

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MEDIATEK, INC. ,
Petitioner,

v.

MOSAID TECHNOLOGIES INC,
Patent Owner.

Case IPR2024-00719
Patent 7,945,885

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

The Petition should be denied because Petitioner fails to demonstrate a reasonable likelihood of prevailing as to even one challenged claim. Petitioner's two grounds center upon two combinations, Nowka-Borkar and Nicol-Borkar. All grounds fail, however, for the threshold reason that Petitioner fails to show that Borkar is analogous art available for use in an obvious combination. *See* Section II. Even if that could be overlooked, Petitioner fails to show that Nowka-Borkar renders obvious a "plurality of power islands" as required by the claims (*see* Section III.A-B). The Nicol-Borkar combination fares no better; Petitioner fails to explain what its combination even is (*see* Section IV.A) and, in any event, fails to demonstrate a reasonable likelihood of prevailing as to any claim (*see* Sections IV.B).

II. PETITIONER FAILS TO PROVE THAT BORKAR IS ANALOGOUS ART (ALL CLAIMS, ALL GROUNDS).

Every ground of the Petition (Pet., 1) relies upon combinations with Borkar, but Petitioner fails to prove Borkar is analogous art. "A reference qualifies as prior art for an obviousness determination . . . only when it is analogous to the claimed invention." *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). An obviousness ground that relies upon non-analogous art fails. *Id.*, 1352. "Petitioner bears the burden of showing by a preponderance of evidence that the asserted prior art references are analogous art." *SCHOTT Gemtron Corp. v. SSW Holding Co., Inc.*,

IPR2013-00358, Paper 106, 26 (Aug. 20, 2014); *In re Nat. Alts., LLC*, 659 Fed. App'x. 608, 613-14 (Fed. Cir. 2016) (nonprecedential).

To be analogous, a reference must be either (1) from the same field of endeavor as the patent-at-issue, or (2) reasonably pertinent to the particular problem with which the inventor of the challenged patent is involved. *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). Petitioner, however, fails to prove that Borkar is analogous under either prong. Whereas the '885 patent's field is managing power on integrated circuits using power islands, Borkar's field is controlling transistor body bias to control chip parameters. *See* Section II.A. And whereas the '885 patent is directed towards improving upon prior art "voltage islands," whose operating voltages and frequencies did not dynamically change based upon the needs and operation of the integrated circuit, Borkar, by contrast, is directed towards the very different problem of improving the switching rate in transistors. *See* Section II.B. Because Petitioner's grounds all rely upon non-analogous art (Borkar), they must be rejected.

A. Borkar And The '885 Patent Do Not Share The Same Field Of Endeavor.

The '885 patent and Borkar do not share the same field of endeavor. The '885 patent's field of endeavor—as confirmed by its title, abstract, figures, written description, and claims—is “managing power on integrated circuits using power

islands.” Borkar’s field, by contrast, is “using software to control transistor body bias in controlling chip parameters.”

To discern the field of endeavor, the Federal Circuit has often looked to a patent’s “background of invention” and “field of the invention” sections.¹ Additionally, a claim preamble, and function and structure of the claimed inventions may also bear upon the field of endeavor. *Airbus*, 941 F.3d at 1380-81 (affirming Board’s finding of field of endeavor based on “the preamble of a ... claim”); *In re Bigio*, 381 F.3d 1320, 1326 (Fed. Cir. 2004) (“The Board thus correctly set the field of the invention by consulting the structure and function of the claimed invention as perceived by one of ordinary skill in the art.”).

Here, these traditional sources for identifying a field of endeavor unanimously confirm that the ’885 patent’s field is “managing power on integrated circuits using power islands.” The ’885’s “field of invention” indicates that it relates to “managing

¹ See, e.g., *In re Wood*, 599 F.2d 1032, 1036 (CCPA 1979) (determining field of endeavor based on “Background of Invention”); *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1237-38 (Fed. Cir. 2010) (similar); *Airbus S.A.S. v. Firepass Corp.*, 941 F.3d 1374, 1381 n. 8 (Fed. Cir. 2019) (“[T]he specification of each reference includes a ‘Field of the Invention’ section that distinctly describes each applicable field of endeavor.”).

power on integrated circuits using power islands.” Ex. 1001 [’885] 1:23-25. The Abstract similarly discusses “[a] system for an integrated circuit comprising a plurality of power islands including a first power manager and a second power manager.” *Id.*, Abstract. The Background of the Invention also focuses upon deficiencies in prior art “voltage islands”:

Some prior integrated circuits have employed voltage islands or multiple clocks to lower power consumption. One problem with these integrated circuits is that the voltages in the power island and the frequencies of the multiple clocks are static. The voltages and the frequencies do not dynamically change based on the needs and operations of the integrated circuit.

Id., 2:19-26.

Similarly, each of the claims is directed towards “a plurality of power islands ... having associated power consumptions, ... each of the power consumptions being independently controllable” and a “power management processor” or “power manager” to monitor and control the “power consumptions” associated with each “power island.” *Id.*, cls. 1-64. The ’885 patent’s embodiments and disclosure, moreover, are directed towards managing power consumption in power islands. *See, e.g., id.*, Figs. 1-2, 4-5, 8-10. Looking beyond the claims, “power island[s]” are mentioned well over 100 times in the specification.

And there can be little doubt concerning the ’885 patent’s field. Both

Petitioner and its expert, Dr. Rosing, recognize that “[t]he ’885 patent relates to managing power on an integrated circuit (‘IC’) using power islands.” Pet., 2; Ex. 1003 [Rosing-Decl.] ¶ 35.

Borkar’s field is not “managing power on an integrated circuit using power islands.” Borkar never mentions a “power island” or any other sort of “island.” Rather, Borkar’s field is “using software to control transistor body bias in controlling chip parameters.” Indeed, this is precisely how Borkar describes its “technical field of the invention.” Ex. 1006 [Borkar] 1:8-10. In accord, Borkar’s title is “Software Control of Transistor Body Bias in Controlling Chip Parameters.” Its Abstract, similarly, concerns “setting [] a body bias signal to control body biases ...” Borkar’s background of the invention likewise concerns points at which a transistor can switch states. *Id.*, 1:12-56.

This focus on transistor body bias is reflected in Borkar’s summary of the invention which concerns “control circuitry” that “controls a setting of a body bias signal to control body biases provided in the processor to at least partially control a parameter of the processor, wherein the control circuitry controls the setting responsive to processor signal resulting for execution of software.” *Id.*, 1:59-65. Each of Borkar’s claims, moreover, requires “a processor having transistor[s]” and “control circuitry to control a setting of a body bias signal to control body biases provided to at least some of the transistors in the processor ...” *See id.*, cls. 1-24.

Consequently, Borkar is not directed toward “managing power on an integrated circuit (‘IC’) using power islands.”

