

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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SAMSUNG ELECTRONICS CO., LTD, MICRON TECHNOLOGY, INC.,  
MICRON SEMICONDUCTOR PRODUCTS, INC., and  
MICRON TECHNOLOGY TEXAS LLC  
Petitioner,

v.

NETLIST, INC.,  
Patent Owner.

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Case No. IPR2022-00615<sup>1</sup>  
Patent No. 7,619,912

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**PATENT OWNER’S MOTION TO SUBMIT SUPPLEMENTAL  
INFORMATION PURSUANT TO 37 C.F.R. §42.123(b)**

***Mail Stop “PATENT BOARD”***  
Patent Trial and Appeal Board  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

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<sup>1</sup> Micron Technology, Inc., Micron Semiconductor Products, Inc., and Micron Technology Texas LLC filed a motion for joinder and a petition in IPR2023-00203 and have been joined as petitioners in this proceeding.

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**Rules**

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Netlist respectfully moves to submit the deposition transcript excerpts attached to this motion as supplemental information under 37 C.F.R. §42.123(b).

### **I. Nature of Supplemental Information Sought to be Submitted**

The supplemental information consists of testimony from Micron's corporate representative, Boe Holbrook, given in a parallel litigation between Patent Owner and Petitioner Micron involving various Netlist patents, including US10,860,506 and US10,949,339. *See* Attachment A, 1; EX2065 (Complaint), 1.

Mr. Holbrook has been with Micron since 2002 and his title is Senior Manager in the Module Development Group. EX2066, ¶2; *see also* Attachment A, 10:17-21. In the parallel litigation, Micron designated Mr. Holbrook as its 30(b)(6) corporate representative on over a dozen topics, including non-infringement EX2067, 29 (Topic #89); EX2068 (Micron's counsel designating Mr. Holbrook for Topic #89). In order to testify on "all facts and circumstances" relating to non-infringement of the patents at issue, Mr. Holbrook reviewed the patents: "Q. You understand that Micron is accused of infringing a number of Netlist patents in this case. Correct? A. I understand that. Q. And did you review those patents in preparation for your testimony? A. Yes, sir." Those patents, like the '912 patent, include the term "rank" in the context of memory modules having DRAM memory devices. *See e.g.*, EX2069 (US10,860,506), Cl. 1 ("memory module comprising ... memory devices arranged in multiple ranks"); EX2070 (US10,949,339), Cl. 1 ("memory module

comprising ... double data rate dynamic random access memory (DDR DRAM) devices coupled to the PCB and arranged in multiple N-bit-wide ranks”). Mr. Holbrook also testified he led the design of memory modules at Micron: “Q. Is there anyone more senior than you in module development? A. No, sir.” Attachment A, 10:17-19.

The testimony is non-hearsay under FRE 801(2) as Mr. Holbrook testified on the operation and structure of DDR5 modules that are covered by the patents. EX2067, 13 (Topics #14-17); EX2068 (showing Mr. Holbrook was designated for same topics). The testimony is admissible against Samsung under FRE 804(3) for the same reason, coupled with the fact that the statement removes a prior art design in which information is sent in packetized form from the scope of the patent claims, which harms Mr. Holbrook’s employers’ interest.

## **II. Relevance of the Supplemental Information**

The supplemental information is relevant to the issue of whether the term “rank” can be construed as “an independent set of one or more memory devices on a memory module,” as Petitioner’s contend. Pet., 12. On that issue, Mr. Holbrook testified under oath as follows:

Q. And in JEDEC DDR parlance, a rank is two or more memory devices. Is that correct?

A. A rank is defined as a group that comprises a full 64-bit data bus. So it would be, at a minimum, the number of devices that are required to meet that full data bus.

Q. And, historically, how many has that been?

A. So for a x8-based module, that would be eight devices. For a x4-based, so four DQs in a DRAM -- x8 is going to be 8 DQs. So four DQs, x4 configuration, that would be 16 DRAM.

Attachment A, 51:9-19 (emphasis added). This testimony is inconsistent with the Petitioners' position that a "rank" can include a single memory device. *See* Pet., 13 (arguing that "[a] 'Rank' comprises 'one or more DRAM devices.'"); *see also* Paper 14, 5-7. Mr. Holbrook's testimony is consistent, however, with Patent Owner's position that "rank" refers to a **plurality** of memory devices. *See* POPR, 28-34.

Mr. Holbrook's testimony contradicts Petitioner's argument that a "rank can include one memory device because, as Mr. Holbrook testified, a "rank is defined as a group that comprises a full 64-bit data bus," and there were no 64-bit memory devices at the time and still today. EX2062, ¶ 247. Thus, in order to provide data across the full 64-bit data bus, more than one memory device is necessarily required to form a "rank."

