

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MEDIATEK, INC.,
Petitioner,

v.

MOSAID TECH. INC.,
Patent Owner.

Case IPR2024-00598
Patent 7,051,306

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	PETITIONER’S SINGLE-REFERENCE GROUNDS DO NOT SHOW THAT THE CITED ART DISCLOSES OR RENDERS OBVIOUS DETERMINING “A TARGET POWER LEVEL FOR ONE OF THE POWER ISLANDS BASED ON NEEDS AND OPERATION OF THE INTEGRATED CIRCUIT” (GROUNDS 1A, 2A; ALL CLAIMS CHALLENGED UNDER THESE GROUNDS).	2
A.	The Board Should Apply The Agreed-Upon Construction Of “Based On Needs And Operation Of The Integrated Circuit.”	3
B.	Petitioner Does Not Show That The Agreed-Upon Construction Is Met.	9
1.	Petitioner Does Not Show That Nowka Teaches The Agreed-Upon Construction (Ground 1A).	10
2.	Petitioner Does Not Show That Nicol Teaches The Agreed-Upon Construction (Ground 2A).	21
C.	Even If The Board Were To Apply No Construction, Petitioner Still Fails To Show The “Determining A Target Power Level Based On Needs And Operation Of The Integrated Circuit” Limitation Is Met.	28
1.	Petitioner Fails to Show that Nowka Renders the Asserted Claims Obvious Under the “Plain and Ordinary Meaning” (Ground 1A).	29
2.	Petitioner Fails to Show that Nicol Renders the Asserted Claims Obvious Under the “Plain and Ordinary Meaning” (Ground 2A).	34

III. PETITIONER DOES NOT SHOW THAT ITS SINGLE-REFERENCE
GROUNDS TEACH DETERMINING “AT LEAST ONE OF ACTIONS
TO CHANGE A POWER CONSUMPTION LEVEL OF THE ONE OF
THE POWER ISLANDS TO THE TARGET POWER LEVEL”
(GROUNDS 1A, 2A; ALL CLAIMS CHALLENGED UNDER THESE
GROUNDS). 37

IV. PETITIONER’S MULTIPLE-REFERENCE GROUNDS INCORPORATE
THE FLAWS OF PETITIONER’S SINGLE-REFERENCE GROUNDS
(GROUNDS 1B, 1C, 2B, 2C, 2D, CLAIMS 5, 9-10, 12-15, 21, 24-25, 27-
30, 34-35, 45-46, 48-51)..... 38

V. CONCLUSION. 41

TABLE OF AUTHORITIES

	Page(s)
COURT DECISIONS	
<i>Apple Inc. v. Samsung Elecs. Co.</i> , 839 F.3d 1034 (Fed. Cir. 2016) (en banc)	16
<i>Bd. of Regents of the Univ. of Tex. Sys. v. BENO Am. Corp.</i> , 533 F.3d 1362 (Fed. Cir. 2008)	33
<i>Becton Dickinson & Co. v. Tyco Healthcare Grp., LP</i> , 616 F.3d 1249 (Fed. Cir. 2010)	33
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966)	16, 37
<i>Harmonic Inc. v. Avid Tech., Inc.</i> , 815 F.3d 1356 (Fed. Cir. 2016)	27
<i>In re Kotzab</i> , 217 F.3d 1365 (Fed. Cir. 2000)	28
<i>Microsoft Corp. v. FG SRC, LLC</i> , 860 Fed. App'x. 708 (Fed. Cir. 2021)	25
<i>Netflix, Inc. v. DivX, LLC</i> , 84 F.4th 1371 (Fed. Cir. 2023)	13
<i>Novartis AG v. Torrent Pharms.</i> , 853 F.3d 1316 (Fed. Cir. 2017)	27
<i>PAR Pharm. v. TWi Pharms., Inc.</i> , 773 F.3d 1186 (Fed. Cir. 2014)	14
<i>Polaris Indus., Inc. v. Arctic Cat, Inc.</i> , 882 F.3d 1056 (Fed. Cir. 2018)	29
<i>Sivel Int'l. S.A. v. Sierra Wireless, Inc.</i> , 82 F.4th 1355 (Fed. Cir. 2023)	13

