

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION,
Petitioner,

v.

BiTMICRO, LLC,
Patent Owner.

Case IPR2023-00783
Patent 6,496,939

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	THE BOARD NEED NOT REACH ANY CLAIM CONSTRUCTION ISSUES TO DENY THE PETITION.....	8
III.	PETITIONER’S CHALLENGES FAIL ON THE MERITS	10
A.	The Challenged Claims Require Deactivating the Super Capacitors Based Upon the Super Capacitors Discharging to a Predetermined Level.....	10
B.	A POSITA Would Not Have Been Motivated to Combine the Ground 1 References of Nishida, Harari, and Nakao in the Manner Claimed	13
C.	A POSITA Would Not Have Been Motivated to Combine Petitioner’s Ground 2 References Nishida, Harari, Ergott, and Pilukaitis in the Manner Claimed.....	18
D.	Ground 3 Based on Nishida, Harari, Ergott, Pilukaitis, and Nakamura Fails for the Same Reasons as Ground 2	20
E.	Grounds 4-6 Fail Because the Supercap Manual is Not a Printed Publication Constituting Prior Art	21
IV.	CONCLUSION.....	24

TABLE OF AUTHORITIES

Cases

<i>Acceleration Bay, LLC v. Activision Blizzard Inc.</i> , 908 F.3d 765 (Fed. Cir. 2018)	23
<i>Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.</i> , 326 F.3d 1226 (Fed. Cir. 2003)	24
<i>Connell v. Sears, Roebuck & Co.</i> , 722 F.2d 1542 (Fed. Cir. 1983)	5
<i>Constant v. Advanced Micro-Devices, Inc.</i> , 848 F.2d 1560 (Fed. Cir. 1988)	21

Other Authorities

Manual of Patent Examining Procedure, Ch. 2001.06	24
Manual of Patent Examining Procedure, Ch. 2128.01	21

Rules

37 C.F.R. § 42.107	1
37 C.F.R. § 42.120(a).....	1

PATENT OWNER’S LIST OF EXHIBITS

Exhibit Number	Exhibit Description
2001	Screenshot of USPTO Patent Center’s Documents Tab for U.S. Patent No. 5,608,684 (“Reasoner”)

Pursuant to 37 C.F.R. § 42.107, Patent Owner BiTMICRO, LLC (“BiTMICRO” or “Patent Owner”) files this preliminary response to the Petition, setting forth reasons why the Petition for *inter partes* review (“IPR”) of claims 1-3, 6, 10-12, and 15 of U.S. Patent No. 6,496,939 (the “’939 Patent”), as requested by Intel Corporation (“Petitioner”), should be denied.¹