Petitioner does not even address whether (let alone argue that) the ’885 patent and Borkar share the same field of endeavor. Petitioner only contends that Borkar shares the same field of endeavor as Petitioner’s ***other prior art references***. See, e.g., Pet., 13 (“First, Nowka and Borkar are related to the same field . . .”); Pet., 61 (“Nicol and Borkar are in the same field of endeavor. . .”). Even assuming *arguendo* that Borkar shares a field of endeavor with other prior art references would not establish that it is in the same field of endeavor as the ’885 patent. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.*, 66 F.4th 1373, 1380 (Fed. Cir. 2023) (“Because Mylan argued that de Gennes is analogous to another prior art reference and not the challenged patent, Mylan did not meet its burden to establish obviousness premised on de Gennes.”).

Additionally, Petitioner’s identification of Borkar’s field is overly broad. The Federal Circuit has rejected similarly overbroad characterizations of a field of endeavor. Under Federal Circuit precedent, even art with substantial similarities and in the same technological area as the patent-at-issue may not be in the same field. As one example, *Clay*, the leading analogous art decision, is instructive. There, a finding of analogous art was “clearly erroneous” where the patent-at-issue and the allegedly analogous art (Sydansk) were two patents owned by the same company

(Marathon Oil) and the patent-at-issue concerned a gel for use in the petroleum industry while Sydansk concerned a “similar” gel for use in the petroleum industry. *Clay*, 966 F.2d at 657-60. As to the field-of-end endeavor test, the Court found that the Board clearly erred in finding Sydansk was analogous because the patent-in-question’s “field of endeavor is the *storage* of refined liquid hydrocarbons” whereas “[t]he field of endeavor of Sydansk’s invention ... is the *extraction* of crude petroleum.” *Id.*, 659 (italicization in original). Thus, the use of gels in oil “storage” and the use of gels in oil “extraction” were separate fields.

Similarly, semiconductor “memory” is likewise too broad a field. As the Federal Circuit found:

The Allen-Bradley art is not in the same field of endeavor as the claimed subject matter merely because it relates to memories. It involves memory circuits in which modules of varying sizes may be added or replaced; in contrast, the subject patents teach compact modular memories.

Wang Labs., Inc. v. Toshiba Corp., 993 F.2d 858, 864-65 (Fed. Cir. 1993).

Thus, in *Clay* despite a similar gel being used, in both cases, in the petroleum industry the references were not the same field because they did not relate to the same endeavor—storage vs. extraction. Likewise, the generic categorization of references as “memory” was insufficient in *Wang Labs.*

Clay and *Wang Labs* confirm that a field of endeavor is not determined in so low-resolution a fashion that it would suffice for Petitioner to suggest that Borkar, much less the '885 patent, both generally involve power and integrated circuits. Petitioner has not shown that the '885 patent and Borkar are directed to the same field of endeavor.

B. Petitioner Does Not Demonstrate Borkar Is Reasonably Pertinent To The Problem The Inventors Of The '885 Patent Were Addressing.

Nor is Borkar reasonably pertinent to the problem the inventors of the '885 patent were trying to solve. In assessing whether a reference is “reasonably pertinent,” “the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve,” and if the reference “is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.” *Clay*, 966 F.2d at 659. Further, “when addressing whether a reference is analogous art with respect to a claimed invention under a reasonable-pertinence theory, the problems to which both relate *must* be identified and compared.” *Donner Tech., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353, 1359 (Fed. Cir. 2020).

The '885 patent is directed towards addressing deficiencies in prior art integrated circuits that employed “voltage islands” with static voltages/frequencies. The '885's background of the invention explains that “[o]ne problem with many

integrated circuits is that power consumption is not efficiently utilized,” because “the entire integrated circuit may operate at a maximum frequency just to support an application needing that maximum frequency, while other portions of the integrated circuit can operate at a lower frequency.” Ex. 1001 [’885] 1:66-2:4. Additionally, “inactive circuitry within the integrated circuit consumes power and increases the likelihood of leakage,” and that such “[i]nefficient power consumption may also adversely affect performance of the integrated circuit.” *Id.*, 2:4-8. The ’885 patent explains that the importance of reducing power consumption increases as integrated circuits employ more functionalities including in, *e.g.*, system-on-a-chip (SoC) chips. *Id.*, 2:9-18.

The ’885 patent further explains that certain prior art integrated circuits employed “voltage islands” or multiple clocks to lower power consumption and otherwise address these issues. This prior art, however, suffered from the “problem” that the voltages/frequencies were static, and did not dynamically change based upon the needs and operation of the integrated circuit:

Some prior integrated circuits have employed voltage islands or multiple clocks to lower power consumption. One problem with these integrated circuits is that the voltages in the power island and the frequencies of the multiple clocks are static. The voltages and frequencies do not dynamically change based on the needs and operation of the integrated circuit.

Id., 2:19-25. Thus, the '885 patent tries to address the problem of “voltage islands” which have static voltages and frequencies that do not dynamically change based on the needs and operation of the integrated circuit.

Borkar, by contrast, concerns a much different problem; optimizing the rate at which transistors switch states. As Borkar’s background of the invention explains, a transistor’s performance “includes the rate at which the transistor can switch states.” Ex. 1006 [Borkar] 1:12-14. Borkar explains that the switching speed of transistors may affect, *e.g.*, the temperature of the chip and power consumption. *Id.*, 1:14-57. To address these problems relating to the switching rate of transistors, Borkar introduces “control circuitry” that “controls a setting of a body bias signal to control body biases provided in the processor,” that is, to adjust the point at which a transistor switches. *Id.*, 1:59-65; *see also, id.*, 2:49-52 (“The invention involves changing body bias signals applied to transistors in an integrated circuit ...”).

Thus, the '885 patent and Borkar are directed towards solving different problems. Whereas the '885 patent is directed towards addressing deficiencies in prior art integrated circuits containing “voltage islands” with static voltage/frequency, Borkar is directed towards adjusting the switching speed of particular transistors to, *e.g.*, ensure the integrated circuit does not overheat.

Thus, Petitioner fails to demonstrate that Borkar is analogous art to the '885 patent, and consequently, all of Petitioner’s grounds fail.

III. PETITIONER’S NOWKA-BORKAR GROUNDS FAIL (GROUND 1, ALL CLAIMS).

Petitioner’s Nowka-Borkar grounds fail for several reasons. First, Petitioner argues that the Nowka-Borkar combination teaches a “plurality of power islands” but fails to address the claim construction on that term, including its own construction set forth in the co-pending district court litigation. Section III.A. Second, Petitioner’s arguments for combining Nowka and Borkar to arrive at a “plurality of power islands” fails to explain why a POSITA would combine the two pieces of art with a reasonable expectation of success. Section III.B.

A. The Petition Should Be Denied For Failing To Address The Construction Of “Power Island.”

Each challenged claim requires “a plurality of power islands,” each power island with a power consumption either adapted to be (or being) “independently being “independently controllable.”