<i>Southwire Co. v. Cerro Wire LLC</i> , 870 F.3d 1306 (Fed. Cir. 2017)	14
<i>Texas Instruments, Inc. v. ITC</i> , 988 F.2d 1165 (Fed. Cir. 1993)	15
<i>Trintec Indus., Inc. v. Top U.S.A. Corp.</i> , 295 F.3d 1292 (Fed. Cir. 2002)	13, 26

AGENCY DECISIONS

<i>Apple Inc. v. One-E-Way, Inc.</i> , IPR2021-00284, Paper 7 (Jun. 11, 2021)	6
<i>BlackBerry Corp. v. Facebook, Inc.</i> , IPR2019-01596, Paper 7 (Mar. 5, 2020)	7
<i>Intel Corp. v. VLSI Technology LLC</i> , IPR2019-01196, Paper 11 (Jan. 7, 2020).....	28
<i>Juniper Networks, Inc., v. Finjan, Inc.</i> , IPR2019-00073, Paper 7 (May 1, 2019).....	7
<i>Matterport, Inc. v. Appliance Computing III, Inc.</i> , IPR2021-00939, Paper 15 (Nov. 23, 2021)	16
<i>Niantic, Inc. v. Nant Holdings IP, LLC</i> , IPR2021-01119, Paper 8 (Dec. 9, 2021).....	6
<i>OBM, Inc., v. Lancium LLC</i> , IPR2023-01407, Paper 9 (Mar. 13, 2024)	6
<i>Samsung Elec. Co., Ltd., v. California Instit. Of Tech.</i> , IPR2023-00137, Paper 10 (May 4, 2023).....	6
<i>Snap Inc., v. Blackberry Ltd.</i> , IPR2019-00830, Paper 7 (Oct. 1, 2019)	7

TCT Mobile (US) Inc., v. Semiconductor Energy Lab. Co., Ltd.,
IPR2022-00440, Paper 13 (Aug. 3, 2022)6

Valeo N. Am., Inc. v. Magna Elecs., Inc.,
IPR2014-01206, Paper 13 (Dec. 23, 2014)16

REGULATIONS

37 C.F.R. § 42.100(b)4

RULES, RULEMAKING, AND OTHER AGENCY AUTHORITIES

83 Fed. Reg. 51,340 (Oct. 11, 2018).....5, 7

Consolidated Trial Practice Guide
Patent Trial And Appeal Board4

EXHIBIT LIST	
2001-2003	Reserved
2004	<i>MOSAID Techs. Inc. v. MediaTek, Inc.</i> , 2:23-cv-00129, Joint Claim Construction And Prehearing Statement (May 9, 2024) [Joint-Claim-Construction-Statement]

Emphases are added unless otherwise stated.

I. INTRODUCTION.

The Petition should be denied as it fails to demonstrate it would prevail as to at least one challenged claim. Each asserted claim requires (1) “determining a target power level for one of the power islands based on needs and operation of the integrated circuit” and (2) determining “at least one of actions to change a power consumption level . . . to the target power level.” Petitioner alleges, but fails to prove, that these limitations are taught in the cited art.

Regarding “determining a target power level,” Petitioner has agreed to a construction of the claims’ qualifying phrase “based on needs and operation of the integrated circuit” in the co-pending district court litigation but fails to show that this construction is met in the art. This construction was also adopted by two district courts in prior litigations involving the ’306 patent. Petitioner ignores this agreed-upon construction in its analysis, without ever attempting to explain why this construction is the correct construction in the district court but should not be adopted by the Board. Instead, Petitioner purports to apply a “plain and ordinary meaning” of the limitation, to provide cover for the Petition’s application of “based on needs and operation of the integrated circuit” so broadly as to include almost anything relating to power management. Under Petitioner’s analysis, “determining a target power level” would be met by *any* change *affecting* power consumption in any way.

Petitioner's conclusory assertions that this element is present in the prior art fail to carry its burden.