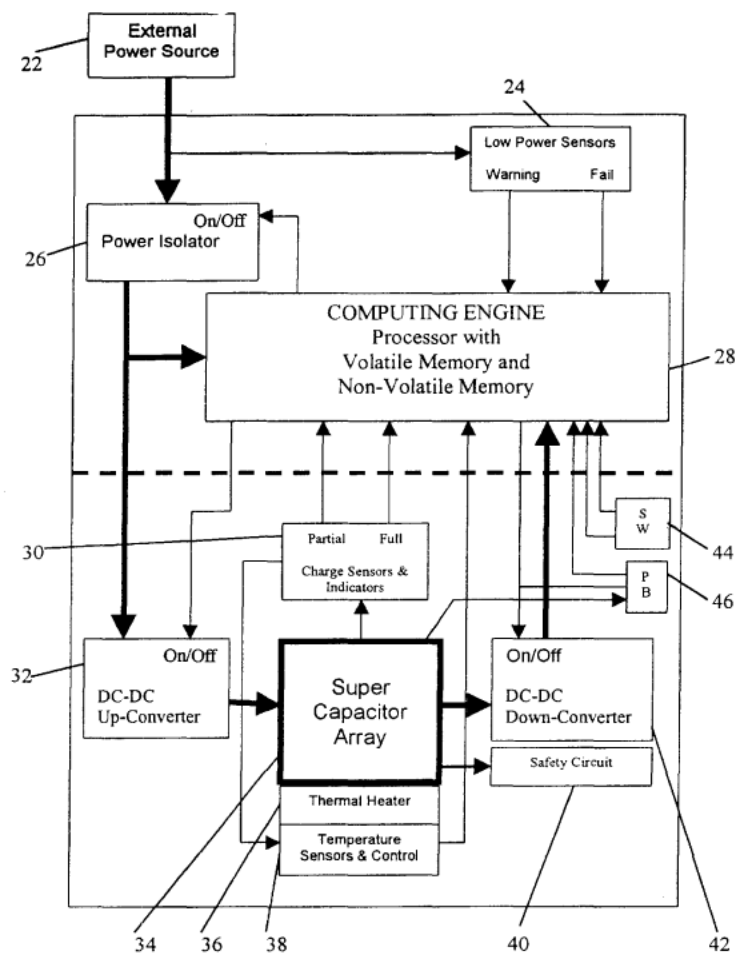
I. INTRODUCTION

At the time of the ’939 Patent’s filing, computer systems possessed two different types of memory: volatile and non-volatile. Volatile memory, which does not retain data upon loss of power, could include cache memory and main memory of the computer system. Unlike volatile memory, non-volatile memory such as a hard disk drive (HDD) does not lose its data upon a power loss. The inventors of the ’939 Patent recognized that volatile memory in a computer system contains newly written and/or modified data that is subject to erasure if the computer system loses power quickly, and that novel technologies for reconfiguring such data in these circumstances (*e.g.*, flushing data from volatile to non-volatile memory) were needed.

The ’939 Patent discloses, among other things, solutions for performing a data transaction upon experiencing a loss of power in a computer system. By

¹ By submitting this Preliminary Response, no waiver of any argument is intended by Patent Owner. Patent Owner will have a right to file a complete response to the Petition, should the Board institute *inter partes* review. 37 C.F.R. § 42.120(a).

including a plurality of super capacitors that can be charged while external power is active, the computer system can temporarily draw power from the charged super capacitors if the power sensors recognize a power loss. This temporary backup power gives the computer system time to perform data reconfiguration, such as transferring data from volatile memory to non-volatile memory or actively erasing data from the volatile memory. However, the inventors of the '939 Patent also recognized that once the super capacitors have discharged to a predetermined level, proper operation of the computer system cannot occur due to insufficient voltage. Thus, the '939 Patent discloses cutting off power from the super capacitors based on the super capacitors discharging to a predetermined level. An exemplary computer engine connected to super capacitors for providing temporary backup power is illustrated in FIGURE 1, reproduced below.



20

FIGURE 1

Consistent with this disclosure, the challenged claims are directed generally to a method and system for controlling data in a computer system when the computer system loses power. As claimed, upon experiencing a power loss, the method and system activate a plurality of super capacitors to provide power for data management in the computer system, but only until the super capacitors discharge to a predetermined level. This temporary power supply via the super

capacitors enables the system to reconfigure data before shutting down due to the loss of power. As an example of the data reconfiguration, the data can be transferred from volatile memory to non-volatile memory. Claim 1's "method for controlling data in a computer system when the computer system loses power" includes, in relevant part, the steps of "activating a plurality of super capacitors to supply power to the computing engine based upon power being removed from the computer system" and "deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level." Claim 3 depends from claim 1, and further recites, as part of the process of reconfiguring data, "allowing all data to be transferred from the at least one volatile memory to the at least one non-volatile memory." Independent claim 10 recites substantially similar features as the above-quoted features of claim 1. For example, claim 10 is a system claim and claims a "means for deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level."

Petitioner asserts six grounds against these challenged claims based on a multitude of incongruous references, one of which (the "Supercap Manual," defined in footnote 8 below) is not even prior art. A review of the Petition's increasingly annotated figures from Nashida shows that with the benefit of

hindsight and using the challenged claims as a guide, the Petitioner has built up the ‘939 Patent’s inventions through a collection of disparate parts. This approach stretches obviousness jurisprudence too far. *See e.g., Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549 (Fed. Cir. 1983) (“That features, even distinguishing features, are ‘disclosed’ in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made”).

In Ground 1, Petitioner contends that challenged claims 1-3 and 6 are obvious over the Nishida² reference in view of the Harari³ reference and the Nakao⁴ reference.