The term “power island” requires construction and, indeed, has already been construed in the ’885 patent by two different district courts, in litigations involving *Freescale* and *Xilinx*. *See generally* Ex. 1011 [Freescale-Order] 44; Ex. 1012 [Xilinx-Order] 29. The constructions are as follows:

<i>Freescall</i> District Court Construction	<i>Xilinx</i> District Court Construction
a section of an integrated circuit where power consumption is controlled by independently varying its operating voltage and its frequency of operation Ex. 1011 [Freescall-Order], 44	a section of an integrated circuit where power consumption is controlled by independently varying its operating voltage or its frequency of operation (or both) Ex. 1012 [Xilinx-Order], 29

What is more, in the co-pending district court litigation, the parties to this proceeding have proposed that there is a need for construction of the term “power island,” and that the proper construction is one of those previously decided by district courts. There, Patent Owner has proposed the *Freescall* construction, and Petitioner has proposed the *Xilinx* construction. Ex. 2004 [Joint-Claim-Construction-Statement] 3.

To provide context for these proposals, the ’885 specification states that “[a] power island ... is any section, delineation, partition, or division of an integrated circuit ... where power consumption is controlled within the section, delineation, partition, or division.” Ex. 1001 [’885] 3:56-59. The ’885 specification includes additional disclosures of how power consumption is “controlled within” a power island, *see id.*, 4:8-58 (examples of controlling power within a power island by, *inter alia*, “modifying a clock frequency of one of the power islands,” “modify[ing] a voltage of one of the power islands”), and the parties’ dispute could be regarded as

centering on which of the above interpretations—in view of the entire intrinsic record—is a more appropriate interpretation of what it means for power consumption to be “controlled within” a section of an integrated circuit.

While the parties disagree about *which* district court construction to use, they agree that a “power island” in the sense of the ’885 patent is a section of an integrated circuit where power consumption is controlled by “independently varying” one or more power characteristics, including at least one of an “operating voltage” or a “frequency of operation.”

Petitioner here contends, however, that “power island” requires no construction. Pet., 6. Petitioner does not explain why “power island” does not “require” construction here, but it is apparent. Petitioner’s hopes turn upon ignoring the failure of the cited art to disclose multiple “power islands”—power-controllable sections of integrated circuits. What better way to avoid confronting this failure than to conceal it by avoiding any engagement with the claim term?

Admittedly, Petitioner does not conceal the existence of the *Xilinx* and *Freescale* constructions, citing them generally in connection with stating that “no claim terms require a formal construction for purposes of addressing the Grounds in this Petition.” Pet., 5. Curiously, however, Petitioner nowhere indicates that “power island” was even construed in any previous litigation, let alone that Petitioner is proposing one of the prior litigation constructions in the co-pending district court

litigation.

Again, Petitioner has little choice because Petitioner cannot—and does not even attempt to—argue that the cited art teaches “a plurality of power islands” by comparing the art to either party’s (or either district court’s) construction.

This is more than sufficient reason to deny institution. “Power island” is a term that both parties agree requires construction and, indeed, has been previously construed by two different district courts in mostly similar terms. Both parties, moreover, advance one of these constructions in district court and, aside from the distinction identified above, both parties agree on the balance of the construction. Petitioner, however, does not make any real attempt to argue that either of these constructions is satisfied under any of its grounds nor does it make any real attempt to argue why “power island,” only in this IPR, does not require construction.

Petitioner had the burden to construe the claim and demonstrate that the construed claims are satisfied. *See* 37 C.F.R. §§ 42.104(b)(3)-(4). Its failure to carry that burden is sufficient reason to deny institution. In *Orthopediatrics Corp. v. K2M, Inc.*, IPR2018-01546, Paper 10 (Feb. 14, 2019), for instance, the Board denied institution where the petitioner took contradictory claim constructions between the IPR and the district court and the district court had accepted petitioner’s construction. *Id.*, 11-12. As the Board explained:

Because of the unique circumstances of this proceeding, where Petitioner advocated for a different claim construction in the related district court litigation, we determine that construction of the claim term in dispute is necessary for the resolution of issues before us. Lacking such claim construction, the Petition fails to comply with 37 C.F.R. § 42.104(b)(3).

... Keeping in mind that Petitioner has the burden to show a reasonable likelihood of prevailing in showing that at least one claim is unpatentable, it is incumbent upon Petitioner to address substantively the District Court’s claim construction of a limitation when construction of that limitation is likely to be a focal point of the inter partes review proceeding. By failing to reconcile its proffered claim construction here with its very different construction proffered in District Court—which the District Court agreed with—Petitioner fails to satisfy this burden.

Id.; see also *10x Genomics, Inc. v. President and Fellows of Harvard College*, IPR2023-01299, Paper 15, 13 (Mar. 7, 2024) (“Because Petitioner has the burden to show a reasonable likelihood of prevailing in its assertion that at least one claim is unpatentable, our rules require that Petitioner substantively address any claim terms in dispute. ... Thus, we find the Petition is deficient on its face under 37 C.F.R. § 42.104(b)(3), as merely stating ‘no construction [is] necessary’—while knowing the construction is actually disputed under § 112(f)—is not sufficient for purposes of institution.”).

Consequently, where “power islands” has been construed by two different district courts and the parties agree the term requires construction (each advocating for one of those constructions), it was incumbent upon Petitioner to say more than that “[f]or purposes of this proceeding only, Petitioner submits that no claim terms require a formal construction for addressing the Grounds in this Petition.” Pet., 5. Moreover, it was incumbent upon Petitioner to at least inform the Board of its inconsistent claim construction position, which it has not done.

This is particularly so given that the district court and the Board apply precisely the same claim construction standard. Notably, the Office made clear, in the preamble of the rulemaking associated with the switch from a “broadest reasonable interpretation” standard to a *Phillips*-style claim construction standard, the Office’s official “agree[ment] with “[s]everal comments [which] acknowledged that harmonizing the claim construction standards **would prevent parties from taking inconsistent positions ...**” *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340, 51350 (Oct. 11, 2018); *id.* (““With a uniform application of the *Phillips* standard, patent challengers ... **will instead be required to choose a single claim construction that best captures the true meaning of the patent claim ...**”).

At the very least, Petitioner needed to explain why a twice construed term, for which Petitioner currently has provided a construction in the district court litigation,

required “no formal construction” here. Under these circumstances, Petitioner has failed to comply with 37 C.F.R. §§ 42.104(b)(3)-(4) and that failure should prove sufficient to deny institution.

B. Petitioner Fails To Prove A POSITA Would Be Motivated To Combine Nowka-Borkar Or Could Do So With A Reasonable Likelihood Of Success (Ground 1, All Claims).

