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Please find below and/or attached an Office communication concerning this application or proceeding.

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***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/015,449.

PATENT UNDER REEXAMINATION 10268608.

ART UNIT 3992.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting Request For Ex Parte Reexamination	Control No. 90/015,449	Patent Under Reexamination 10268608	
	Examiner WILLIAM H WOOD	Art Unit 3992	AIA (FITF) Status No

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed 08/22/2025 has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a) ☐ PTO-892, b) ☒ PTO/SB/08, c) ☐ Other: _____

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

/William H. Wood/
Primary Examiner, Art Unit 3992

cc:Requester (if third party requester)

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

DECISION ON REQUEST FOR REEXAMINATION

A Request for *ex parte* Reexamination (herein *Request*) has been filed (08/14/2019) by a third party requester for claims 1-5 of U.S. Patent 10,268,608 to Lee et al., which issued on 04/23/2019 (herein *Lee '608*).

A substantial new question of patentability affecting claims 1-5 of U.S. Patent 10,268,608 to Lee et al. is raised by the request for *ex parte* reexamination (herein *Request*). As such the filed request for reexamination is granted.

Claim Interpretation

During reexamination ordered under 35 U.S.C. 304, and also during reexamination ordered under 35 U.S.C. 257, claims are given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims (In re Yamamoto, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984)). In a reexamination proceeding involving claims of an expired patent, claim construction pursuant to the principle set forth by the court in Phillips v. AWH Corp., 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (words of a claim "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention) should be applied since the expired claim are not subject to amendment. See Ex parte Papst-Motoren, 1 USPQ2d 1655 (Bd. Pat. App. & Inter. 1986). The statutory presumption of validity, 35 U.S.C. 282, has no application in reexamination (In re Etter, 756 F.2d 852, 225 USPQ 1 (Fed. Cir. 1985)). See MPEP 2258 I.G.

The *Lee '608* patent is not expired and subject to the broadest reasonable interpretation as described above.

Prosecution History Summary

Reexamination requested patent US 10,268,608 to Lee et al. issued from U.S. Application 15/820,076 with a filing date on 11/21/2017, claiming benefit to application 15/426,064 filed 02/07/2017 (patent 9,824,035), claiming benefit to application 14/846,993 filed on 09/07/2015 (patent 9,563,587), claiming benefit to application 13/952,599 filed on 07/27/2013 (patent 9,128,632), claiming benefit to provisional application 61/676,883 filed on 07/27/2012. The following is a summary of the relevant portions of the corresponding prosecution history.

Issued claims 1-5 are requested for reexamination and correspond to prosecution claims 1-5.

15/820,076 (US 10,268,608 B2)

During the original prosecution of the application that would result in the *Lee '608* patent, the initially presented claim 1 was rejected in the Non-Final Office Action of 01/25/2018 under obvious type double patenting and also indicated as allowable stating: "the prior art does not fairly teach or suggest, individually or in combination, a memory module system with a plurality of buffers mounted in positions corresponding to the respective sets of data / strobe signal lines, each buffer providing data paths between the data / strobe signal lines and a set of memory devices and including logic that responds to control signals by enabling the data paths corresponding to memory operations between the data / strobe signal lines and the memory devices, wherein the logic is configured to obtain timing information based on signals received by the buffers during a second memory operation prior to the first memory operation and to control timing of the data and strobe signals on the data paths in accordance with the

obtained timing information as claimed.” Both the Notice of Allowance of 07/03/2018 and the Notice of Allowance of 11/19/2018 repeated the same reasons for allowance.

Claim amendments of 05/24/2018 and 02/19/2019 were entered.

The above cited reasons for allowability correspond to the claim 1 language, “... a plurality of buffer circuits corresponding to respective sets of the plurality of sets of data/strobe signal lines, wherein each respective buffer circuit of the plurality of buffer circuits is mounted on the module board, coupled between a respective set of data/strobe signal lines and a respective set of memory devices, and configured to receive the module control signals and the module clock signal, the each respective buffer circuit including a data path corresponding to each data signal line in the respective set of data/strobe signal lines, and a command processing circuit configured to decode the module control signals and to control the data path in accordance with the module control signals and the module clock signal, wherein the data path corresponding to the each data signal line includes at least one tristate buffer controlled by the command processing circuit and a delay circuit configured to delay a signal through the data path by an amount determined by the command processing circuit in response to at least one of the module control signals”.