² INTEL-1006, the English Translation of Japanese Patent Application Publication No. JPH05-108505 (“Nishida”).

³ INTEL-1024, U.S. Patent No. 5,535,328 (“Harari”).

⁴ INTEL-1007, U.S. Patent No. 5,929,603 (“Nakao”).

In Ground 2, Petitioner contends that challenged claims 1-3, 6, 10-12, and 15 are obvious over Nishida in view of Harari, further in view of the Ergott⁵ reference and the Pilukaitis⁶ reference.

In Ground 3, Petitioner contends that challenged claims 10-12 and 15 are obvious over Nishida in view of Harari, Ergott, Pilukaitis, and the Nakamura⁷ reference.

In Grounds 4-6, Petitioner respectively challenges the same claims challenged in Grounds 1-3, but these challenges also add the Supercap Manual⁸ to each of Grounds 1-3.

However, each Ground fails to establish unpatentability of the challenged claims.

In Ground 1, Petitioner’s combination of Nishida/Harari and Nakao is unsupported by the requisite motivation. Petitioner fails to recognize that Nishida and Nakao disclose alternative and inconsistent solutions. Nishida’s approach to preserving data in the event of a power failure is to determine, *in advance*, whether

⁵ INTEL-1008, U.S. Patent No. 4,965,828 (“Ergott”).

⁶ INTEL-1014, U.S. Patent No. 5,926,383 (“Pilukaitis”).

⁷ INTEL-1027, U.S. Patent No. 5,710,931 (“Nakamura”).

⁸ INTEL-1015, File History for U.S. Patent No. 5,608,684, including a cited reference, “SUPERCAP” (Electric Double-Layer Capacitors) User’s Manual (“Supercap Manual”).

sufficient backup power exists to complete a data transfer before beginning such a transfer. On the other hand, Nakao discloses an alternative approach of monitoring battery power *during* a data processing task to address a scenario where power diminishes to an unacceptable level while the data processing task is occurring. However, because Nishida determines there is power sufficient to complete a data processing task in advance, Nishida does not encounter the problem that Nakao seeks to solve. Indeed, Nakao expressly discloses that its solution for monitoring power quality during a transfer is an *alternative* to the advanced determination mechanism, such as that used by Nishida. Contrary to Petitioner's hindsight-driven recreation of the challenged claims, a POSITA would not have been motivated to combine these alternative approaches from Nakao and Nishida into a single system.

Like Ground 1, Ground 2 possesses these same flaws because the Pilukaitis reference, relied upon by Petitioner for a similar purpose as the Nakao reference, also discloses an alternative solution to Nishida's advanced determination whether sufficient power exists for a data transfer. As with Ground 1, a POSITA would not have been motivated to combine the alternative approaches disclosed by Nishida and Pilukaitis into a single system.

Ground 3 adds the Nakamura reference to the Ground 2 combination of references, but not for the purpose of solving the lack of motivation present in Petitioner’s Ground 2. As such, Ground 3 fails for the same reasons as Ground 2.

Finally, Grounds 4-6 add the Supercap Manual to Ground 1-3, respectively, but Petitioner fails to establish that the Supercap Manual is a printed publication constituting prior art. The Supercap Manual is non-patent literature hidden in the file history of an unrelated patent, and there is no evidence if or when this reference was accessible to the public interested in the relevant art. These Grounds 4-6 therefore also fail.

For these reasons, and as explained in more detail below, each Ground presented in the Petition is deficient, and the Petition should be denied without institution.

II. THE BOARD NEED NOT REACH ANY CLAIM CONSTRUCTION ISSUES TO DENY THE PETITION

In the Petition, Petitioner submits the following proposed constructions for nine terms appearing in the challenged claims.