Each claim requires a “plurality of power islands.” Notably, Petitioner concedes that Nowka does not disclose this limitation on its own. *See* Pet., 16 (“Nowka however, discloses a *single* variable power domain.”); Pet., 21 (“As discussed, Nowka discloses *a* power island (logic domain) with an associated power consumption that is independently controllable by changing a supply voltage and operating frequency.”). Nor does Petitioner argue that Borkar discloses a “plurality of power islands” either. Thus, Petitioner does not contend that either of its references actually discloses a “plurality of power islands.” Instead, Petitioner argues that Nowka’s speech accelerator would be modified in view of Borkar’s teachings of multiple domains to become a second “power island” (Pet., 24) and thus achieve a “plurality of power islands.” Petitioner, however, fails to prove a POSITA would be motivated to make its combination or could do so with a reasonable likelihood of success.

Because neither Nowka nor Borkar disclose a “plurality of power islands,” Petitioner must demonstrate obviousness in the face of a missing limitation. The

Federal Circuit has held that when a “missing limitation goes to the heart of an invention” a court’s review of any purported “reasoned basis for resort to common sense” must be especially “searching” *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362-63 (Fed. Cir. 2016). What is more, “common sense” can be used to supply a missing limitation “**only** when ‘the limitation in question [is] unusually simple and the technology particularly straightforward.’” *DSS Tech. Mgm’t v. Apple Inc.*, 885 F.3d 1367, 1374-75 (Fed. Cir. 2018) (citations omitted).

In this case, the limitation-at-issue is both at the heart of the invention and involves complex technology, so it is not appropriate to supply it through “common sense.” The “plurality of power islands” limitation is undeniably at the heart of the claimed inventions. As explained in Section II.B, the ’885 patent is directed towards addressing deficiencies in prior art integrated circuits that employed “voltage islands” with static voltages/frequencies that “do not dynamically change based on the needs and operation of the integrated circuit.” Ex. 1001 [’885] 2:19-25. The Summary of the Invention, in accord, is rooted in managing power consumption in a “plurality of power islands:”

The invention addresses the above problems by providing power managers for an integrated circuit. A system for an integrated circuit comprising a **plurality of power islands** includes a first power manager and a second power manager. The first power manager manages a first power consumption for the integrated circuit based on needs and

operation of the integrated circuit. The second power manager communicates with the first power manager and manages a second power consumption for one of the power islands.

The first power manager may determine power trade offs between the power islands. The second power manager may determine status information about the one of the power islands and may transmit the status information to the first power manager. The first power manager may receive the status information and may manage the first power consumption for the integrated circuit using the status information. The first power manager may determine status information about the integrated circuit and may transmit the status information to power interface software. The first power manager may receive a message from power interface software to change the first power consumption for the integrated circuit. The first power manager may transmit a message to the second power manager and the second power manager may receive and process the message to change the second power consumption for the one of the power islands. The second power manager may register capabilities of the second power manager with the first power manager.

Ex. 1001 [’885] 2:29-55.

Both the ’885’s figures and associated disclosure are similarly directed towards managing power consumption in a “plurality of power islands.” *See, e.g., id.*, Figs. 1-2; 3:50-55 (explaining that Figure 1 includes “four power islands 112, 114, 116, and 118”); 5:3-10 (explaining that Figure 2 includes “power island 260”

and “power island 270”). Similarly, this focus manifests itself in the claims which each require, “a plurality of power islands ... having associated power consumptions, each of the power consumptions being independently controllable by changing a supply voltage and operating frequency ...” *See, e.g., id.*, cls. 1, 8, 16, 23. Nor is power management in power islands on modern integrated circuits an unusually simple and particularly straightforward technology.

This critical missing limitation, thus, cannot be shown through mere common sense and conclusory assertions and, yet, that is all that Petitioner offers. Petitioner contends a POSITA would combine Nowka’s “logic domain” with Borkar’s “multiple domains.” Pet., 24. More specifically, Petitioner contends that Nowka’s “speech accelerator” could be modified using Borkar’s techniques to “creat[e] a second variable domain.” Pet., 26-27. According to Petitioner, this “would have been a straightforward implementation of the techniques disclosed in Nowka and Borkar (changing frequency and voltage in a power domain) applied to an analogous system (Nowka’s SOC), with the modification of an additional variable power domain (Borkar).” Pet., 27.

Petitioner, fundamentally, provides no convincing account of why a POSITA would be motivated to modify Nowka’s speech accelerator in view of Borkar’s multiple domains to arrive at the claimed invention or that a POSITA could do so with a reasonable expectation of success. Petitioner assures us it would be a

“straightforward implementation,” but no clear explanation is given of how precisely Nowka’s speech accelerator would be modified in view of Borkar’s transistor domains to yield a “plurality of power islands.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“it was [Petitioner’s] burden to explain to the Board how Haskell combined with Rossmere rendered the challenged claims unpatentable.”).

Nor does Petitioner explain why its combination would be “straightforward.” Borkar’s “multiple domains” relate to groups of “domains” of mismatched transistors where during fabrication “different transistors have different characteristics” such as, *e.g.*, different switching rates. Ex. 1006 [Borkar] 9:25-35. Borkar presents a solution for “detect[ing] and correct[ing] this mismatch between “domains” of mismatched transistor groups. Ex. 1006 [Borkar] 10:4-5.

Nowka’s “speech accelerator” has nothing to do with mismatched transistors or correcting mismatches between them. Petitioner provides no clear explanation of why Borkar’s teachings regarding correcting transistor mismatch owing to manufacturing differences would motivate a POSITA to modify Nowka’s speech accelerator to operate independently. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011) (“obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected combined those prior art elements in the normal course of research and development to yield

the claimed invention.”) (citation omitted). Thus, in a context where mere common sense is insufficient to demonstrate obviousness, Petitioner’s combination defies even common sense.

Taking a teaching about correcting mismatched transistors would not inspire a POSITA to modify Nowka’s speech accelerator. This is not the byproduct of the “normal course of research and development.” Rather, it is driven purely by hindsight and the improper use of the claimed invention as a roadmap to stitch together two ill-fitting teachings. *Metalcraft of Mayville v. Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (“We agree with the district court that Toro provides no explanation or reasoning for concluding that one of skill in the art would have combined these particular references to produce the claimed invention. Without any explanation as to how or why the references would be combined to arrive at the claimed invention, we are left with only hindsight bias that *KSR* warns against.”); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) (“This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result - often the very definition of invention”).

And far from being a “straightforward implementation,” Petitioner does not even attempt to explain why a POSITA would have a reasonable expectation of

success in taking techniques relating to reducing transistor mismatch and applying them in a scenario where no such mismatch is alleged to exist. And modifying Nowka's speech accelerator is hardly a "straightforward" matter. Nowka itself explains that "[s]ignificant modifications to the circuit design were required" to support the dynamic voltage scaling system in Nowka. Ex. 1004 [Nowka] 1443. These modifications resulted in performance degradation. *Id.*, 1443-1444 ("At nominal supply, register reads were degraded by 7.5% due to the increased gate and interconnect capacitance."). Petitioner fails to explain the impact of these "significant modifications" on a POSITA's expectation of success or whether combining the speech accelerator with Borkar would result in further performance degradation.