IPR2023-00847 (US 10,268,608 B2)

The *Lee* ‘608 patent was subject to Inter Partes Review IPR2023-00847, in which the following issues were developed: (1) RLP 1, claims 1-5 were unpatentable over Hiraishi (US 2010/312956) and Butt (US 2007/0008791); (2) RLP 2, claims 1-5 were unpatentable over Hiraishi, Butt, and Tokuhiko (US 8,020,022); (3) RLP 3, claim 5 was unpatentable over Hiraishi, Butt, and Ellsberry (US 2006/0277355); and (4) RLP 4, claim 5 was unpatentable over Hiraishi, Butt, Tokuhiko, and Ellsberry.

In the Final Written Decision, the PTAB (Patent Trial and Appeal Board) noted the Petitioner requested review of claims 1-12 and in a preliminary response Patent Owner disclaimed claims 6-12 (see

Final Written Decision, paper 42, pages 2, 6). As such, claims 1-5 are subject to the analysis of the Final Written Decision and claims 6-12 were not considered.

With regard to claim interpretation, the PTAB stated, “[w]hat we consider here is interpretation of the language of limitation 1[e], together with limitation 1[f], and note that we are not performing claim construction of a specific claim term or phrase per se. Claim 1 of the ’608 patent recites that ‘each respective buffer circuit including a data path corresponding to each data signal line in the respective set of data/strobe signal lines’ [limitation 1[e]] and ‘wherein the data path corresponding to the each data signal line includes’ . . . ‘a delay circuit configured to delay a signal through the data path by an amount . . . ‘ [limitation 1[f]]” (see Final Written Decision, paper 42, page 16).

After detailed analysis, the PTAB stated, “... claim 1 recites that a ‘data path’ which corresponds to data signal lines carrying data signals and not to strobe signal lines carrying strobe signals” (see Final Written Decision, paper 42, page 16).

Based on the claim interpretation and further detailed analysis, the PTAB found each RLP (RLPs 1-4) did not show the claims (claims 1-5) to be unpatentable (see Final Written Decision, paper 42, pages 72-73). The PTAB states: “Patent Owner argues, and we agree, that Petitioner does not demonstrate that that Hiraishi teaches the recited ‘delay circuit’ that delays a ‘signal thorough the data path.’ ... We also agree with Patent Owner that several of elements of Hiraishi alleged to be part of ‘a delay circuit’ are not in a ‘data path’ as claimed and do not ‘delay a signal through the data path’” (see Final Written Decision, paper 42, page 37). The PTAB found that Hiraishi was relied upon for the teaching of the “data path” that includes the “delay circuit”, and not Butt (Final Written Decision, paper 42, page 43, also pages 67-68). Further, the PTAB found the additions of Tokuhiro and Ellsberry did not overcome the previously analyzed deficiencies (see Final Written Decision, paper 42, pages 69-70).

Summary

Therefore, at least any of the following limitations and/or claim elements would be considered important to a reasonable examiner (as issued in claim 1, corresponding to prosecution claim 1): "... a plurality of buffer circuits corresponding to respective sets of the plurality of sets of data/strobe signal lines, wherein each respective buffer circuit of the plurality of buffer circuits is mounted on the module board, coupled between a respective set of data/strobe signal lines and a respective set of memory devices, and configured to receive the module control signals and the module clock signal, the each respective buffer circuit including a data path corresponding to each data signal line in the respective set of data/strobe signal lines, and a command processing circuit configured to decode the module control signals and to control the data path in accordance with the module control signals and the module clock signal, wherein the data path corresponding to the each data signal line includes at least one tristate buffer controlled by the command processing circuit and a delay circuit configured to delay a signal through the data path by an amount determined by the command processing circuit in response to at least one of the module control signals" (emphasis added).

Other Proceedings

After the prosecution of US Application 15/820,076 which resulted in reexamination requested patent US 10,268,608 to Lee et al., the patent was involved in the following litigation: (1) CLOSED, 6:21cv00431, Netlist Inc. v. Micron Technology Inc. et al.; (2) OPEN, 1:22cv00136, Netlist Inc. v. Micron Technology Inc. et al.; (3) CLOSED, 2:22cv00293, Netlist Inc. v. Samsung Electronics Co Ltd. et al.; (4) 25-1378; and (5) OPEN, 2:23cv628, Netlist Inc. v. Micron Technology Inc et al.

Further, after the prosecution of US Application 15/820,076 which resulted in reexamination requested patent US 10,268,608 to Lee et al., the patent was involved in the following additional inter partes review proceedings: (1) Not Instituted, IPR2022-00237; and (2) Note Instituted, IPR2024-00370.

References of the Request

The *Request* proposes the following patents and/or printed publications provide teachings relevant to the requested claims of the US 10,268,608 B2 patent to Lee et al.