Term	Petitioner’s Proposed Construction
Claim 10: “means for activating”	Means-plus-function Structure: “an up-Converter and a down-converter (and equivalents)”

	Function: “activating a plurality of super capacitors to supply power to the computing engine based upon power being removed from the computer system”
Claim 10: “means for reconfiguring”	Means-plus-function Structure: “non-volatile memory and volatile memory (and equivalents)” Function: “reconfiguring the data in the computing engine”
Claim 10: “means for deactivating”	Means-plus-function Structure: “a down-converter (and equivalents), and switches, transistors, gates, etc. that are generally known in the art” Function: “deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level”
Claim 12: “means for allowing”	Means-plus-function Structure: “volatile and non-volatile memory (and equivalents)” Function: “allowing all data to be transferred from the at least one volatile memory to the at least one non-volatile memory”
Claim 15: “means for reversing”	Means-plus-function Structure: “a down-converter and an up-converter (and equivalents)”

	Function: “reversing the flow of current between the computing engine and the plurality of super capacitors”
Claim 15: “means for discharging”	Means-plus-function Structure: “an up-converter and a down-converter (and equivalents)” Function: “discharging current from the plurality of super capacitors to the computing engine”

See Pet., 7-15. Without expressly agreeing to Petitioner’s constructions, and without waiving its right to submit its proposed constructions in a Patent Owner Response, Patent Owner submits that the Board need not engage in any pre-institution claim construction. For the reasons presented in Section III below, Petitioner’s grounds each include fundamental flaws and fail to establish the disclosure of every claimed element in each independent claim. These findings do not require the Board to conduct any construction of the above-identified terms.

III. PETITIONER’S CHALLENGES FAIL ON THE MERITS

A. The Challenged Claims Require Deactivating the Super Capacitors Based Upon the Super Capacitors Discharging to a Predetermined Level

Claim 1’s “method for controlling data in a computer system when the computer system loses power” includes, in relevant part, the steps of “activating a plurality of super capacitors to supply power to the computing engine based upon

power being removed from the computer system” and “deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level.” The “deactivating” step is identified as element 1.c in the Petition. *See* Pet., 23. Independent claim 10 recites a substantially similar feature, namely a “means for deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level.”⁹

Providing exemplary support for these claimed features, the '939 Patent discloses charge level sensors in the computer system that “inform the computer system that the super-capacitor voltage has fallen below the fully charged and partially charged levels.” '939 Pat., 5:36-38. “[O]nce the super-capacitors discharge to a predetermined level,” they are deactivated to shut down power to the computer system. *See, e.g.*, '939 Pat., 5:39-42; FIGURE 3 (Steps 108 and 110).

The deactivation of the super capacitors is described by the '939 Patent as providing exemplary “positive side effects” for protecting the computer system. '939 Pat., 5:44. “First, if the output voltage from the down-converter were allowed to fall below the minimum operating voltage of the computer system, the computer

⁹ As noted in Section II above, Petitioner agrees that the claimed function for this claim term is “deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level.” Pet., 10-12.

system could continue to run with unpredictable and potentially serious results.”

’939 Pat., 5:44-48. “Also, by not fully discharging the super-capacitors they will take only a few seconds to recharge once the external system power is restored, whereas the initial charge of super-capacitors may take up to 5 minutes.” ’939 Pat., 5:48-52. Thus, the claimed “deactivating the plurality of super capacitors” step is “based upon the plurality of super capacitors discharging to a predetermined level.”

Claim 3, which depends directly from claim 2 and indirectly from claim 1, further recites “allowing all data to be transferred from the at least one volatile memory to the at least one non-volatile memory.” This requirement for transferring all data out of volatile memory is not a claimed feature of claim 1 or claim 10, however. Further, this feature of claim 3 provides an additional limitation to claim 1’s “reconfiguring” step, not claim 1’s “deactivating” step. As a result, even when claim 3 is read in light of base claims 1 and 2, the “deactivating the plurality of super capacitors” step is “based upon the plurality of super capacitors discharging to a predetermined level,” not upon whether all—or less than all—data has been transferred out of volatile memory.

Petitioner’s challenges combine disparate references in an attempt to disclose or suggest every feature of the challenged claims. However, when the disclosures of these references are considered in full, this is no reason that a

POSITA would have been motivated to combine the references as alleged by the Petitioner. As a result, each of Petitioners' challenges fails to establish unpatentability of any challenged claim.