Fatally, Petitioner fails to engage with the reasonable expectation of success at all. That alone should be sufficient reason to reject Petitioner's combination. It was Petitioner's burden to demonstrate a reasonable expectation of success. *See, e.g., Eli Lilly & Co. v. Teva Pharms. Int'l GmbH*, 8 F.4th 1331, 1348-9 (Fed. Cir. 2021) ("in this case, it was, at all times, [the IPR petitioner's] burden to show that the claims would have been obvious, including that a skilled artisan would have had a reasonable expectation of success in achieving the claimed invention."). What is more, Petitioner was obligated to make this showing in its petition. *Intelligent Bio-Systems, Inc. v. Illumina Cambridge, Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016)

(“the expedited nature of IPRs bring with it an obligation for petitioners to make their case in their petition to institute.”).

Here, Petitioner did not attempt to carry that burden as to the Nowka-Borkar combination. Petitioner pays conclusory lip service to the requirement in the *Nicol-Borkar* combination, stating, “[a] POSITA would have been motivated to modify Nicol’s integrated circuit to incorporate the teachings of Borkar **with reasonable expectation of success.**” Pet., 61. In the Nowka-Borkar combination, however, Petitioner states, “[a] POSITA would have been motivated to combine Nowka and Borkar for a number of reasons,” without even asserting that the combination could be achieved with a reasonable expectation of success. *See id.*, 13, *see also id.*, 13-15 (addressing only motivation to combine Nowka-Borkar but not reasonable expectation of success).

This is more than sufficient reason to reject the Nowka-Borkar ground and, indeed, the Board has rightly denied institution where a petitioner has failed to demonstrate a reasonable expectation of success:

We agree with Patent Owner that Petitioner never mentions a reasonable expectation of success of combining Thorens788 and Thorens231 in the Petition with respect to this ground. ... Noticeably absent from Petitioner’s contentions is any persuasive discussion of an explicit or implicit reasonable expectation of success. Though Dr. Janet does provide additional testimony not referenced in the Petition

concerning this combination, that testimony addresses additional reasons to combine and is silent as to whether a reasonable expectation of success exists in the combination of Thorens231 and Thorens788. Ex. 1005 ¶ 217 (testifying that an additional reason to modify Thorens788 is that pulling on the heating element “is inconvenient and unsanitary”); see *id.* ¶¶ 214–217, 238 (no discussion of a reasonable expectation of success). We acknowledge that a reasonable expectation of success can be “implicit” and may be “intertwined” with motivation to combine. See *Elekta Ltd. v. ZAP Surgical Sys., Inc.*, 81 F.4th 1368, 1376 (Fed. Cir. 2023) (“Unlike a motivation to combine determination, which requires an explicit analysis, a finding of reasonable expectation of success can be implicit.”). Here, however, we cannot reasonably discern any implicit argument in Petitioner’s arguments directed to common inventors, same alleged invention, and possible injury to the consumer, and the evidence discussed above that supports motivation to combine fails to support a reasonable expectation of success.

NJoy, LLC v. Juul Labs, Inc., IPR2024-00267, Paper 15, 38-39 (June 12, 2024) (denying institution).

Nor could a reasonable expectation of success just be assumed, particularly so here. Although Petitioner states that a POSITA could have used the techniques in Borkar to “creat[e] a second variable domain with the speech accelerator” and that “[i]t would have been a straightforward implementation of the techniques disclosed in Nowka and Borkar” (Pet., 27), neither Petitioner nor its expert provide any

explanation as to how a POSITA would use the teachings in Borkar to modify the speech accelerator to arrive at a second “power island” with “independently” controlled “power consumption” as required by the claims.

Petitioner proffers various alleged motivations in support of its combination but they do not address the fundamental ill-fitting nature of its combination and the absence of a reasonable expectation of success. They are, in any event, unavailing, particularly to supply a critical missing limitation. Petitioner first argues that “[a] POSITA would understand that this [speech labeling algorithm in the speech accelerator] would allow for independent operation of the speech accelerator because it does not need to operate at the same frequency as the processor cores.” Pet., 17.

In this regard, Petitioner employs *ex post facto* wish casting, for it writes upon something of a blank slate; Nowka says little about its “speech accelerator.” All Nowka says is that its SOC “include[s] a speech recognition accelerator” and that “[t]he speech accelerator performs the speech-labeling algorithm for acoustic modeling in speech recognition.” Ex. 1004 [Nowka] 1445. Nowka does not teach or suggest that the speech accelerator is independently operated, capable of independent operation, nor does it suggest, in any way, that independent operation would be desirable.

Petitioner, moreover, does not point to any deficiency in the operation of

Nowka's speech accelerator that would be addressed by its modification. *See, e.g., Apple Inc. v. Cellular Comm'ns Equipment, LLC*, IPR2015-00576, Paper 7, 12 (Jun. 12, 2015) (denying institution where "Petitioner ... fails to provide a specific explanation why [the primary reference] did not already accomplish [the asserted benefits] by itself."); *F5 Networks, Inc. v. Radware, Ltd.*, IPR2017-00124, Paper 48, 64-65 (Apr. 23, 2018) (no motivation for modification that "serve[s] no purpose"). Petitioner's conclusory argument in this regard must be rejected. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) ("To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.").

Moreover, Petitioner's contention that the speech accelerator was capable of independent operation because it does "not need to operate at the same frequency as the processor cores" is made up out of whole cloth. Nowka says nothing about the frequency at which the speech accelerator can operate at, let alone its alleged capability to operate at a different frequency than the processor core. Petitioner's expert merely parrots this exact sentence without added analysis or explanation as to how a POSITA would understand that the speech accelerator can operate at a different frequency than the processing cores. Ex. 1003 [Rosing-Decl.] ¶ 59. Such conclusory assertions, supported only by conclusory, parroting expert testimony,

cannot establish obviousness. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, 15-17 (Aug. 24, 2022) (precedential) (denying institution when expert declaration copies the petition “verbatim” and “adds little to the conclusory assertion for which it is offered to support”); *id.*, Paper 12, 5 (Feb. 10, 2023) (Director Review) (“I determine that the Board was correct in giving little weight to Petitioner’s expert because the expert declaration merely offered conclusory assertions without underlying factual support and repeated, *verbatim*, Petitioner’s conclusory arguments.”) (emphasis in original, citations omitted).

Next, Petitioner argues that “[b]ecause the speech accelerator only needs to operate at the capabilities of human hearing, its operating frequency and voltage can be scaled as needed.” Pet., 25. This statement too is unsubstantiated. Petitioner does not explain why the speech accelerator only needs to operate at the capabilities of human hearing—and such explanation is lacking in Nowka—nor does Petitioner explain why that fact, if true, means that “its operating frequency and voltage can be scaled as needed.” Petitioner’s expert provides no additional analysis and makes an almost verbatim statement. Ex. 1003 [Rosing-Decl.] ¶ 70. Petitioner, moreover, fails to explain the relationship between “operat[ing] at the capabilities of human hearing” and scalable frequency and voltage. Petitioner’s argument in this regard is not only conclusory, it is not even clearly asserted.