Likewise, Petitioner's arguments relating to determining an action to change a power consumption level to the "target power level" are similarly conclusory and lacking analysis. And of course, they inherit all the faults of Petitioner's arguments that the references teach determining a "target power level ... based on needs and operation of the integrated circuit." Thus, Petitioner similarly fails to show a likelihood of success on the merits regarding determining an action to change a power consumption level as well.

The Board should reject Petitioner's arguments and deny institution.

II. PETITIONER'S SINGLE-REFERENCE GROUNDS DO NOT SHOW THAT THE CITED ART DISCLOSES OR RENDERS OBVIOUS DETERMINING "A TARGET POWER LEVEL FOR ONE OF THE POWER ISLANDS BASED ON NEEDS AND OPERATION OF THE INTEGRATED CIRCUIT" (GROUNDS 1A, 2A; ALL CLAIMS CHALLENGED UNDER THESE GROUNDS).

Each claim requires determining (or involves a component configured to determine) "a target power level for one of the power islands *based on needs and operation of the integrated circuit.*" Ex. 1001 ['306] cls. 1, 16, 37. "[B]ased on needs and operation of the integrated circuit" has been construed by two district courts to mean "based on future operational needs and current operating status of the integrated circuit." Ex. 1011 [*Freescale*-Construction] 48; Ex. 1012 [*Xilinx*-

Construction] 9. Thus, as construed by two district courts, this limitation requires “determining a target power level for a power island based on future operational needs and current operating status of the integrated circuit.” Both Petitioner and Patent Owner agree that this prior district court construction should apply in the co-pending litigation. Ex. 2004 [Joint-Claim-Construction-Statement] 2. The Board should apply this universally agreed-upon construction here. *See* Section II.A.

Institution should be denied because Petitioner fails to demonstrate that the agreed-upon district court construction of “determining a target power level for one of the power islands based on needs and operation of the integrated circuit” is met under any of its grounds. *See* Section II.B (single-reference grounds); *see also* Section IV (multiple-reference grounds). Nonetheless, even if the Board did not construe this limitation, Petitioner still fails to show a reasonable likelihood that this limitation is taught by the cited art. *See* Section II.C.

**A. The Board Should Apply The Agreed-Upon Construction Of
“Based On Needs And Operation Of The Integrated Circuit.”**

Again, two different district courts have construed “based on needs and operation of the integrated circuit” to mean “based on future operational needs and current operating status of the integrated circuit.” Ex. 1011 [Freescale-Construction] 48; Ex. 1012 [Xilinx-Construction] 9. In the co-pending district court litigation,

Petitioner and Patent Owner agree that this is the correct construction of the term.
Ex. 2004 [Joint-Claim-Construction-Statement] 2.

The Board should apply this universally agreed-upon construction here. For starters, a construction agreed to by two district courts and both parties appearing before the Board should presumptively apply in this proceeding, which utilizes the same claim construction standard. 37 C.F.R. § 42.100(b) (“In an *inter partes* review proceeding, a claim . . . shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.”).

The Board’s rules also provide that “[a]ny prior claim construction determination concerning a term of the claim in a civil action . . . that is timely made of record in the *inter partes* review proceeding will be considered.” 37 C.F.R. § 42.100(b). The Board must also give “appropriate weight” to a district court claim construction. Consolidated Trial Practice Guide (Nov. 2019 Update), 46-47 (“The Board will give such other claim construction determinations appropriate weight.”); Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board (the “Claim Construction

Preamble”), 83 Fed. Reg. 51,340, 51,354 (Oct. 11, 2018) (“The PTAB will consider prior claim constructions from district courts ... and give them appropriate weight.”) (emphasis added).