B. A POSITA Would Not Have Been Motivated to Combine the Ground 1 References of Nishida, Harari, and Nakao in the Manner Claimed

As noted above, claim 1's "method for controlling data in a computer system when the computer system loses power" includes, in relevant part, "deactivating the plurality of super capacitors to cut off power to the computing engine based upon the plurality of super capacitors discharging to a predetermined level." This "deactivating" step is identified as element 1.c in the Petition. *See* Pet., 23. Petitioner concedes that Nishida combined with Harari fails to disclose element 1.c, but contends that the "Nishida/Harari system in combination with Nakao rendered this limitation obvious." Pet., 23. Patent Owner disagrees. Considering the disclosures of these references in full, a POSITA would not have been motivated to combine these references in the manner claimed.

Nishida's "object" is providing "a computer system that can know in advance whether a backup can be performed completely, and can prevent accidents during backup by issuing an alarm when a backup cannot be performed properly." Nishida, [0006]. By monitoring both the "amount of power that can be supplied from a backup power supply" and "the amount of data in the main recording

memory” before initiating a data transfer, Nishida determines whether the transfer can be fully performed in advance. Nishida, [0014]-[0015]. Nishida discloses that “at the same time as switching to the storage battery 110 side, the CPU 101 initiates a shutdown process effected by a warning from the power supply monitoring means 107” Nishida, [0004]. Through this process, Nishida discloses that “the occurrence of the backup accident can be more completely inhibited.” Nishida, [0009]; *see also id.*, [0015] (“the data on the main recording memory 102 is completely evacuated to the external recording device 103.”).

On the other hand, Nakao expressly discloses that its mechanism serves as an *alternative* to “power source detection mechanisms,” which were used to assume the “remaining battery remanent voltage ... to judge in advance the state of the batter consumption.” Nakao, 1:39-46, 6:15-18 (“power source detection mechanisms ... are not required any more in the present invention.”). Thus, Nakao intentionally developed an *alternative* to the advanced computation of reserve battery power, such as disclosed in Nishida.

The Petition contends that the Nishida/Harari combination and Nakao’s power supply deactivation approach are “similar” systems, and that Nakao’s technique would improve the Nishida/Harari combination “in the same way (improving the safety and reliability of data).” Pet., 29. This is false. Nishida’s system determines in advance whether a data backup can be performed completely

based on the level of power available in a battery storage, and accordingly avoids over-discharge situations. On the other hand, Nakao’s discharge finishing signal PFD exists to initiate a “predetermined stop operation (data-save operation, etc.)” precisely because Nakao has no mechanism to know whether a data transfer or backup operation will be completed before backup power is discharged. Nakao, 4:57. Indeed, as noted above, Nakao expressly discloses that its mechanism serves as an *alternative* to detecting the “remaining battery remanent voltage ... to judge in advance the state of the batter consumption.” Nakao, 1:39-46, 6:15-18 (“power source detection mechanisms ... are not required any more in the present invention.”). Nakao also disparages Nishida’s advanced computational method, disclosing that this approach results in stopping devices “even when the remaining capacity of the battery is fully within the usable region,” and this makes it “difficult to take out the battery capacity of the battery package to a maximum extent.” Nakao, 1:47-54. Given that even Nakao itself sought an alternative approach to Nishida’s advanced computation, a POSITA faced with the disclosures of Nishida and Nakao would not have been motivated to combine these references’ teachings in the manner claimed.

Petitioner’s proposed combination of Nishida and Nakao uses Nakao’s PFD signal and RST signal, but also continues to use Nishida’s power quantity monitoring means 114. *See* Pet., 34. But Nakao discloses that “power source

detection mechanisms ... are not required any more in the present invention.”

Nakao, 6:15-18. As such, a POSITA would have had no reason to include Nishida's power quantity monitoring means 114 to monitor the storage battery 110 into a system that uses Nakao's mechanism for avoiding over-discharge. This is another confirmation that the Petition fails to recognize Nakao's solution as an alternative to Nishida's calculate-in-advance approach.