Petitioner’s final motivation argument is that “a POSITA would have

understood that more control and precision for managing the power consumption in the speech accelerator or other components, such as the DES accelerator, are advantageous because ‘[t]he performance advantages of an accelerator can be extended to active power reductions if the additional performance allows both the core and the processor to operate at a lower voltage and/or frequency.’ MTK-1004, 1445.” Pet., 25. But Nowka’s statement is not about allowing the **accelerator** to perform at different voltages but is simply stating that “the **core** and the **processor**” can be “operated at a lower voltage and/or frequency.” Petitioner also takes this quote out of context: in the preceding sentences, Nowka states that “additional performance and power efficiency can be achieved through the use of dedicated hardware accelerators.” Ex. 1004 [Nowka] 1445. This suggests that the “performance advantages of an accelerators” are not related to modifying an accelerator for the capability of independent power consumption but is simply stating the use of a dedicated accelerator at all can improve performance and such performance improvements can be further increased via the use of Nowka’s “active power reductions.” In any event, Petitioner fails to explain how this relates to modifying the speech accelerator such that it would teach the claimed limitation or why it would motivate a POSITA to modify Nowka in this fashion.

For the aforementioned reasons, the Nowka-Borkar combination should be rejected because Petitioner fails to demonstrate that a POSITA would be motivated

to make the combination or could do so with a reasonable expectation of success.

IV. PETITIONER’S NICOL-BORKAR GROUNDS FAIL (GROUND 2, ALL CLAIMS).

Petitioner’s Nicol-Borkar grounds fail for two additional reasons. First, Petitioner fails to actually explain what their Nicol-Borkar combination is. Second, Petitioner fails to show that Nicol or Borkar teach limitations which change power consumption in response to a “power consumption change request.”

A. Petitioner Never Explains What The Nicol-Borkar Combination Actually Is (Ground 2, All Claims).

Petitioner argues that a POSITA would combine Nicol with Borkar but fails to sufficiently describe the combination.

Petitioner attempts to state its combination on pages 61-63 of the Petition. In those pages, however, Petitioner never clearly articulates *what* its combination is. Rather, Petitioner provides broad statements like, “[a] POSITA would have been motivated to modify Nicol’s integrated circuit to incorporate the teachings of Borkar with reasonable expectation of success.” *Id.*, 61. But what components of the combination would be the same as in Nicol, and which would be modified as supposedly taught by Borkar? We are not told. For example, Petitioner points to Figure 4 in Nicol as supposedly teaching a “plurality of power islands” but then says “[t]o the extent it is argued that Nicol does not explicitly disclose a plurality of power islands, Borkar also discloses and renders obvious a plurality of power islands. . .”.

Pet., 66. So what, specifically, is the combination? Petitioner fails to explain this. Petitioner does not argue that some component of Nicol is changed according to the teachings in Borkar nor does Petitioner argue that some components in Borkar can be imported into Nicol. Petitioner claims that “[t]he Nicol-Borkar combination renders obvious a plurality of power islands. . .” (Pet., 65) but fails to anywhere explain how or why. This lack of explanation is found everywhere Petitioner asserts that the alleged Nicol-Borkar combination teaches a limitation.

Petitioner also tells us that alleged “similarities across Nicol and Borkar’s disclosures would have led a POSITA to incorporate Borkar’s teachings”—which teachings, again we are not told—“in Nicol’s dynamic power management.” *Id.*, 63. Petitioner further contends that “Nicol discusses the need to adjust to temperature variations” and “[a] POSITA would have understood that the discussion of temperature variation is closely related to the need to monitor power consumption,” and so that “[a] POSITA would have understood that Borkar’s power consumption monitoring mechanism would provide an additional check on the adverse effects of high power consumption ...” *Id.*

Thus, at best, we are told that Petitioner’s combination involves Borkar’s power consumption monitoring mechanism—whatever that is—which would, somehow, be an “additional check” on the adverse effects of high-power consumption that Nicol discusses. We are not told, however, *what* from Borkar is

combined with *what* from Nicol, how the combination would work, and why a POSITA would be able to make the combination with a reasonable likelihood of success.

To be sure, Petitioner attempts to provides reasons why a POSITA might combine these two pieces of art in some fashion. Petitioner states that “Nicol and Borkar are in the same field of endeavor: power management on an integrated circuit.” Pet., 61. Petitioner further states that “Nicol and Borkar address the same known problem, the need to balance performance with power consumption in electronic systems” and that “[b]oth Nicol and Borkar also suggest the solution of dynamically controlling power parameters, such as frequency and voltage, of the units in response to changing needs and operations.” Pet., 61-62. Petitioner then says that “[t]he similarities across Nicol and Borkar’s disclosures would have led a POSITA to incorporate Borkar’s teachings in Nicol’s dynamic power management.” Pet., 63. Petitioner then goes on to discuss temperature monitoring in Borkar to state that a “POSITA would have understood that Borkar’s power consumption monitoring mechanism would provide an additional check on the adverse effects of high power consumption (which causes high temperature) that Nicol discusses.” Pet., 63.

But, again, missing from this discussion of why a POSITA would combine Nicol with Borkar is *what* the resulting combination would be. Instead of actually

explaining its combination, Petitioner vaguely points to disparate features in the art. But merely pointing to disparate features in the art is insufficient to state a combination. *Microsoft Corp. v. Virtru Corp.*, IPR2023-00019, Paper 12, 23 (May 17, 2023) (“Nor does Petitioner explain why it would have been obvious to use both mechanisms in the process of validating one user, and obviousness cannot be shown merely by pointing to disparate features of a disclosure.”) (denying institution).

Relying on unspecified combinations, as Petitioner has done here, is sufficient reason to reject a ground. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“it was [Petitioner’s] burden to explain to the Board how Haskell combined with Rossmere rendered the challenged claims unpatentable.”); *Markforged Inc., v. Continuous Composites, Inc.*, IPR2022-01220, Paper 8, 36 (Jan. 11, 2023) (“Petitioner appears to be arguing that a POSITA could have combined unspecified teachings of Lipsker in unspecified ways to improve Wohrl’s method. . . . Accordingly, the Petition lacks an adequate explanation as to why a skilled artisan reading Wohrl would have looked specifically to Lipsker for its particular teachings, **and how** a skilled artisan would have combined the teachings of Wohrl and Lipsker in the manner claimed.”) (denying institution).

Petitioner likewise has simply pointed to disparate disclosures in Nicol and Borkar without explaining how a POSITA would have combined the two. This is reason enough to reject the Nicol-Borkar grounds.

B. Neither Nicol Nor Borkar Teach A “Power Manager[]” Changing Power Consumption In Response To A “Power Consumption Change Request” (Ground 2, All Claims).