The Board’s use of the agreed-upon construction is particularly appropriate in view of the Office’s motivation for aligning its claim construction standard with that used by district courts: to reduce the likelihood of inconsistent constructions between district courts and the Board, and to promote greater certainty over claim scope.¹

¹ See, e.g., 83 Fed. Reg. at 51,343 (“Having the same claim construction standard for . . . original patent claims . . . ***will reduce the potential for inconsistency in the interpretation*** of the same or similar claim terms. . . . Using the same claim construction standard . . . avoids . . . potential . . . inconsistencies between PTAB and federal court proceedings”), 51,344 (“having the same claim construction standard . . . will reduce the potential for inconsistency in the interpretation of the same or similar claim terms.”); 51,345 (“most of the comments noted that this rule change should lead to greater consistency with the federal courts . . . and such consistency will lead to greater certainty as to the scope of issued patent claims. . . . The Office agrees with these comments. . . . As noted by the commentators, the rule change will lead to greater consistency and harmonization with the federal courts”); 51,347 (“The Office agrees that aligning the claim construction standard used

Thus, adopting the same construction as two prior district courts, not to mention a construction agreed to by both parties to this IPR in the co-pending litigation, harmonizes the Board's practice with that of the district courts, as intended.

In accord, the Board routinely adopts agreed upon constructions and, moreover, denies institution when a petitioner fails to show that a construction it agreed to is satisfied. *See, e.g., Apple Inc. v. One-E-Way, Inc.*, IPR2021-00284, Paper 7, 14 (Jun. 11, 2021) (“On this record, Petitioner does not show sufficiently that Ham teaches [limitation] under the claim construction agreed to by the parties and adopted for purposes of this Decision.”); *TCT Mobile (US) Inc., v. Semiconductor Energy Lab. Co., Ltd.*, IPR2022-00440, Paper 13, 14-15 (Aug. 3, 2022) (denying institution where agreed upon construction is not met); *OBM, Inc., v. Lancium LLC*, IPR2023-01407, Paper 9, 28-33 (Mar. 13, 2024) (same); *Samsung Elec. Co., Ltd., v. California Instit. Of Tech.*, IPR2023-00137, Paper 10, 20, 23-28, 30-32 (May 4, 2023) (same); *Niantic, Inc. v. Nant Holdings IP, LLC*, IPR2021-01119, Paper 8, 23-24 (Dec. 9, 2021) (denying institution where petitioner “failed to demonstrate that Altman discloses tessellated tiles as those have been defined by the parties”); *BlackBerry Corp. v. Facebook, Inc.*, IPR2019-01596, Paper 7, 11-12 (Mar. 13, 2019) (denying institution where petitioner “failed to demonstrate that Altman discloses tessellated tiles as those have been defined by the parties”).

in PTAB proceedings with that used by the federal courts . . . promotes consistency in claim construction rulings”).

5, 2020) (“Petitioner’s position that mere mention of the DRM functionality satisfies the requirement of a dedicated security processor eviscerates the claim requirement, according to the agreed claim construction, of two distinct processors”); *Snap Inc., v. Blackberry Ltd.*, IPR2019-00830, Paper 7, 17-18 (Oct. 1, 2019) (“Patent Owner argues that because the agreed-upon construction requires changes, and Petitioner has failed to identify any changes at all to Aufricht’s advertisements, Aufricht does not disclose this claim limitation. . . . We agree with Patent Owner.”); *Juniper Networks, Inc., v. Finjan, Inc.*, IPR2019-00073, Paper 7, 16 (May 1, 2019) (“We agree with Patent Owner that Petitioner has not shown that Browne teaches or suggests receiving ‘an incoming Downloadable’ under the agreed-upon construction”).

Relatedly, the Claim Construction Preamble also made clear the Office’s official “agree[ment] with “comments [which] acknowledged that harmonizing the claim construction standards *would prevent parties from taking inconsistent positions . . .*” 83 Fed. Reg. at 51350; *see also 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”).