Petitioner also contends that “a POSITA would have incorporated the teachings about Nakao's Figure 1, 2, and 5 implementations into the Nishida/Harari system *because Nishida did not disclose how to achieve system shutdown.*” Pet., 28 (emphasis added). This statement reflects an attempt by Petitioner to manufacture a problem in Nishida—no alleged disclosure how to complete a shutdown—where no problem exists. This leads Petitioner to argue that Nakao's mechanism would have been added to Nishida. But again, Nishida's disclosed process allows its system to engage in a memory transfer knowing that its backup power supply is sufficient to adequately complete the transfer during shutdown to avoid over-discharge.

Petitioner also argues that a “POSITA would have modified the Nishida/Harari system to incorporate Nakao's teachings of deactivating power storage elements to obtain the benefit of over-discharge prevention as taught by Nakao.” Pet., 27-28. This is also wrong. Nishida does not risk an over-discharge

condition that Nakao seeks to solve. As discussed above, Nishida ensures that there is sufficient reserve power available to complete a data transfer, and ensures that there is sufficient space available on the external recording device 103, as part of the CPU shutdown before a data transfer is started. Accordingly, Nishida does not risk the over-discharge condition that Nakao seeks to solve.

The Petition also complains that “Nishida does not address over-discharge.” Pet., 28. But as noted above, Nishida does not risk an over-discharge condition because Nishida commences a transfer after verifying that there is sufficient power to complete the transfer as part of the CPU shutdown process. Before a transfer begins, Nishida “first calculates the maximum amount of data (memory backupable [*sic*] amount) that can be transferred from the main recording memory 102 to the external recording device 103 by only the power from the storage battery 110 when a memory backup must be performed.” Nishida, [0014]. Nishida also monitors the “amount of data in the main recording memory” before initiating a data transfer. Nishida, [0015]. Nishida determines whether the transfer can be fully performed in advance, thus obviating a risk of over-discharge that Nakao addresses. Therefore, contrary to Petitioner’s statement, Nishida does not need to discuss over-discharge in the manner that Nakao does. These references disclose different, alternative solutions, and a POSITA would not have been motivated to combine these solutions.

For all of these reasons, Petitioner's asserted combination of Nishida/Harari with Nakao is not supported by the record evidence. A POSITA would not have been motivated to combine these references in the manner claimed, and this Ground fails to establish unpatentability of any challenged claim.

C. A POSITA Would Not Have Been Motivated to Combine Petitioner's Ground 2 References Nishida, Harari, Ergott, and Pilukaitis in the Manner Claimed

In Ground 2, Petitioner first proposes to “include an up-converter and a down-converted [from Ergott] in the Nishida/Harari system described in Ground 1 regarding limitation 1.pre (at 19).” Pet., 40. Petitioner refers to this resulting combination as the Nishida/Harari/Ergott system. See Pet., 46. This combination lacks claim 1's “deactivating” step, element 1.c.

Addressing element 1.c, Petitioner contends that a “POSITA would have incorporated Pilukaitis's undervoltage protection circuit into the Nishida/Harari/Ergott system.” Pet., 46. Petitioner alleges in the first paragraph of the Petition that, like Nakao, “Pilukaitis described” the claimed “predetermined level” feature of element 1.c's “deactivating” step. Pet., 1. Petitioner also states that “Pilukaitis's undervoltage lockout circuit was a ‘suitable option’ that ‘helped address’ the ‘known problem’ of undervoltage supplied to a power converter by turning off the converter when input voltage drops below a threshold.” Pet., 48. Accordingly, Petitioner's use of Pilukaitis in Ground 2 is similar to Petitioner's use

of Nakao in Ground 1. For the same reasons explained above for Ground 1, a POSITA faced with Nishida would not have been motivated to incorporate Pilukaitis's undervoltage lockout circuit into the combination.

Specifically, Petitioner once again misunderstands the Nishida system, which would not have been modified by a POSITA to include Pilukaitis for addressing undervoltage. Rather, as explained in Section III.B above, Nishida implements an alternative approach that does not risk an over-discharge condition. Specifically, Nishida ensures that there is sufficient power available from a storage battery 110 in advance, before engaging in a data backup. Without citation to any evidence, Petitioner asserts that “[a]s part of the combination [in Ground 2], in at least some cases Nishida’s super-capacitors 110 would have been less than fully discharged when the down-converter reached the predetermined input voltage threshold.” Pet., 50. But this assertion is unsupported by any record evidence, and fails to recognize that Nishida ensures that there is sufficient power in advance to complete a data transfer as part of the shutdown process. Petitioner’s statement about the discharge status of Nishida’s storage battery 110 relies on unstated assumptions. In particular, Petitioner’s statement and scenario assumes that the transfer of data has commenced after Nishida confirms that there is sufficient power in the storage battery 110 to complete the transfer, but that the CPU shutdown process is not completed before the storage battery discharge drops to a