Hiraishi

Hiraishi et al., US 2010/0312956 A1 (herein *Hiraishi*) was not cited during the original prosecution of application 15/820,076 which resulted in the reexamination requested patent US 10,268,608 B2 (*Lee '608*). The *Hiraishi* reference is eligible for application under at least 35 U.S.C. 102(b) as the reference was published 12/09/2010 as compared to the earliest possible priority date of the *Lee '608* patent to 07/27/2012. *Hiraishi* was cited in IPR2023-00847.

As discussed in the following section on SNQs, the *Request* asserts *Hiraishi* establishes a substantial new question of patentability.

Guo

Hiraishi et al., US 2008/0256282 A1 (herein *Guo*) was not cited during the original prosecution of application 15/820,076 which resulted in the reexamination requested patent US 10,268,608 B2 (*Lee '608*). The *Guo* reference is eligible for application under at least 35 U.S.C. 102(b) as the reference was published 10/16/2008 as compared to the earliest possible priority date of the *Lee '608* patent to 07/27/2012.

As discussed in the following section on SNQs, the *Request* asserts *Guo* establishes a substantial new question of patentability.

Rajan

Rajan et al., US 8,089,795 B2 (herein *Rajan*) was cited during the original prosecution of application 15/820,076 which resulted in the reexamination requested patent US 10,268,608 B2 (*Lee '608*). The *Rajan* reference is eligible for application under at least 35 U.S.C. 102(a) as the reference was issued 01/03/2012 as compared to the earliest possible priority date of the *Lee '608* patent to 07/27/2012. *Rajan* was previously published as US 2007/0195613 A1 on 08/23/2007.

As discussed in the following section on SNQs, the *Request* asserts *Rajan* establishes a substantial new question of patentability.

Ellsberry

Ellsberry et al., US 2006/0277355 A1 (herein *Ellsberry*) was cited during the original prosecution of application 15/820,076 which resulted in the reexamination requested patent US 10,268,608 B2 (*Lee '608*). The *Ellsberry* reference is eligible for application under at least 35 U.S.C. 102(b) as the reference was published 12/07/2006 as compared to the earliest possible priority date of the *Lee '608* patent to 07/27/2012. *Ellsberry* was cited in IPR2023-00847.

As discussed in the following section on SNQs, the *Request* asserts *Ellsberry* establishes a substantial new question of patentability.

Substantial New Question of the Request

The following is an analysis of the *Request* asserted at least one substantial new question of patentability, in view of the above cited prior art, with respect to issued claims 1-5 of *Lee '608* patent.

Issue 1

The *Request* asserts *Hiraishi* in view of *Guo* raises a substantial new question of patentability (*Request: pages 22-60, section V.A.*) with regard to claims 1-5.

Claims 1-5 are proposed as being obvious over *Hiraishi* in view of *Guo* (*Request: pages 69-120, section VI.A.*).

Analyzing the cited references, *Hiraishi* shows teachings relevant to at least: buffer circuits corresponding respective sets of data/strobe signal lines (*Hiraishi: see figures 1, 5, and 7; see [0069] and [0103]; showing a buffer 300 and data/strobe signal lines L0, with DQ-Pre and DQS-Pre*); each buffer circuit including a data path corresponding to each data signal line in the respective set of data/strobe signal lines (*Hiraishi: see figure 5, showing path connecting L0 DQ element 340 with L1 DQ element 341 and L2 DQ element 342; see also figure 1, showing each buffer 300 with L0 signal lines, and also lines L1 and L2 connecting respective memory chips 200*); each buffer circuit including a command processing circuit configured to decode the module control signals and to control the data path in accordance with the module control signals and the module clock signal (*Hiraishi: see figure 5; see [0087]-[0091]; showing in a buffer 300, circuits 310 and 320 controlling path elements of the buffer using signals CK and DRC*); and the data path corresponding to the each data signal line includes at least one tristate buffer controlled by the command processing circuit (*Hiraishi: see figure 5, showing triangular illustrated tristate buffers before and after elements 301, 302, 333, and 334 connecting L0 DQ element 340 with L1 DQ element 341 and L2 DQ element 342*).

Analyzing the cited references, *Guo* shows teachings relevant to at least: time aligning data signals in memory modules with a buffer (*Guo: see [0001], [0008]-[0009], [0016] ; see figure 1, showing data signals communicated through a buffer*); adjust for delay in a buffer (*Guo: see [0036]-[0037], [0044], [0046], [0055]*); adjust for delay in multiple data paths (*Guo: see figure 4*); and a data path

corresponding to the each data signal line includes ... a delay circuit configured to delay a signal through the data path by an amount determined by the command processing circuit in response to at least one of the module control signals (*Guo*: see figure 3, showing in a data path an adjustable delay circuit 59 controllable by element 61).