Here too, where *both* parties agreed to use the prior district court construction in co-pending litigation, there is no reason to countenance potential inconsistency.²

What is more, the agreed-upon construction is entirely consistent with the intrinsic record. For example, in the specification, several exemplary embodiments discuss consideration of the future operational needs by “determin[ing] possible trade-offs” before “select[ing] a frequency rate, Vdd, and Vt” Ex. 1001 [’306] 7:61-65; *id.*, 9:4-7 (“The PMCL 218 determines possible trade-offs available for the unit and selects a the [*sic*] lower possible Vdd that will support the requested frequency in step 808 and determines the SPMs 264 and 274 that will be affected and which power PINs to change in step 810.”). Several exemplary embodiments discuss consideration of the current operating status in ways such as “monitor[ing] the temperature statistics of the SPM[.]” *Id.*, 11:34-36. Thus, there is consideration of both possible trade-offs, indicating that the determination of a target power level is based upon both what is occurring in the future and how the current power

² When parties disagree on the correct construction of a term, the Board has allowed petitioners to offer analysis under alternative constructions. In this case, however, the parties agree on the correct litigation construction. Ex. 2004 [Joint-Claim-Construction-Statement] 2.

management might impact that, as well as consideration of current operational status, such as spikes in temperature due to excessive power consumption.

Petitioner provides no convincing account of why the Board should apply a different construction than the one issued by two district courts and agreed to by the parties to this proceeding in co-pending litigation. Petitioner does not contend that the construction it agreed to in district court is wrong—nor does it contend, much less demonstrate, that either prior district court erred in issuing this construction. Rather, Petitioner merely “submits that no claim terms require a formal construction for purposes of addressing the Grounds in the Petition,” allegedly because “none of the constructions impact the invalidity analysis in the Petition.” *See* Pet., 5-6. As explained in the next section, Petitioner does not show that this is the case. *See* Section II.B. Thus, construction of “based on needs and operation of the integrated circuit” is necessary to resolve the controversies before the Board—and it should be resolved as other district courts have resolved it, by applying the construction Petitioner agreed to in the district court.

B. Petitioner Does Not Show That The Agreed-Upon Construction Is Met.

As just discussed, the Board should construe “determining a target power level for one of the power islands *based on needs and operation of the integrated circuit*” to mean “determining a target power level for a power island *based on future*

operational needs and current operating status of the integrated circuit.” Though two courts have adopted this construction and though both parties agree it should apply in the co-pending district court litigation, Petitioner makes no serious attempt to demonstrate that any of its grounds teach this limitation under the agreed-upon construction.

1. Petitioner Does Not Show That Nowka Teaches The Agreed-Upon Construction (Ground 1A).

Petitioner fails to demonstrate that that the agreed-upon construction is taught by Nowka. As construed, the limitation requires “*determining a target power level for a power island* based on future operational needs *and* current operating status of the integrated circuit.” Thus, a target power level must be determined “based on” two items: (1) “future operational needs [of the integrated circuit]” and (2) the “current operating status of the integrated circuit.” Petitioner does not show this step (or any system configured to perform this step) disclosed or taught in Nowka. In fact, the chief characteristic of Petitioner’s argument is obfuscating any legally-acceptable analysis.

Even prior to getting to the “based on” portion of the limitation, Petitioner’s analysis founders because it conflates separate limitations. Claim 1, for example,³

³ The ’306 patent’s other independent claims are not method claims, but

separately recites steps of (1) “determining a target power level . . . ” [in the sense required by the claim], (2) “determining at least one of actions to change a power consumption level of the one of the power islands to the target power level,” and (3) “performing the at least one of the actions to change the power consumption level. . . .” [in the sense required by the claims]. *See* Ex. 1001 [’306] cl. 1.

Thus, satisfying these limitations requires three different findings. Petitioner’s analysis of determining “a target power level,” however, contravenes fundamental patent law principles as it collapses these three separately recited elements into a single inquiry: whether Nowka discloses “actions” that adjust power consumption. Petitioner argues that because Nowka discloses actions which adjust power consumption, Nowka must also disclose determining a target power level for one of the power islands based on the needs and operations of the integrated circuit. But Petitioner does not support this argument with any explanation, relying solely on the alleged understanding of a POSITA.

parallel claim 1 in reciting a power manager configured “to determine a target power level . . . ,” to “determine at least one of actions to change a power consumption level . . . ,” and to “perform the at least one of the actions to change the power consumption level . . . ,” Ex. 1001 [’306] cl. 16, or power management software operational to direct a processor to do these three things, respectively. *Id.*, cl. 37.