low-voltage threshold. This assumption is unfounded, and in fact conflicts with Nishida's determination that sufficient power exists in advance of conducting the data transfer. As such, a POSITA would not have been motivated to combine Nishida and Pilukaitis's alternative approaches as argued by the Petitioner.

Just as Nakao recognized that disconnection of a power supply served as an alternative to Nishida's advanced determination of power levels, Pilukaitis's system does as well. There is no reason that a POSITA would have combined two alternative systems where one system would be rendered moot as a result of the other. This combination of Nishida and Pilukaitis, along with Harari and Ergott, is unsupported and should be rejected by the Board.

Thus, Petitioners' Ground 2 also fails.

D. Ground 3 Based on Nishida, Harari, Ergott, Pilukaitis, and Nakamura Fails for the Same Reasons as Ground 2

Ground 3 adds Nakamura to the references of Ground 2 to challenge independent claim 10 and dependent claims 11-12 and 15. Ground 3 is therefore founded upon the Ground 2 combination of Nishida, Harari, Ergott, and Pilukaitis, and therefore fails for the same reasons addressed above in Ground 2. Nakamura is not used by Petitioner to remedy the lack of motivation for combining the references of Ground 2 as discussed. As such, Petitioner's Ground 3 fails for the same reasons as Ground 2.

E. Grounds 4-6 Fail Because the Supercap Manual is Not a Printed Publication Constituting Prior Art

Grounds 4-6 add the Supercap Manual to Grounds 1-3, respectively. The Petition submits the Supercap Manual in the format in which it is included within the File History of U.S. Patent No. 5,608,684 (“Reasoner”), INTEL-1015. *See* Pet., iii. Within INTEL-1015, the Supercap Manual appears to be a document that was submitted to the USPTO examiner along with an Information Disclosure Statement during prosecution of Reasoner. INTEL-1015, 61-103. However, Petitioner fails to establish that the Supercap Manual is a printed publication constituting prior art.

For a document such as the Supercap Manual to constitute a “printed publication,” it must have been “sufficiently accessible to the public interested in the art; dissemination and public accessibility are the keys to the legal determination whether a prior art reference was ‘published.’” Manual of Patent Examining Procedure (“MPEP”), Ch. 2128.01 (citing *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1568 (Fed. Cir. 1988)). Here there is no showing that the Supercap Manual would have been sufficiently accessible to the public interested in the relevant art.

First, the file history of Reasoner is not available online through the USPTO’s Patent Center. *See* Ex. 2001 (displaying a screen shot of the USPTO’s Patent Center Documents tab for Reasoner, indicating that no electronic file history

is available to the public); *see also* INTEL-1015 at 1-4 (indicating that Petitioner had to engage a specialist service, Clarivate, to procure and assemble a physical copy of the subject file history through unknown and undisclosed efforts). Even if Reasoner's file history were generally available online, the Supercap Manual, as non-patent literature ("NPL"), would not have been published in that file history. This is because it is the USPTO's policy not to publish NPL in the online file histories. *See* https://www.uspto.gov/ebc/pair/pair_faq_pt_general.html#npl ("A. Images of non-patent literature (NPL) cited in public patent application files are not available for either viewing or downloading through Public PAIR. Certified copies of the full contents of the patent application files, including NPL are available from the USPTO Office of Public Records. To order a copy of this document, click here (link to <http://ebiz1.uspto.gov/oems25p/index.html>). For questions regarding patent document copies available for order, contact the OPR Customer Service Line: (703) 308-9726 or (800) 972-6382 between 8:30 a.m. and 8:00 p.m. U.S. Eastern Standard Time.").