These teachings of *Hiraishi* and *Guo* constitute teachings pertinent to at least the claim limitations (see *Lee* '608, claim 1): "buffer circuit including a data path corresponding to each data signal line in the respective set of data/strobe signal lines, and a command processing circuit configured to decode the module control signals and to control the data path in accordance with the module control signals and the module clock signal, wherein the data path corresponding to the each data signal line includes at least one tristate buffer controlled by the command processing circuit and a delay circuit configured to delay a signal through the data path by an amount determined by the command processing circuit in response to at least one of the module control signals".

As revealed in the above "Prosecution History Summary", these limitations were important to the allowability of *Lee* '608 over the prosecution cited prior art. As now presented, these teachings were not previously considered in the prosecution that led to the reexamination requested patent and are viewed in a new light (*Hiraishi* was previously reviewed in the IPR2023-00847 proceeding, but not in conjunction with *Guo* for the 'delay circuit' that delays a 'signal thorough the data path' feature the PTAB found missing; *Guo* has not previously been considered by the Office for these or any other limitations). The combination of *Hiraishi* and *Guo* is not merely cumulative to prior art already considered by the Office (the references teach at least additional information as compared to the previously cited prior art).

In light of these teachings, *Hiraishi* and *Guo* are found to provide new prior art teachings that would be considered important to a reasonable examiner in evaluating the patentability of claims 1-5.

Accordingly, Hiraishi and Guo raise a substantial new question of patentability with respect to claims 1-5.

Issue 2

The *Request* asserts *Hiraishi* in view of *Guo* and in further view of *Ellsberry* raises a substantial new question of patentability (*Request: pages 60-62, section V.B.*) with regard to claims 4-5.

Claims 4-5 are proposed as being obvious over *Hiraishi* in view of *Guo* in further view of *Ellsberry* (*Request: pages 120-123, section VI.B.*).

Ellsberry provides additional teachings in conjunction with *Hiraishi* and *Guo*. As now presented, these teachings were not previously considered in the prosecution that led to the reexamination requested patent and are viewed in a new light (*Ellsberry* was previously cited by the *Lee '608* patent). *Ellsberry* with *Hiraishi* and *Guo* is not merely cumulative to prior art already considered by the Office (the references teach at least additional information as compared to the previously cited prior art).

In light of these teachings, *Hiraishi*, *Guo*, and *Ellsberry* are found to provide new prior art teachings that would be considered important to a reasonable examiner in evaluating the patentability of claims 4-5 for the same reasons as discussed above for Issue 1. Accordingly, *Hiraishi*, *Guo*, and *Ellsberry* raise a substantial new question of patentability with respect to claims 4-5.

Issue 3

The *Request* asserts *Hiraishi* in view of *Guo* and in further view of *Rajan* raises a substantial new question of patentability (*Request: pages 63-69, section V.C.*) with regard to claims 1-5.

Claims 1-5 are proposed as being obvious over *Hiraishi* in view of *Guo* in further view of *Rajan* (*Request: pages 123-127, section VI.C.*).

Rajan provides additional teachings in conjunction with *Hiraishi* and *Guo*. As now presented, these teachings were not previously considered in the prosecution that led to the reexamination requested patent and are viewed in a new light (*Rajan* was previously cited by the *Lee* '608 patent). *Rajan* with *Hiraishi* and *Guo* is not merely cumulative to prior art already considered by the Office (the references teach at least additional information as compared to the previously cited prior art).

In light of these teachings, *Hiraishi*, *Guo*, and *Rajan* are found to provide new prior art teachings that would be considered important to a reasonable examiner in evaluating the patentability of claims 1-5 for the same reasons as discussed above for Issue 1. Accordingly, *Hiraishi*, *Guo*, and *Rajan* raise a substantial new question of patentability with respect to claims 1-5.

Issue 4

The *Request* asserts *Hiraishi* in view of *Guo* in view of *Rajan* and in further view of *Ellsberry* raises a substantial new question of patentability (*Request*: page 69, section V.D.) with regard to claims 4-5.

Claims 4-5 are proposed as being obvious over *Hiraishi* in view of *Guo* in view of *Rajan* in further view of *Ellsberry* (*Request*: page 127, section VI.D.).

Ellsberry provides additional teachings in conjunction with *Hiraishi*, *Guo*, and *Rajan*. As now presented, these teachings were not previously considered in the prosecution that led to the reexamination requested patent and are viewed in a new light (*Ellsberry* was previously cited by the *Lee* '608 patent). *Ellsberry* with *Hiraishi*, *Guo*, and *Rajan* is not merely cumulative to prior art already considered by the Office (the references teach at least additional information as compared to the previously cited prior art).