Petitioner's discussion of determining a target power level ... based on needs and operation of the integrated circuit" is expressed as a single inquiry: whether Nowka discloses "actions" that adjust power consumption. After describing examples of what Petitioner terms "actions" taken in or by the systems of Nowka, Pet., 10-13, Petitioner states:

A POSITA *would have found it obvious* that each of these actions involves determining a target power level because these actions were well-understood in the art as mechanisms for adjusting power level.

Pet., 13. Petitioner's argument is a mystery it demands the Board unravel. Is Petitioner arguing that a POSITA would understand Nowka *inherently* discloses determining a "target power level" in all of the examples cited by Petitioner (because Petitioner states that "*each* of these actions [in Nowka] *involves determining a target power level*")? Or is this Petitioner's admission that Nowka did not "determin[e] a target power level" (because an express appeal is made to what a POSITA would have found to be "obvious")? Perhaps Petitioner's additional statement that "[t]o the extent that Nowka doesn't disclose determining a target power level based on needs and operation of the integrated circuit, it would have been obvious to a POSITA that the system *was making* such a determination," Pet., 13-14, perhaps tilts the balance in favor of assuming Petitioner is arguing inherency?

The only thing that is clear is that Petitioner avoids making legally-cognizable

arguments by expressly addressing inherency or obviousness. It is not the Board's assignment to sort out Petitioner's opaque argumentation into legally cognizable theories. *Netflix, Inc. v. DivX, LLC*, 84 F.4th 1371, 1377 (Fed. Cir. 2023) ("A petitioner may not rely on a vague, generic, and/or meandering petition and later fault the Board for failing to understand what the petition really meant. Ultimately, it is the petitioner's burden to present a clear argument."); *Sivel Int'l. S.A. v. Sierra Wireless, Inc.*, 82 F.4th 1355, 1364 (Fed. Cir. 2023) (affirming rejection of obviousness rationales that "were too conclusory, lacked clarity, or suffered from both problems").

Assuming the Board entertains helping the Petitioner make a cognizable inherency argument, that argument fails. Inherency requires demonstrating that a limitation is "'necessarily present,' not merely probably or possibly present, in the prior art." *Trintec Indus., Inc. v. Top U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002); *see also 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).

Petitioner’s argument seems to be that if a “*mechanism*[] for adjusting power level” is well understood in the art, then use of that mechanism automatically involves “determining a target power level ... based on needs and operation of the integrated circuit.” *See* Pet., 13. This logic is facially wrong: for example, a laptop on/off switch adjusts the power level of a device, but, it does not involve determining a “target” power level, much less based on the “future operational needs and current operating status of the integrated circuit.”

Furthermore, this logical leap would read entire limitations out of all of the challenged claims, which as observed above, separately recite “determining a target power level” (as, *e.g.*, one step of claim 1’s method), “determining . . . actions to change a power consumption level . . . to the target power level,” and “performing the at least one of the actions to change the power consumption level . . .” It also ignores the specification, which also discusses these things separately (including in the “Summary of invention” section, and in the abstract of the patent). *See, e.g.*, Ex. 1001 [’306] 2:24-30 (“A power manager determines a target power level for one of the power islands. The power manager *then* determines an action to change a consumption power level of the one of the power islands to the target power level. The power manager performs the action to change the consumption power level. . . .”); *see also id.*, Abstract (similar).

Petitioner's recitation of various examples of "actions" allegedly disclosed in Nowka, Pet., 10-13, does not even attempt to identify what determination of a "target power level" a POSITA would have understood to have necessarily been made in each case. Being nonspecific, unsupported, and entirely at odds with express claim language, Petitioner's inherency argument should be rejected. *See Texas Instruments, Inc. v. ITC*, 988 F.2d 1165, 1171 (Fed. Cir. 1993) (rejecting interpretation of claim language as surplusage and finding that an express limitation cannot be read out of a claim).