Each claim requires a “power manager” or “power management processor” that changes power consumption in a “power island” “in response to a power consumption change request.” *E.g.* Ex. 1001 [’885 patent] cls. 1, 8, 16, 23, 31, 48, 56. Petitioner fails to demonstrate that this limitation is disclosed and/or obvious over the combination of Nicol-Borkar.

Petitioner first contends the limitation is inherently disclosed in Nicol, arguing that:

The Nicol-Borkar combination renders obvious the power management processor being configured to change power consumption in at least one of the power islands in response to a power consumption change request. Nicol’s operating system “independently program[s] the lowest operating frequency and corresponding lowest supply voltage for each PE.” MTK-1008, 5:66-6:2. Nicol further describes the timing of changing frequency and voltage to the appropriate frequency and/or voltage to match the load when a task is being started and when the task has completed. MTK-1008, 4:54-66, 5:23-29, Fig. 3. ***A POSITA would have found obvious from this disclosure that there is a corresponding power consumption change request associated with each of the times that a new task starts***, such that operating frequency and voltage must be stepped up, and when the task ends, such that frequency and voltage can be stepped down. MTK-1003, ¶¶220-221.

Pet., 78.

Thus, Petitioner does not point to any express disclosure of a “power consumption change request” in Nicol. The core of Petitioner’s argument is that “[a] POSITA would have found obvious from” Nicol’s disclosure, “that there *is* a corresponding power consumption change request associated with each of the times a new task starts.” Petitioner is not saying that Nicol expressly discloses changing power consumption for a power island in response to a “power consumption change request,” nor is arguing that it would be obvious to modify Nicol to add such a requirement. Instead, Petitioner is arguing from different disclosures that a POSITA “would have found obvious” that there “*is*” a corresponding power consumption change request.

In this regard, Petitioner invokes the language of obviousness but is, in actuality, arguing for an inherent disclosure. *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1065 (Fed. Cir. 2017) (statements that “a [POSITA] would understand the [evidence] as disclosing [the limitation]” could support an argument that a limitation was “inherently disclose[d] ...”); *LBT IP I LLC v. Apple Inc.*, 2023 U.S. App. LEXIS 14376, *8 (Fed. Cir. 2023) (similar). Inherency, however, requires a high bar and a demonstration that a limitation is “necessarily” present. *PAR Pharm. v. TWi Pharms., Inc.*, 773 F.3d 1186, 1195–96 (Fed. Cir. 2014) (“A party must [] meet a high standard in order to rely on inherency to establish the existence of a

claim limitation in the prior art in an obviousness analysis—the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art.”); *Southwire Co. v. Cerro Wire LLC*, 870 F.3d 1306, 1310–11 (Fed. Cir. 2017) (similar); *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002) (cleaned up) (similar).

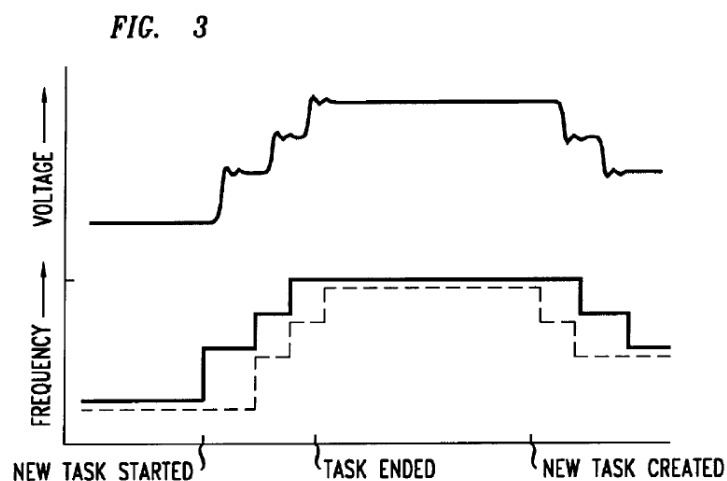
Petitioner, however, fails to surmount that bar and wholly fails to show that Nicol ***necessarily*** changes power consumption in response to a “power consumption change request.” Indeed, Petitioner does not even mention let alone address this high standard.

Petitioner first points to Nicol’s disclosure that its operating system “independently program[s] the lowest operating frequency and corresponding lowest voltage for each PE.” Pet., 78 (citing 5:66-6:2). But nothing therein relates to a change in power consumption much less one necessarily generated in response to a “power consumption change request.”

Petitioner next states that “Nicol further describes the timing of changing frequency and voltage to the appropriate frequency and/or voltage to match the load when a task is being started and when the task is completed.” Pet., 78 (citing Ex. 1008 [Nicol] 4:54-66, 5:23-29, Fig. 3). But that frequency and voltage may be changed does not in any way demonstrate that those changes are ***necessarily*** in response to a “power consumption change request.” To demonstrate that this is so,

Petitioner would have to demonstrate that there is not any other way in which such a change could occur and, yet, Petitioner wholly fails to engage with the relevant legal standard.

Petitioner provides various citations, but, they too, are of no avail. Petitioner points to Figure 3 and associated discussions in Nicol.



Ex. 1008 [Nicol] Fig. 3; Pet., 79. Petitioner cites 4:54-66 from Nicol, which explains that Figure 3 shows how a “system operating at 70 MHz” is increased to “140 MHz” in “three steps.” Ex. 1008 [Nicol] 4:54-66. Figure 3 does not, however, involve “power consumption change requests.” Nicol’s system requires two clock frequencies, one which lags behind the other, because “the PEs might fail to perform properly” if this was not the case. Ex. 1008 [Nicol] 4:38-42. Figure 3 simply “demonstrates the timing associated with increasing [the two clock signals and voltage] when a new task is created and the load on the multiprocessor is thus

increased. . .” Ex. 1008 [Nicol] 4:54-56. Figure 3 does not discuss changing power consumption in response to a “power consumption change request.” Neither Petitioner nor its expert explain what exactly in Figure 3 is the “power consumption change request” or why anything in Figure 3 would necessitate a “power consumption change request.”

Petitioner also cites Nicol at 5:23-29 which states how Nicol changes the allocation of tasks as “more tasks are entered into the ‘to-do’ list” and also computes the new operating frequency. Ex. 1008 [Nicol] 5:23-29. But again, Petitioner does not explain what the “power consumption change request” is or how this particular statement necessitates a “power consumption change request.”

Petitioner also cites Dr. Rosing’s declaration at paragraph 220-221, but it too fails to engage with the relevant legal standard. Dr. Rosing adds little to the Petition’s discussion and points to the very same disclosures in Borkar to conclude that “[a] POSITA would have found obvious from this disclosure that when a ‘new task is enabled for execution,’ or when ‘a task completes,’ there is a corresponding power consumption change request which triggers the stepping up or down of frequency and/or voltage.” Ex. 1003 [Rosing-Decl.] ¶ 221. Dr. Rosing’s conclusion in this regard, however, is entirely conclusory and does not address the relevant standard for an inherent disclosure.