Moreover, the claims do not simply recite memory devices, generally, but specifically recite "DDR memory devices," where DDR is a type of memory standardized by JEDEC. EX1033, 332-333. This is significant because, as Micron

admits, the term “rank” was created by JEDEC (EX2112, 1), and JEDEC defines the term “rank” to mean a group of multiple memory devices. POR, 10-12.

### **III. The Supplemental Information Could Not Be Obtained Earlier**

Mr. Holbrook was not made available to testify until August 30, 2023 (EX2071), and therefore the information could not have been obtained earlier. Netlist served its 30(b)(6) notice on May 15, 2023. EX2067. Micron did not respond to Netlist’s notice until June 27, 2023, merely objecting to each of Netlist’s topics without designating a single witness. Micron finally provided Mr. Holbrook’s availability for deposition on August 3, 2023, informing Netlist that Mr. Holbrook would not be available for deposition until August 30, 2023. Micron did not provide its final designations for its 30(b)(6) witnesses until August 9, 2023—nearly 3 months after Netlist served its 30(b)(6) notice. EX2068.

After the deposition, Micron further delayed by improperly designating the entire transcript as confidential under the district court’s protective order. The next day, Netlist asked for the relevant testimony be de-designated (EX2072). Netlist further acted diligently in expediently raising this issue with the Board on September 5, 2023 (EX3017) after Micron’s delay in de-designating the relevant testimony.

To the extent Samsung argues that Netlist should have sought discovery from Mr. Holbrook in the IPR, this was an impossibility as he was not designated to provide testimony on non-infringement of the patents (and thus Micron’s

understanding of the patents) until August 9, 2023.

#### **IV. Admission of the Supplemental Information is in Interest-of-Justice**

As the Board has recognized in past cases, evidence that a party has taken inconsistent positions on the same issues here and in related district court litigation is relevant to the Board's determination and should be considered in the interests-of-justice. *See, e.g., Kingston Tech. Co., Inc. v. Spex Techs., Inc.*, No. IPR2017-01021, Paper 31, at 2, 4-5 (PTAB May 29, 2018). Here, Samsung itself has submitted and relied on evidence from parallel district court proceedings. *See, e.g.,* EX1045-1060.

Dated: October 4, 2023

Respectfully submitted,

By: /Jonathan M. Lindsay/

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# Attachment A

UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

---oOo---

NETLIST, INC.,

Plaintiff,

vs.

No. 2:22-cv-203-JRG-RSP

MICRON TECHNOLOGY, INC.;

MICRON SEMICONDUCTOR

PRODUCTS, INC.; MICRON

TECHNOLOGY TEXAS LLC,

Defendants.

\_\_\_\_\_/

REMOTE VIDEOTAPED DEPOSITION OF  
BOE HOLBROOK  
30(B)(6) DESIGNEE, MICRON

\_\_\_\_\_  
WEDNESDAY, AUGUST 30, 2023

REPORTED BY: HOLLY THUMAN, CSR No. 6834, RMR, CRR  
JOB NUMBER 6066631

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Remote videotaped deposition of BOE HOLBROOK,  
taken by the Plaintiff, with the witness located in  
Boise, Idaho, commencing at 10:16 A.M. Mountain Time,  
on WEDNESDAY, AUGUST 30, 2023, before me, HOLLY THUMAN,  
CSR, RMR, CRR.

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APPEARANCES

(ALL APPEARANCES REMOTE)

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TONY NOKES, Videographer  
CARRISA NARCISO, Tech Concierge  
BECKY CARRIZOSA, In-house counsel, Micron

## I N D E X

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MR. SHEASBY	171

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## EXHIBITS MARKED FOR IDENTIFICATION

NO.	DESCRIPTION	PAGE
Exhibit 1	JEDEC Standard JESD82-31A, August 2019 (SAM-NET00332467 through -665)	16
Exhibit 2	JEDEC Standard JESD82-32A, August 2019 (MICNL203-00012556 through -755)	17
Exhibit 3	Micron document, "3-Dimensional Stack (3DS) DDR4 SDRAM"	37
Exhibit 5	Micron document "DDR4 SDRAM LRDIMM" (MICNL203-00001364 through -391)	55
Exhibit 6	Micron document, "DDR5 SDRAM RDIMM Addendum" (MICNL203-00000678 through -685)	91
Exhibit 7	Master Revision Control Document 3408.01	90
Exhibit 8	Micron document, "DDR5 SDRAM SODIMM Core" (MICNL203-00000562 through -580)	90
Exhibit 9	Master Revision Control Document 3163.01	90
Exhibit 10	Master Revision Control Document 3405.1	92