Alternatively, if the Board credits Petitioner with making an obviousness argument, Petitioner's conclusory assertion to this effect fails. Petitioner does not identify what is lacking in Nowka's systems, what modification(s) would need to be made to Nowka's systems, or why a POSITA would have been motivated and able to make such modifications. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18, 35–36 (1966); *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1047–48 (Fed. Cir. 2016) (en banc); *see also, e.g., Valeo N. Am., Inc. v. Magna Elecs., Inc.*, IPR2014-01206, Paper 13, 15 (Dec. 23, 2014) (denying institution and noting that "Petitioner's obviousness analysis is incomplete in that it: fails to state explicitly the differences between the [prior art] and the claimed subject matter, does not explain persuasively the relevance of the evidence, and presents conclusory assertions

regarding how the references are combined”); *Matterport, Inc. v. Appliance Computing III, Inc.*, IPR2021-00939, Paper 15, 16–17 (Nov. 23, 2021) (denying institution because “Petitioner does not identify differences between [cited art] and element 1.2 or how Petitioner proposes to combine or modify the asserted prior art to meet element 1.2”).

This defect is exacerbated by Petitioner’s failure to demonstrate that Nowka discloses element 1[b], “determining a target power level ...,” as construed—requiring the determination be “based upon the future operational needs *and* current operating status of the integrated circuit.”

Petitioner’s argument directs the Board’s attention to various disclosures in Nowka, variously insinuating that a teaching might exist of a determination of a “target power level” based at least upon future operational needs of a circuit, or of a determination of “target power level” based at least upon the current operating status of an integrated circuit. But Petitioner does not connect these disclosures to the agreed-upon construction, which requires a determination of a target power level based on both future operational needs and current operating status.

Petitioner first argues that tests illustrated in Nowka’s Figures 5 and 6 teach a target power level that is “is shifted in response to needs and operation of the integrated circuit.” Pet., 11. The bare use of claim language to broadly characterize

Nowka does not address whether Petitioner is here arguing that Nowka's Figure 5 and accompanying discussion teaches a determination based on *both* the future operational needs of an integrated circuit and the current operating status of an integrated circuit, that Nowka's Figure 6 and accompanying discussion does this, or—if Petitioner is relying on a combination of these two embodiments for the claim limitation—which figures disclose which aspects of the limitation, and why one would be motivated to combine them. Petitioner's discussion of Figures 5 and 6 simply ignores the agreed-upon construction. *See* Pet., 11.

Petitioner then argues that tests illustrated in Nowka's Figure 8 would have been understood by a POSITA to involve frequency and voltage changes made “in anticipation of performance demands.” Pet., 12 (quoting Ex. 1004 [Nowka] 1444). Although again Petitioner does not directly address the agreed-upon construction, Petitioner arguably suggests that Figure 8 teaches a changing a power level based on future operational needs of the circuit (“anticipation of performance demands”). *Id.* Here, however, Petitioner makes no attempt to address whether (let alone how) these changes are also based on the current operating status of any circuit, and thus again does not address how Nowka teaches the agreed-upon-construction.

Petitioner then states that “Nowka discloses clock gating inactive registers and cores, as well as putting the system in various standby modes, which changes the

power state of the logic domain, when certain registers and units, or the entire logic domain, does not need to be active,” Pet., 13, and that “[a] POSITA would have found it obvious that each of these actions involves determining a target power level because these actions were well-understood in the art as mechanisms for adjusting power level.” *Id.* This mere restatement of Petitioner’s flawed claim that Nowka inherently discloses “determining a power level” does not address, for example, how “putting the system in various standby modes” relates to either future operational needs or present operating status of any circuit. Based on this statement in Nowka, it is not inconceivable that, depending on what a system’s “standby modes” actually are, that one might put a system or a portion of a system “in various standby modes” without making any determination of any “target power level” prior to doing so.

Petitioner briefly attempts to directly argue that Nowka satisfies the agreed-upon construction—with one sentence simply stating that Nowka does this, and a second sentence quoting two phrases in Nowka.

