Paper 14 Date: September 1, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
MICRON TECHNOLOGY, INC.; MICRON SEMICONDUCTOR PRODUCTS, INC.; and MICRON TECHNOLOGY TEXAS LLC Petitioner,
V.
NETLIST, INC., Patent Owner.
IPR2022-00418 Patent 8,301,833 B1

Before GEORGIANNA W. BRADEN, SHEILA F. McSHANE, and KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

SZPONDOWSKI, Administrative Patent Judge.

DECISION
Granting Institution of *Inter Partes* Review 35 U.S.C. § 314



I. INTRODUCTION

Micron Technology, Inc., Micron Semiconductor Products, Inc., and Micron Technology Texas LLC (collectively "Petitioner") filed a Petition (Paper 2, "Pet.") to institute an *inter partes* review of claims 1, 3–17, and 19–30 of U.S. Patent 8,301,833 B1, issued on October 30, 2012 (Ex. 1001, "the '833 patent"). Netlist, Inc. ("Patent Owner") filed a Preliminary Response (Paper 11, "Prelim. Resp."). We have jurisdiction under 35 U.S.C. § 314.

Institution of an *inter partes* review is authorized when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). Based on the current record, and for the reasons explained below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim. Accordingly, we institute an *inter partes* review.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 64. Patent Owner also identifies itself as the real party in interest. Paper 3 ("Patent Owner's Mandatory Disclosure"), 1.

B. Related Matters

The parties advise that the '833 patent is the subject of *Netlist, Inc. v. Micron Technology, Inc., et al.*, 6:21-cv-00430 (W.D. Tex.). Pet. 64; Paper 3, 2. Petitioner also advises that the '833 patent has been the subject of the following three *inter partes review* proceedings: IPR2014-00994,



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IPR2014-001370, and IPR2017-00649. Pet. 64. Additionally, Petitioner advises that "a nearly identical claim to the '833 Patent's claim 15 was invalidated as obvious in IPR2017-00692." *Id.* at 65.

C. The '833 Patent (Ex. 1001)

The '833 patent is titled "Non-Volatile Memory Module" and is generally directed to "a memory system which can communicate with a host system such as a disk controller of a computer system." Ex. 1001, codes (54), (57).

The '833 patent states that "[n]on-volatile memory can generally maintain stored information while power is not applied to the non-volatile memory," so, "[i]n certain circumstances, it can therefore be useful to backup volatile memory using non-volatile memory." *Id.* at 1:28–31. The invention in the '833 patent relates to a configuration of hybrid memory systems that "can include volatile and non-volatile memory and a controller which are configured such that the controller backs up the volatile memory using the non-volatile memory in the event of a trigger condition," such as a power failure or power reduction. *Id.* at code (57), 3:65–67, 17:66–18:1. "[T]he volatile memory system can be operated at a reduced frequency during backup and/or restore operations which can improve the efficiency of the system and save power." *Id.* at 4:41–44.

Figure 9, which depicts a flowchart of an example method of a volatile memory subsystem operating at a reduced rate in back-up mode, is reproduced below:



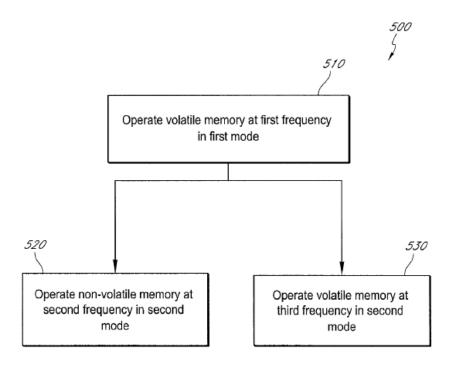


FIG. 9

Id. at 3:45–48. Figure 9 depicts block 510, "[o]perate volatile memory at first frequency in first mode," block 520, "[o]perate non-volatile memory at second frequency in second mode," and block 530, "[o]perate volatile memory at third frequency in second mode." The memory system "may switch from the first mode of operation to the second mode of operation in response to a trigger condition," such as "a power failure condition." Id. at 17:64–8:1." The second mode of operation may include, for example, backup and/or restore operations. Id. at 18:1–7. The '833 patent also describes that "[t]he third frequency can be less than the first frequency," and "can be approximately equal to the second frequency." Id. at 8:8–10.



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D. Illustrative Claims

Among the challenged claims, claims 1 and 15 are independent. Independent claim 15 is representative and is reproduced below.

15. A memory system operatively coupled to a host system, the memory system comprising:

a volatile memory subsystem operable at a first clock frequency when the memory system is in a first mode of operation in which data is communicated between the volatile memory subsystem and the host system;

and a non-volatile memory subsystem operable at a second clock frequency when the memory system is in a second mode of operation in which data is communicated between the volatile memory subsystem and the nonvolatile memory subsystem,

the volatile memory subsystem further being operable at a third clock frequency when the memory system is in the second mode of operation, the third clock frequency being less than the clock first frequency.

Ex. 1001, 21:61–22:17.

E. Prior Art and Asserted Challenges to Patentability

Petitioner asserts that claims 1, 3–17, and 19–30 are unpatentable on the following challenges (Pet. 2):

Claims Challenged	35 U.S.C. § ¹	Basis/References
1, 15	§ 103(a)	Collateral Estoppel

¹ Because the '833 patent issued from a patent application that was filed before March 16, 2013, patentability is governed by the version of 35 U.S.C. § 103 preceding the Leahy-Smith America Invents Act ("AIA"), Pub L. No. 112–29, 125 Stat. 284 (2011).



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