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1	(Exhibits, cont'd)	
2	Exhibit 12	Press release, May 7, 2012, "Micron Announces Its First Fully Functional DDR4 DRAM Module" 110
3		
4	Exhibit 14	Presentation deck, "Micron/Netlist Partnership Opportunity, April 2015" 112
5		(NL-MIC-203_00041942 through -2004)
6	Exhibit 16	Micron document, "DDR4 SDRAM LRDIMM" 99
7		(MICNL203-00001364 through -391)
8	Exhibit 17	US Patent 10,949,339, Lee et al. 105
9	Exhibit 18	Page from presentation deck with diagrams headed "Micron" Nd "Netlist Patents" 108
10		
11	Exhibit 19	Texas Instruments presentation deck, "Alternative HDLR Dimm Concept," 124
12		October 6, 2008
13		(NETLIST_SAMSUNG_EDTX00056236 through -245)
14	Exhibit 20	Document marked as Exhibit 19, with highlights 126
15	Exhibit 21	Page from presentation deck with headings for Micron, Netlist Patents, and TI JEDEC Presentation 133
16		
17	Exhibit 23	Presentation deck, "Micron/Netlist Partnership Opportunity, April 2015" 142
18		(NL-MIC-203_00041942 through -2004)
19	Exhibit 25	Minutes of Meeting No. 164, JC-40 Digital Logic Committee, December 9, 2010 (SAM-NET00078119 through -134) 144
20		
21	Exhibit 26	Richtek document, "DDR5 VR on DIMM PMIC" (MICNL203-00059886 through -60009) 148
22		
23	Exhibit 27	Minutes of Meeting No. 193, JC-40 Digital Logic Committee, June 4-6, 2018 (SAM-NET00246201 through -225) 156
24		
25	(Cont'd)	

(Exhibits, cont'd)

Exhibit 29 Presentation slide, "4.3.1.0, 158  
#2259.39, Micron, Voltage Regulators  
for DDR5 DIMMs"

Exhibit 30 Minutes of Meeting No. 59, JC-45 162  
Module Committee, June 4-6, 2018  
(NETLIST\_SAMSUNG\_EDTX00158253 through  
-287)

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INSTRUCTIONS TO WITNESS/REQUESTS TO MARK TRANSCRIPT

	PAGE	LINE
Instruction not to answer	76	23
Instruction not to answer	175	15
Instruction not to answer	175	24

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REPORTER'S NOTE: Exhibits Numbers 4, 11, 15, 22, 24,  
and 28 were not used.

1 EXAMINATION BY MR. SHEASBY 10:18:58

2 BY MR. SHEASBY: 10:18:58

3 Q. Good morning, sir. Can you state your 10:18:59

4 full name for the record? 10:19:00

5 A. Full name is Boe Holbrook. 10:19:01

6 Q. And, sir, you've been designated to speak 10:19:03

7 on behalf of the entire Micron defendant 10:19:06

8 corporation as to a number of technical topics. Is 10:19:09

9 that correct? 10:19:11

10 A. That's correct. 10:19:12

11 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

17	Q. Is there anyone more senior than you in	10:22:20
18	module development?	10:22:23
19	A. No, sir.	10:22:24
20	Q. And how long have you been at Micron?	10:22:25
21	A. 21 years.	10:22:27

Page 10



23 Q. I've marked as Exhibit 1 what is the 10:34:46

24 DDR -- DDR4RCD. 10:34:49

25 Do you see that? 10:34:51

[REDACTED]

1 Q. By the way, just so -- before we do that, 11:08:23

2 Exhibit 1 is the RCD specification. 11:08:26

3 Do you see that? 11:08:29

4 A. Yes, I see that. 11:08:31

█ [REDACTED] █ [REDACTED]

█ [REDACTED] █ [REDACTED]

█ [REDACTED] █ [REDACTED]

█ [REDACTED] █ [REDACTED]

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█ [REDACTED] █ [REDACTED]

20	Q. And "CS" stands for chip-select. Is that	11:42:56
21	correct?	11:43:01
22	A. That's correct.	11:43:02
23	Q. And in JEDEC DDR parlance, chip-selects	11:43:03
24	select a rank. Is that correct?	11:43:07
25	A. Yes. That's correct.	11:43:13

```
19      x4 configuration, that would be 16 DRAM.                                11:44:24
```

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7 Q. And, by the way, do you know what the 11:46:45

