fig. 25) are all part of the embodiments that include an SDRAM compatible interface, which Tsunoda's third embodiment indisputably lacks. EX2014 (Liu Dep.) 61:6-62:5. In other words, Petitioner attempts to show how Tsunoda's third embodiment (MMC interface only) functions by relying exclusively on disclosures in Tsunoda

that relate to different embodiments that are not limited to only an MMC interface.

Second, to the extent that Petitioner intends to argue in Reply that Tsunoda's third embodiment actually discloses a power up sequence that would "include copying data from the flash memory to the SDRAM when the MMC is coupled to the host system," this is an improper argument in a reply brief, because it was never presented in the Petition.

Petitioner then alleges that "a POSITA would have found it obvious to implement this power up sequence in the MMC 1401, for example, using a memory control unit as described in FIG. 1 or a control unit as described in FIG. 24" simply because these are separate embodiments within the same reference. Reply 8 (citing *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009)). This is incorrect. It ignores that Tsunoda's third embodiment, which uses only an MMC interface, would not be capable of providing the required SDRAM interface as taught by Tsunoda. POR 15-16; EX2012 ¶42. Also, it is an entirely new theory of obviousness that Petitioner is attempting to add in its Reply. Finally, it does not make up for Petitioner's failure to present any argument or evidence that a POSITA would have had an expectation of success in

combining the embodiments of Tsunoda.

**III. Tomio does not render obvious a portable memory apparatus having a housing**

**A. Petitioner has not provided any support for the claim constructions it purports to rely upon**

Petitioner alleges that its Petition “addresses both Micron’s and Sonrai’s District Court constructions,” Reply 5, but provides no citation to the Petition in support of this point. Indeed, the Petition plainly says that no construction is necessary. And, in the one instance where Petitioner refers to “a scope for the terms ‘portable’ and ‘housing,’” it expressly states that “[t]his ground addresses the claims under the scope of these terms advanced by Patent Owner in its complaint for infringement.” Pet. 52-53. Patent Owner can find no instance where Petitioner offers any alternative constructions.

Petitioner complains that Patent Owner’s response brief did not include a discussion of Sonrai’s responses to discovery requests in the co-pending litigation between the parties that reveal, according to Petitioner, “inconsistent claim construction positions.” Reply 1-2. This is unpersuasive. First, in the district court litigation, the parties agreed that “a portable memory apparatus” is a limiting construction, but neither

party argued for an explicit construction of this term. In addition, as to “a housing,” Sonrai’s position was that no construction of this term was necessary, while Micron argued for “a protective enclosure.” EX2011. Thus, Sonrai has not advanced **any** construction for either term in the district court litigation. Second, Petitioner argues that Patent Owner’s positions are inconsistent but offers no construction of its own, as it is required to do. And, third, absent from Petitioner’s Reply is any contention that it **disagrees** with the distinctions made over the prior art in this proceeding on the basis of the “portable memory apparatus” or “housing” terms.

Petitioner criticizes Patent Owner for pointing out that the device in Tomio is not designed to be plugged and unplugged, but makes no mention of the numerous statements in the ’527 patent regarding portable memory devices that are “plugged into” or “unplugged from” a host computer system. Reply 1-2; *see, e.g.*, EX1001, 1:59-65, 3:53-62, 4:5-11, 4:39-48, 5:12-21. In addition, Petitioner’s assertion that “Sonrai further accuses Micron’s internal SSD drives that are not ‘designed to be plugged and unplugged’” (Reply 2) is a factual contention for which Petitioner provides no evidentiary support.

Petitioner’s citations to various non-precedential panel decisions—allegedly finding that a petitioner need not profess “subjective agreement” with its identified claim constructions—do not fill the deficiencies in its arguments. Reply 3-5. First, the Board has held that a petitioner does not comply with 37 C.F.R. § 42.104(b)(3) when it expressly disagrees with the claim construction position it relies on. *Hologic, Inc. v. Enzo Life Sciences, Inc.*, IPR2018-00019, Paper 21 at 6-7 (PTAB Nov. 28, 2018) (instructing that a “Petitioner does not satisfy Rule 42.104(b)(3) when, in a proceeding applying the Phillips claim-construction standard, it expressly disagree[s] with its proffered constructions.”) (citations omitted); *CareFusion Corp. v. Baxter Int’l, Inc.*, IPR2016-01456, Paper 9 at 6-7 (PTAB Feb. 6, 2017) (finding that “Petitioner has failed to prove a sufficient statement of how the challenged claims are to be construed” because “it relies on constructions advanced by Patent Owner in the related litigation” but “also states that it *does not agree that those constructions are in fact correct.*” (emphasis in original)). In addition, even if the Board concludes that Petitioner may rely on claim constructions it expressly disagrees with, Petitioner is not relieved of its burden to demonstrate unpatentability. Petitioner plainly failed to meet that burden when it

based its arguments on claim constructions without providing any intrinsic support for those constructions. Indeed, Petitioner does not cite to, nor is Patent Owner aware of, any instance in which the Board *adopted* a claim construction offered by a petitioner who expressly disagreed with that construction without presenting any intrinsic evidence in the record to support such a construction.