In light of these teachings, *Hiraishi, Guo, Rajan*, and *Ellsberry* are found to provide new prior art teachings that would be considered important to a reasonable examiner in evaluating the patentability of claims 4-5 for the same reasons as discussed above for Issue 1. Accordingly, *Hiraishi, Guo, Rajan*, and *Ellsberry* raise a substantial new question of patentability with respect to claims 4-5.

Affidavits, Declarations, or Other Written Evidence

For support, the Request for Reexamination of 08/14/2025 makes reference to the Declaration of Joseph Bernstein, Ph.D. (Exhibit 1003) and other written evidence (Exhibits 1010-1017). The declarations and other written evidence are considered and made of record as appropriate.

Affidavits or declarations or other written evidence which explain the contents or pertinent dates of prior art patents or printed publications in more detail may be considered in reexamination (MPEP 2258 I.E). However, any rejection must be based upon the prior art patents or printed publications as explained by the affidavits or declarations or other written evidence. The rejection in such circumstances cannot be based on the affidavits or declarations or other written evidence as such, but must be based on the prior art patents or printed publications.

In this reexamination, the Bernstein Declaration analyzes the teachings of the cited references with regard to the reexamination challenged claims and further explains the contents of the prior art patents and/or printed publications in more detail.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 09/03/2025 are considered by the examiner in accordance with 37 CFR 1.98, 37 CFR 1.555, and MPEP 2257, to the fullest extent of the items presented including any concise explanation. Documents not meeting a particular criteria are lined through and not considered.

35 USC 325(d)

Section 325(d) states in part, “[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” Thus, for the Director to exercise discretion as to whether to Order a reexamination under chapter 30, the Request must first be determined to be based on the same or substantially the same prior art or arguments that were previously presented to the Office.

A review of the post grant history of the ‘608 patent indicates three post grant challenges filed prior to the filing of the current Request: IPR2022-00237 (“the ‘237 IPR”), IPR2023-00847 (“the ‘847 IPR”), and IPR2024-00370 (“the ‘370 IPR”).

IPR2022-00237

On Dec. 23, 2021, Petitioner, Micron Technology, Inc.; Micron Semiconductor Products, Inc.; and Micron Technology Texas LLC, filed a Petition for *inter partes* review of the ‘608 patent with the Patent Trial and Appeal Board (“Board”) (‘237 IPR, Paper 2, “the ‘237 IPR Pet.”). The ‘237 IPR Pet. asserted the following grounds as raising a reasonable likelihood in prevailing (“RLP”):

RLP #	Challenged Claims	35 U.S.C. § ¹	References
1	1 and 4	102(b)	Osanai ²
2	1-5	103(a)	Osanai and Tokuhiro ³
3	1-5	103(a)	Osanai, Tokuhiro, and Takefman ⁴

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”) amended 35 U.S.C. §§ 102 and 103 with an effective date of March 16, 2013. Because the ‘608 patent issued on an application filed before March 16, 2013, the pre-AIA version of §§ 102 and 103 are applied.

² U.S. Patent Application Publication No. 2010/0312925, to Osanai et al. (“Osanai”).

³ U.S. Patent No. 8,020,022, to Noriyuki Tokuhiro (“Tokuhiro”).

⁴ U.S. Patent No. 8,713,379, to Takefman et al. (“Takefman”).

On Sept. 16, 2022, the Board issued a decision under 35 U.S.C. § 314(a) denying the ‘237 IPR Pet. (‘237 IPR, Paper 15, “‘237 Decision”) based on a meritorious review of at least Osanai as applied to at least claim 1. In particular, the Board states:

[W]e agree with Patent Owner that Petitioner has not identified a data path that includes Osanai’s write leveling circuit 322. Claim 1 recites “wherein the data path ... includes at least one tristate buffer ... and a delay circuit configured to delay a signal through the data path.” Thus, claim 1 requires that the data path include two elements: (1) at least one tristate buffer and (2) a delay circuit.
(‘237 Decision 18.)

...
Petitioner contends that the “buffer circuits 300 include ‘a delay circuit’ Id. at 41. The claim, however, requires more than just the buffer circuit include the delay circuit. The claim requires the data path include the delay circuit. Based on our review of Petitioner’s contentions it appears Petitioner does not demonstrate this to be the case.
(‘237 Decision 19-20.)

...
Accordingly, having considered the arguments and evidence, we are not persuaded that petitioner has demonstrated a reasonable likelihood that Osanai anticipates claim 1, or claim 4, which depends from claim 1.
(‘237 Decision 20.)

The Board also explained that “Petitioner does not rely on Tokuhito or Takefman as disclosing that the delay circuit is included in the recited data path, as required by claim 1 ... [a]ccordingly, having considered the arguments and evidence, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that claims 1–5 would have been obvious over Osanai and Tokuhito or would have been obvious over Osanai, Tokuhito, and Takefman.” ‘237 Decision 20.