Second, Petitioner presents no testimony or other evidence that the Supercap Manual, whether buried in an obscure file history or through another source, would have been sufficiently accessible to the public interested in the art. To the contrary, the evidence shows that without first knowing of the Reasoner file history and then taking the steps to procure and obtain Reasoner's physical file history

from the USPTO, a person of skill in the art would not have been able to know anything more than the title of the Supercap Manual as it appears on the Reasoner patent: “NEC Document No. CEP-1004G, ‘Supercap’ User’s Manual, published Jun. 1992.” INTEL-1015, 10. There is no evidence in the record on how a POSITA would have understood this title, what this title would have informed a POSITA, and why a POSITA familiar with nothing more than this non-descript title would have had reason to take the necessary further step of ordering the complete Reasoner patent file history from the USPTO to acquire the Supercap Manual and review the contents of this submission. Further, there is no evidence that public interested in the relevant art would have been familiar with Reasoner in the first place. On this evidence, there is no basis to conclude that the Supercap Manual, as included but not indexed within the Reasoner file history, constituted a printed publication. *See Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 773 (Fed. Cir. 2018) (concluding that an electronic technical report did not constitute a “printed publication” because the indexing or searchability was deficient, and an interested skilled artisan, using reasonable diligence, would have had to undertake an extensive search of materials without knowing whether the search would have been fruitful).

Third, there absolutely no evidence that the Supercap Manual was independently available as a “printed publication.” Even Reasoner’s decision to

submit the Supercap Manual in an IDS is not evidence that the Supercap Manual was a printed publication because the duty of disclosure extends beyond prior art. *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226, 1234 (Fed. Cir. 2003) (The duty of disclosure “is not limited to prior art but embraces *any* information that a reasonable examiner would be substantially likely to consider important in deciding whether to allow an application to issue as a patent.”) (emphasis in original). “Materiality controls whether information must be disclosed to the Office, *not the circumstances under which or the source from which the information is obtained.*” MPEP Ch. 2001.06 (emphasis added).

For all these reasons, there is no basis for the Supercap Manual to be treated as a printed publication constituting prior art, and Petitioner's Grounds 4-6 do not remedy any shortcomings of Grounds 1-3 identified above.

IV. CONCLUSION

For the reasons presented above, no *inter partes* review should be instituted.

Dated: September 20, 2023

/s/ Wayne M. Helge
Wayne M. Helge (Reg. No. 56,905)
NOSSAMAN, LLP
1401 New York Ave, NW
Suite 800
Washington, DC 20005
Telephone: (202) 887-1400
Email: whelge@nossaman.com

James T. Wilson (Reg. No. 41,439)
DAVIDSON BERQUIST JACKSON &

IPR2023-00783 Patent Owner's Preliminary Response

GOWDEY, LLP
8300 Greensboro Dr., Suite 500
McLean, VA 22102
Telephone: (571) 765-7700
Fax: (571) 765-7200
Email: jwilson@dbjg.com

Counsel for Patent Owner

CERTIFICATE OF WORD COUNT

The undersigned certifies that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE complies with the type-volume limitation in 37 C.F.R. § 42.24(b)(1). According to the word-processing system's word count, the brief contains 4,935 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

By: /s/ Wayne M. Helge
Wayne M. Helge (Reg. No. 56,905)
Attorney for Patent Owner

CERTIFICATE OF SERVICE

I hereby certify that on September 20, 2023, a true and correct copy of the foregoing document was served via email, by consent, to Petitioner by serving the correspondence email address of record as follows:

Tyler R. Bowen
Reg. No. 60,461
PERKINS COIE LLP
2901 N. Central Avenue
Suite 2000
Phoenix, Arizona 85012
(602) 351-8000

Intel-BiTMicro-
IPRService@perkinscoie.com

Lori A. Gordon
Reg. No. 50,633
Yuanfeng Gao
Reg. No. 79,573
PERKINS COIE LLP
700 Thirteenth Street, N.W.,
Suite 800
Washington, DC 2005-3960
(202) 654-6200

Chad Campbell
PERKINS COIE LLP
2901 North Central Avenue
Suite 2000
Phoenix, AZ 85012

/s/ Wayne M. Helge
Wayne M. Helge (Reg. No. 56,905)
Attorney for Patent Owner