**B. Petitioner has not shown that Tomio renders obvious a portable memory apparatus having a housing**

Tomio does not disclose or render obvious a portable memory apparatus having a housing. POR 35-39. Petitioner argues that it applied Tomio to the challenged claims in a manner consistent with “positions taken by Sonrai in the District Court” and that Patent Owner “cannot credibly argue that Tomio’s memory module ... is not a portable memory apparatus having a housing.” Reply 9. But Petitioner again misunderstands its burden. It is Petitioner who must set forth how each challenged claim is to be construed, and it is Petitioner who must demonstrate that under those constructions, the prior art renders the claims unpatentable. It has not done so here.

As to the “portable memory device” limitation, Patent Owner

explained in detail why a POSITA would understand that Tomio's teachings are not directed to a portable memory apparatus. POR 35-36. Petitioner's response on this point is unpersuasive. First, neither Petitioner nor its expert have presented a construction for "portable memory device." And, Petitioner's expert repeatedly refused during his deposition to provide a construction or explain how a POSITA would determine whether a device is portable. 7:25-25:8. Second, Petitioner contends that Tomio's disclosure that "a memory module formed using a semiconductor memory 8 of the present invention may be used instead of a conventional floppy disk or CDROM" suggests that Tomio's memory module can be portable. Reply 9-10. But Petitioner's own expert acknowledges that he cannot say that Tomio's memory module is portable or even explain the construction he applied under which Tomio's memory module would be portable. EX2014 (Liu Dep.) 26:10-28:3. Dr. Liu also conceded that Tomio's memory module is not a direct replacement for a floppy disk or CDROM because drives that read such devices would not work to read the memory module of Tomio. EX1029 ¶18; *see also* EX2014 (Liu Dep.) 66:11-68:15; 69:20-70:4. This is evident, for example, because Tomio's memory module is an active powered device that operates very

differently from entirely passive and unpowered floppy disks or CDROMs.

Furthermore, even if a POSITA were motivated to develop a connector that would allow Tomio's memory module to be repeatedly plugged and unplugged, Petitioner offers no explanation of how this could be done (e.g., what modifications to Tomio's the connector or other circuitry of Tomio's memory module would need to be made) and presents no evidence or argument, as the law requires, that a POSITA would have expected success in such an endeavor. Reply 9-11; EX2014 (Liu Dep.) 66:11-68:15; 69:20-70:4. Petitioner has not disputed **any** of the significant and potentially catastrophic problems that would arise when even attempting to plug and unplug a device with as many connections as Tomio requires. *Id.* Thus, Petitioner's new obviousness theory based on floppy disks and CDROMs falls far short.

As to the "housing" limitation, Petitioner's arguments in the Reply are equally flawed. Petitioner again asserts that it is applying Tomio to the claim constructions used by Sonrai in District Court, but never says (1) what those positions are or (2) what, if any, features of Tomio would demonstrate to a POSITA that Tomio discloses a housing. Indeed, when asked repeatedly during his deposition the construction he was applying

for “housing,” Petitioner’s expert would not provide one. EX2014 (Liu Dep.) 39:2-16; 43:13-45:16; 63:20-65:2. He could not even name a single factor that a POSITA would consider in determining whether or not a memory module included a housing. His opinions on this point, like Petitioner’s, are thus entirely conclusory. Petitioner cannot meet its burden here by simply purporting to adopt “positions” taken by Sonrai in District Court without explaining what those positions are or how they inform the proper scope of the claims and without providing any analysis of the prior art under that purported scope.

Date: July 26, 2024

Respectfully submitted,

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Lead counsel for Patent Owner

**CERTIFICATE OF WORD COUNT (37 C.F.R. § 42.24(d))**

The undersigned hereby certifies that the word count in this Patent Owner’s Sur-Reply is no more than 2,188 words, as counted by the word-processing program Microsoft Word that was used to generate this Patent Owner’s Sur-reply, where such word count excludes the table of contents, table of authorities, mandatory notices, certificate of service, appendix of

exhibits, claim listing, and this certificate of word count. This Patent Owner's Sur-reply is in compliance with the 5,600-word limit set forth in 37 C.F.R. § 42.24(c)(4).

Date: July 26, 2024

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**CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))**

The undersigned hereby certifies that the above document was served on July 26, 2024, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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