For the reason above, the Board denied institution of the ‘237 IPR Pet. Decision 21.

IPR2023-00847

On April 27, 2023, Petitioner, Samsung Electronics Co., LTD., filed a Petition for *inter partes* review of the ‘608 patent with the Board (‘847 IPR, Paper 1, “the ‘847 IPR Pet.”). The ‘847 IPR Pet. asserted the following grounds as raising a reasonable likelihood in prevailing (“RLP”):

RLP #	Challenged Claims	35 U.S.C. § ⁵	References
1	1-5	103(a)	Hiraishi and Butt ⁶
2	1-5	103(a)	Hiraishi, Butt, and Tokuhiro
3	5	103(a)	Hiraishi, Butt, and Tokuhiro or Ellsberry ⁷

On Dec. 12, 2023, the Board instituted trial on the ‘847 IPR Pet. (‘847 IPR, Paper 13) and subsequently issued a final written decision on Dec. 10, 2024 (‘847 IPR, Paper 42, “‘847 FWD”) finding all challenged claims 1-5 of the ‘806 patent not unpatentable. ‘847 FWD at 72-73. In the ‘847 FWD, the Board focused on limitation “1[f]” of claim 1, which recites, “wherein the data path corresponding to the each data signal line includes at least one tristate buffer controlled by the command processing circuit and a delay circuit configured to delay a signal through the data path by an amount determined by the command processing circuit in response to at least one of the module control signals.” *See e.g.*, ‘847 FWD 31. In their findings, the Board specifically explained that Petitioner had not shown that either Hiraishi or Butt teach the elements of limitation 1[f]. *See* ‘847 FWD 37-43. Based primarily on these findings, the Board was not convinced and found that the prior art supporting the proposed RLPs in the ‘847 IPR Pet. did not render claims 1-5 of the ‘608 unpatentable. ‘847 FWD 72-73.

IPR2024-00370

On Jan. 10, 2024, Petitioner, Micron Technology, Inc.; Micron Semiconductor Products, Inc.; and Micron Technology Texas LLC, filed a Petition for *inter partes* review of the ‘608 patent with the Board (‘370 IPR, Paper 1, “the ‘370 IPR Pet.”). The ‘370 IPR Pet. asserted the following grounds as raising a reasonable likelihood in prevailing (“RLP”):

RLP #	Challenged Claims	35 U.S.C. § ⁸	References
1	1-12	103(a)	Hiraishi and Butt
2	1-12	103(a)	Hiraishi, Butt, and Tokuhiro

⁵ *See supra* footnote 1.

⁶ U.S. Patent Application Publication No. 2007/0009791, to Butt et al. (“Butt”).

⁷ U.S. Patent Application Publication No. 2006/0277355, to Ellsberry et al. (“Ellsberry”).

⁸ *See supra* footnote 1.

3	5 and 12	103(a)	(RLP 1 or RLP 2) and Ellsberry
4	6-8	103(a)	(RLP 1 or RLP 2) and Kim ⁹
5	8	103(a)	(RLP 1 or RLP 2), Kim, and Ellsberry

On July 23, 2024, the Board issued a decision under 35 U.S.C. § 314(a) to discretionarily deny the '370 IPR Pet. ('370 IPR, Paper 8, "'370 Decision") based on the factors set forth in *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (precedential as to § II.B.4.i) ("*General Plastic*"). '370 Decision at 9. The Board found that "factors 1-4¹⁰ and 6¹¹ weigh against institution, factor 5¹² weighs in favor of institution, and factor 7¹³ is neutral." '370

⁹ U.S. Patent No. 6,184,701, to Kim et al. ("Kim").

¹⁰ "The first factor simply asks whether the same petitioner previously filed a petition directed to the same claims of the same patent. Petitioner previously filed such a petition in the Micron IPR [*i.e.*, the '237 IPR]], so we find that this factor favors discretionary denial." '370 Decision at 12.

"[T]he issue we consider for the assessment of factor 2 is whether Petitioner should have known of the prior art at the time of the filing of the petition in the Micron IPR. ... Patent Owner argues, and we agree, that Petitioner does not provide sufficient explanation why it could not have been aware of Butt at the time of its earlier petition in the Micron IPR." '370 Decision at 13.

"The third *General Plastic* factor asks 'whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition.'" In other words, whether the Petitioner used a previous Board decision to change or update their reasoning presented in a subsequent IPR petition, also known as "road mapping." The Board concluded that the Petitioner of the '370 IPR Pet. attempted to engage in road mapping by moving for joinder of the '847 IPR, and the Petition of which did present road mapping because the '370 IPR Petitioner "copied" the '847 IPR Petition. '370 Decision at 15-16.