8 difference is -- between a signal and an encoded 11:46:47

9 packet of data is in JEDEC? 11:46:50

10 A. JEDEC definition, I do not know what that 11:46:57

11 would be; but I understand what a signal would be 11:47:00

12 versus an encoded packet of data. 11:47:03

13 Q. What's the difference between a signal and 11:47:07

14 an encoded packet of data? 11:47:10

15 A. So a signal, from my understanding, is a 11:47:12

16 single, defined signal, a 1 or a 0. Encoded data, 11:47:16

17 group of data, would be a group of 1s and 0s that 11:47:23

18 would be encoded by a device. 11:47:28

19 Q. Do you remember FBDIMMs? 11:47:32

20 A. I am familiar with FBDIMMs. 11:47:36

21 Q. A little before your time? 11:47:39

22 A. A little bit. 11:47:42

23 Q. And you know that they use an advanced 11:47:43

24 memory buffer. 11:47:45

25 Do you remember that? 11:47:47

1 A. Yes, sir. 11:47:48

2 Q. And in an advanced memory buffer, they 11:47:48

3 use -- that uses encoded data as opposed to data 11:47:52

4 signals. Correct? 11:47:55

5 A. I wouldn't know. AMB and FBDIMM was not 11:48:00

6 my area of expertise. 11:48:04

7 Q. But you understand that there is a 11:48:06

8 difference between encoded data and data signals in 11:48:08

9 terms of how you're controlling memory devices on a 11:48:12

10 module. 11:48:15

11 A. So how memory devices are controlled on a 11:48:18

12 module in respect to FBDIMM, yes, I understand 11:48:21

13 that. 11:48:28

█ █ [REDACTED] █

█ [REDACTED] █

█ [REDACTED] █

█ [REDACTED] █

█ [REDACTED] █

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█ [REDACTED] █

█ [REDACTED] █

## CERTIFICATE OF REPORTER

I, HOLLY THUMAN, a Certified Shorthand Reporter, hereby certify that the witness in the foregoing deposition was by me duly sworn to tell the truth, the whole truth, and nothing but the truth in the within-entitled cause; that said deposition was taken down in shorthand by me, a disinterested person, at the time and place therein stated; and that the testimony of said witness was thereafter reduced to typewriting by computer, to the best of my ability via remote videoconferencing, under my direction and supervision;

That before completion of the deposition review of the transcript [] was [X] was not requested/offered. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed are appended hereto.

I further certify that I am not of counsel or attorney for either or any of the parties to the said deposition, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

DATED: 9/05/2023



HOLLY THUMAN, CSR

JASON G. SHEASBY, ESQ.

JSheasby@irell.com

September 5, 2023

RE: NETLIST, INC. vs. MICRON TECHNOLOGY, INC.

AUGUST 30, 2023-BOE HOLBROOK-30(B)(6)-JOB NO.6066631

The above-referenced transcript has been completed by Veritext Legal Solutions and review of the transcript is being handled as follows:

\_\_\_ Per CA State Code (CCP 2025.520 (a)-(e)) - Contact Veritext to schedule a time to review the original transcript at a Veritext office.

\_\_\_ Per CA State Code (CCP 2025.520 (a)-(e)) - Locked .PDF Transcript - The witness should review the transcript and make any necessary corrections on the errata pages included below, notating the page and line number of the corrections. The witness should then sign and date the errata and penalty of perjury pages and return the completed pages to all appearing counsel within the period of time determined at the deposition or provided by the Code of Civil Procedure.

\_\_\_ Waiving the CA Code of Civil Procedure per Stipulation of Counsel - Original transcript to be released for signature as determined at the deposition.

\_\_\_ Signature Waived - Reading & Signature was waived at the time of the deposition.

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1     \_\_\_ Federal R&S Requested (FRCP 30(e)(1)(B)) - Locked .PDF  
2     Transcript - The witness should review the transcript and  
3     make any necessary corrections on the errata pages included  
4     below, notating the page and line number of the corrections.  
5     The witness should then sign and date the errata and penalty  
6     of perjury pages and return the completed pages to all  
7     appearing counsel within the period of time determined at  
8     the deposition or provided by the Federal Rules.  
9     \_X\_ Federal R&S Not Requested - Reading & Signature was not  
10    requested before the completion of the deposition.

**CERTIFICATE OF SERVICE**

I hereby certify, pursuant to 37 C.F.R. section 42.6, that on October 4, 2023, a complete copy of the foregoing document **PATENT OWNER'S MOTION TO SUBMIT SUPPLEMENTAL INFORMATION PURSUANT TO 37 C.F.R. §42.123(b) and EXHIBITS 2065-2072** were served by electronic mail, as agreed to by the parties, upon the following:

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/Pia S. Kamath/

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