Petitioner next turns to Borkar, stating:

Additionally, Borkar also renders this limitation obvious. Borkar's control circuitry also "changes the body bias, supply voltage, and/or clock settings to at least partially to [sic] control one or more parameters of processor 114," disclosing "power management processor being dedicated to execute power management software to individually control each of the power consumptions." MTK-1006, 4:3-5, 4:64-67 ("System 170 may operate the same as system 110 of FIG. 1 with respect to the body bias, supply voltage, and/or clock settings in response to changes in temperature and power consumption. System 200 may operate the same described above in connection with system 140 of FIG. 2 with respect to the body bias, supply voltage, and/or clock settings in response input signals reflecting changes in temperature, power consumption, user settings, battery level signals, and docking station interface conditions."), 11:25-67, 13:28-30 ("These components can provides [sic] input signals that are considered by control circuitry 262 in deciding power constraints."); MTK-1003, ¶222. Therefore, it would have been obvious to a POSITA that the Nicol-Borkar power management processor changes power consumption in a power island in response to a power consumption change request.

Pet., 79-80. This is not even an argument. Petitioner provides a series of quotations from **Borkar** and concludes that it would have been "obvious to a POSITA that the Nicol-Borkar power management processor changes power consumption in a power island in response to a power consumption change request." Petitioner, however,

does not explain how these quotations—none of which mention a “power consumption change request” or any other type of request—support that conclusion. Moreover, even if we were to imagine that one or more of these quotations relate, in some way, to a power consumption change request *in Borkar*, Petitioner does not explain how any such request would factor into the Nicol-Borkar combination.

Nor is it self-evident how any of these quotations relate in any way to a “power consumption change request.” Pointing to a mass of unexplained string cites does not demonstrate that something is taught in the art. *See, e.g., Intel Corp. v. VLSI Technology LLC*, IPR2019-01196, Paper 11, 11 (Jan. 7, 2020) (reference not shown to teach limitation when “Petitioner ... lists a string of citations to [a reference] but does not explain how these disclosures teach” the limitation). Beyond stating that “Borkar also renders this limitation obvious,” Petitioner has failed to explain the significance of any of these cites.

Regardless, even were one to consider these cites, none demonstrate that Borkar renders the “power consumption change request” limitation obvious. Petitioner first cites 4:3-5 but this merely states that the control circuitry “changes the body bias, supply voltage, and/or clock settings to at least partially to control one or more parameters of the processor.” Ex. 1006 [Borkar] 4:3-5. The mere fact that Borkar controls power consumption does not mean that it changes power

consumption in response to a “power consumption change request” and Petitioner does not explain why this cite relates to “power consumption change requests.”

Petitioner’s remaining cites demonstrate that Borkar’s control circuitry takes into consideration parameters such as “changes in temperature, power consumption, user settings, battery level signals, and docking station interface conditions” (Pet., 79) but they do not remotely show that power consumption is changed in response to a “power consumption change *request*.” Quite simply, none of Petitioner’s citations relate to changing power consumption due to a request of any sort. The mere fact that power is changed does not demonstrate a change in response to a “power consumption change request.” To the extent, as with Nicol, Petitioner again implicitly relies upon inherency, that high standard is neither addressed nor satisfied.

Petitioner’s expert presents an argument that appears nowhere in the petition. This improperly incorporated argument should not be considered. 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another document.”).

But even if it were considered, it is unavailing. Petitioner’s expert argues that Borkar discloses changing power consumption in response to “power consumption change requests” because Borkar “discloses changing power consumption in response to certain input signals which trigger that change.” Ex. 1003 [Rosing-Decl.] ¶ 222. But Petitioner never argues that these “input signals which trigger that

change” are “power consumption change requests.” Petitioner’s expert, moreover, does not elaborate upon how these input *signals* are “power consumption change requests” and merely states that “[f]rom these disclosures, a POSITA would have found it obvious that these input signals were either themselves the power consumption change requests or triggered another signal as the power consumption change request, which results in Borkar’s power consumption changes.” *Id.* Petitioner’s expert provides no explanation as to why a POSITA would find these input signals to be “power consumption change requests” and points to nothing in Borkar showing that the trigger of another such signal is a “power consumption change request.” Such conclusory statements are entitled to little weight. *See, e.g.*, 37 C.F.R. § 42.65(a); *see also Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, 5, 15-17 (Aug. 24, 2022) (precedential) (denying institution when expert declaration “adds little to the conclusory assertion for which it is offered to support”).

And even if, *arguendo*, these signals in *Borkar* were assumed to be “power consumption change requests,” Petitioner has not demonstrated that this renders “power consumption change requests” obvious in the context of the Nicol-Borkar combination. As explained in Section IV.A, an overarching issue with Petitioner’s Nicol-Borkar combination is that Petitioner fails to provide any discussion as to what specific component from Borkar one would combine with Nicol. That issue exists

here as well: even assuming the signals in Borkar were “power consumption change requests,” Petitioner does not explain their significance in the Nicol-Borkar combination or what a POSITA would modify in Nicol using this teaching from Borkar.

For all the foregoing reasons, Petitioner fails to prove that the Nicol-Borkar combination renders obvious changing the power consumption of a power island via a “power consumption change request.”

V. CONCLUSION

For the foregoing reasons, the Board should deny institution.

Respectfully submitted,

LOWENSTEIN & WEATHERWAX LLP

Dated: July 11, 2024

By: /s/ Kenneth Weatherwax

Kenneth Weatherwax (Reg. No. 54,528)

Nathan Lowenstein (*pro hac vice* pending filing)

Dennis Courtney (*pro hac vice* pending filing)

Granville Kaufman (*pro hac vice* pending filing)

Attorneys for Patent Owner
MOSAID Technologies Inc.
(310) 307-4500

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), counsel for Patent Owner certifies that this document complies with the type-volume limitation of 37 C.F.R. § 42.24(b). According to Microsoft Office Word's word count, this document contains approximately 9,607 words, including any statement of material facts to be admitted or denied in support, and excluding the table of contents, table of authorities, mandatory notices under § 42.8, exhibit list, certificate of service or word count, or appendix of exhibits or claim listing.

Respectfully submitted,

LOWENSTEIN & WEATHERWAX LLP

Dated: July 11, 2024

By: /s/ Granville Kaufman

Granville Kaufman

Attorney for Patent Owner

MOSAID Technologies Inc.

(310) 307-4500

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to 37 C.F.R. § 42.6(e) and with the agreement of counsel for Petitioner, true and correct copies of **PATENT OWNER'S PRELIMINARY RESPONSE** and **EXHIBITS 2004** are being served electronically on July 11, 2024, to the persons below:

Timothy W. Riffe
Joseph Colaianni
Linhong Zhang
Jared M. Hartzman
Tim Rawson

IPR44508-0023IP5@fr.com

Dated: July 11, 2024

By: /s/ Granville Kaufman

Granville Kaufman
Attorney for Patent Owner
MOSAID Technologies Inc.
(310) 307-4500