As to factor 4, "[a]lthough related patents may implicate different prior art, we agree with Patent Owner ([Prelim. Resp.] at 11) that the evidence of knowledge of the reference in another case provides support that Petitioner reasonably could have had earlier knowledge of Butt." Decision 14.

¹¹ "The sixth *General Plastic* factor considers 'the finite resources of the Board.'" '370 Decision at 17. The Board found that "denial is favored because if "Samsung [were] to settle with Netlist, Micron would be able to continue the IPR in its stead despite the fact that it would be time-barred otherwise." *Id.*

¹² "The fifth *General Plastic* factor queries 'whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent.'" '370 Decision at 16. The Board found Petitioner provided at least some explanation for the time elapsed between filings of the petitions, thus, factor 6 does not favor discretionary denial. '370 Decision at 17.

¹³ "The seventh *General Plastic* factor considers 'the requirement ... to issue a final determination not later than 1 year after the date on which the Director notices institution of review.'" '370 Decision 18. Since both parties argue this factor has "limited relevance" or is neutral, the Board agreed. *Id.*

Decision at 18. As such, the Board determined, based on the *General Plastic* factors, that “it is appropriate to exercise our discretion under 35 U.S.C. § 314(a) to deny institution of an *inter partes* review of the challenged claims of the ‘608 patent.” ‘370 Decision at 18-19. The Board did not discuss, evaluate, or make any final decision on the merits of the prior art presented in the ‘370 IPR Pet., although many of the same references were cited in the ‘847 IPR Pet., over which the Board found claims 1-5 of the ‘608 patent to not be unpatentable as explained above.

Current Reexamination Request (90/015,468)

As noted above, on Aug. 14, 2025, the current Request was filed by attorney Andrew Koning¹⁴, which is not the same as the Petitioners in any of the previous IPRs noted above. The current Request presents the following grounds as raising substantial new questions of patentability (“SNQs”):

SNQ #	Challenged Claims	35 U.S.C. § ¹⁵	References
1	1-5	103(a)	Hiraishi and Guo
2	4 and 5	103(a)	Hiraishi, Guo, and Ellsberry
3	1-5	103(a)	Hiraishi, Guo, and Rajan
4	4 and 5	103(a)	Hiraishi, Guo, Rajan, and Ellsberry

On Oct. 17, 2025, Patent Owner filed a petition (“PO Pet.”) seeking both waiver of 37 CFR 1.530(a) and 1.540 so the Office may consider Patent Owner’s arguments under 37 CFR 1.182 to deny the current Request under section 325(d). On Nov. 7, 2025, the Office of Patent Legal Administration granted Patent Owner’s waiver petition request and forwarded this proceeding to the Central Reexamination Unit (“CRU”) for consideration of the 325(d) arguments. The arguments presented in both Patent Owner’s October 17, 2025 pre-Order 1.182 petition regarding exercising a discretionary

¹⁴ It is not immediately clear from the filings in this proceeding if Andrew Koning is the Third Party Requester or represents the requesting party; in any case it is immaterial to the 325(d) decision.

¹⁵ See *supra* footnote 1.

denial pursuant to 35 USC 325(d) and third party requester's arguments in their November 5, 2025 opposition have been considered and are discussed below.

In the PO Pet., Patent Owner makes three main arguments: (1) the current Request is the fourth post grant challenge of the '608 patent, and thus, amounts to an abusive request primarily relying on *In re Vivint*¹⁶ (PO Pet. 14-16); (2) the current Request simply rehashes already considered arguments by the Board and does not explain how the Board erred, and thus, under *Advanced Bionics*¹⁷, the Request should be denied (PO Pet. 16-21); and (3) various other factors, such as prior validity rulings, settled expectations, improper road mapping, and using Office resources, require denial of the current Request (PO Pet. 22-26).

The Third Party Requester has filed an opposition to the PO Pet. on Nov. 5, 2025 ("Opp.") responding with its own arguments: (1) the use of *Vivint* is a narrow holding with specific facts not analogous to the facts of the current proceeding, thus, there is no abusive filing practices with the current Request (Opp. 5-7); (2) the prior art and arguments relied upon in the current Request are not simply rehashing of old, previously considered arguments, especially in light of newly cited Guo (Opp. 7-10), and that the test in *Advanced Bionics* is not applicable to *ex parte* reexamination proceedings (Opp. 10-11); and (3) the other factors argued by Patent Owner are not applicable to the current Request not only because the *General Plastic* factors are not applicable to *ex parte* reexamination proceedings, but also because the newly raised SNQs in the current Request have not yet been presented to the Office (Opp. 12-15).

In response to Patent Owner's arguments, as an initial matter, there has been no evidence presented in this proceeding of abusive filing practices by the current Third Party Requester (even if anonymous). More importantly, there was never a finding of abusive filing practices made by the Board

¹⁶ 14 F.4th 1342 (Fed. Cir. 2021).

¹⁷ *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469 (PTAB Feb. 13, 2020)(precedential).

in any of the prior IPRs. While the Board in the '370 Decision discusses how the Petitioner in that proceeding should have and could have known about various pieces of prior art and how the Petitioner based its petition on the earlier-filed '847 IPR Pet., the Board did not make a finding of abusive filing practices. Thus, the facts of *Vivint* are distinguishable from the facts in this proceeding.

Second, while there have been three prior IPR challenges of the '608 patent, the grounds of the presented SNQs in the current Request, as noted above, are different than the grounds presented in any of the RLPs of the previous IPRs. Furthermore, as also explained above, Guo and Rajan are newly cited references and have been determined to not be cumulative of prior art already considered by the Office. Moreover, the mappings of the limitation 1[f] discussed in the '847 FWD (which was found to not be taught by Hiraishi) have been updated in light of Guo in the current Request. Thus, not only is Guo new but so too are the corresponding arguments associated with Guo alone and when combined with the other cited references. As a result, the grounds in the current Request are NOT based on the same or substantially the same prior art or arguments as were presented in the grounds of the previous IPRs. Further, the test set forth in *Advanced Bionics* is specific to post grant proceedings, *e.g.*, IPRs, at the Board; *Advanced Bionics* is not applicable in *ex parte* reexamination proceedings.

Third, *ex parte* reexamination is a different proceeding than *inter partes* review. The determination of whether a substantial new question of patentability is raised, and thus reexamination is ordered, is merely based on whether the grounds have or have not already been presented to the Office and whether a reasonable examiner would find the prior art important when determining the patentability of the challenged claims. *See* MPEP § 2242, subsection I. As such, it would not be appropriate to apply, to a 325(d) analysis in an *ex parte* reexamination proceeding, the stricter standard of likelihood of prevailing on the merits, as in *inter partes* reviews, nor consider other factors relevant to institution determinations in IPRs, like settled expectations, improper road mapping, and using Office resources.

Lastly, it is important to note that ordering reexamination does not mean the presented grounds in a request rise to the level of rejecting the challenged claims and finding them unpatentable. The examiner has wide latitude when determining whether or not the merits of the proposed grounds presented in the SNQs are reasonable and whether a rejection is warranted. *See e.g.*, MPEP §§ 2240, 2242, subsection I, 2246. Ordering reexamination is merely answering the question of whether a substantial new question of patentability has been reasonably presented.

As shown above, none of the grounds in the SNQs presented in the current Request are based on the same or substantially the same prior art that was presented in the grounds of RLPs presented in the previous IPR Petitions. While Hiraishi and Ellsberry are common to the '847 IPR, '370 IPR, and the current Request, Butt, Tokuhiro, and Kim were presented in the IPRs but not the Request, and Guo and Rajan are newly added to the Request. Additionally, since there are newly proposed grounds including Guo and Rajan, which were found to not be cumulative prior art, there are also newly presented arguments in the current Request that have not yet been considered by the Office.

For the reasons above, the SNQ grounds presented in the current Request are not based on the same or substantially the same prior art or arguments as were presented in the previous IPRs, thus, the threshold to discretionarily deny reexamination under 35 USC 325(d) is not met.

Accordingly, *ex parte* reexamination of the '608 patent is Ordered based on the facts above and determination that the Request raises a substantial new question of patentability of at least one claim in the '608 patent.

Reexamination

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be

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conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 10,268,608 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Patent Owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c). See MPEP 2250.

After filing of a request for *ex parte* reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

Correspondence Information

All correspondence relating to this *ex parte* reexamination proceeding may be submitted via:

Electronically: Registered users may submit via Patent Center
<https://patentcenter.uspto.gov/>.

By Mail to: Mail Stop *Ex Parte* Reexam

Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand: Customer Service Window
Knox Building
501 Dulany Street
Alexandria, VA 22314

For Patent Center transmissions, 37 CFR 1.8(a)(1)(i)(C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the Office's electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the date of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM H WOOD whose telephone number is (571)272-3736. The examiner can normally be reached Monday-Friday 7am-3pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kosowski can be reached on (571)272-3744. For all general inquiries the CRU main phone number is (571)272-7705.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Wood/

Reexamination Specialist, Art Unit 3992

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Supervisory Patent Examiner, Art Unit 3992