Petitioner submits that Nowka’s disclosure, in light of a POSITA’s knowledge, also satisfies this [agreed-upon] construction. For example, Nowka’s discussion that it changes frequency and voltage “***[i]n anticipation*** of lower performance demands” shows that its power management is responsive to future operational needs, while its disclosure that “anticipating an increase in demand, the logic supply is

raised to 1.8V ***without interrupting execution***” shows that it is also responsive to the current operational status of the integrated circuit.

Pet., 14-15 (quoting Ex. 1004 [Nowka] 1444) (emphasis in original, citations omitted). Petitioner’s expert repeats this reasoning verbatim. Ex. 1003 [Rosing-Decl.] ¶ 63. Although Petitioner’s purported justification begins with “[f]or example,” the above text, which quotes Nowka’s description of its Figure 8—a plot of data generated during a single run of a benchmarking application—is the ***only*** “example” offered by Petitioner as evidence that Nowka satisfies the agreed-upon construction.

Even if one were to assume (as Petitioner does) that the described changes in voltage necessarily involve “determining a target power level,” Petitioner does not show how the cited passages disclose determining a target power level based on ***both*** the future operational needs ***and*** the current operating status of the integrated circuit. The quoted disclosures expressly refer to specific moments in a test illustrated in Nowka’s Figure 8 in a context of “anticipation of lower performance demands” and “anticipating an increase in demand”—*i.e.*, disclosures that the depicted voltage changes relate to anticipated ***future*** demands to be placed on the circuit. Ex. 1004 [Nowka] 1444; *see also id.*, Fig. 8. Petitioner does not show why these changes ***also*** involved consideration of any current operating status of the circuit. The only evidence cited by Petitioner is Nowka’s statement that “anticipating an increase in

demand, the logic supply is raised to 1.8 V *without interrupting execution*,” *id.*, 1444; Pet. 15 (quoting Ex. 1004 [Nowka] 1444), where Petitioner sets “without interrupting execution” in boldface type. In Petitioner’s view, these three words “show[] that [the circuit whose behavior is depicted in Figure 8] is also responsive to the current operational status of the integrated circuit.” Pet. 15. Petitioner’s expert merely mirrors this assertion. Ex. 1003 [Rosing-Decl.] ¶ 63.

Putting Petitioner’s characterization of the reference to one side, in the cited excerpt, Nowka states that at one time during a benchmark test depicted in Figure 8, a change in voltage from 1 V to 1.8 V did not interrupt the execution of the benchmarking application. Ex. 1004 [Nowka] 1444. Petitioner offers no argument (let alone evidence) connecting this observed behavior to any aspect of the design of Nowka’s power management system. Petitioner may be speculating that if a voltage change does not “interrupt the execution” of an application, then that voltage change must necessarily have been based upon the current operational status of a circuit—or perhaps even that had a voltage change *coincided* with an interruption of the execution of the application in Nowka’s test, then that change could *not* have been based upon the current operational status of that circuit. In any event, Petitioner does not offer reasoning or evidence to connect the cited disclosure of the execution of an application to the requirements of the claims.

In sum, the only evidence that Petitioner expressly cites in connection with the agreed-upon construction—which, to be clear, is no more than a disclosure of two moments in a single benchmarking test depicted in Nowka’s Figure 8—simply does not show that Nowka discloses a determination of a target power level based on future operational needs and current operating status of an integrated circuit.

2. Petitioner Does Not Show That Nicol Teaches The Agreed-Upon Construction (Ground 2A).

Petitioner’s arguments about Nicol fare no better. Again, for the most part, Petitioner’s argument that Nicol teaches determining a target power level based on future operational needs and current operating status of an integrated circuit does not engage with the agreed-upon construction.

First, Petitioner argues that Nicol’s Figure 2 teaches this limitation via the operation of its “real time operating system (RTOS) in PE 100” Pet., 56. Quoting Nicol’s discussion of Figure 2 to the effect that the RTOS “‘divide[s] the collection of tasks as evenly as possible (in terms of needed processing time)’ and ‘adjust[s] the clock frequency,’” *id.* (quoting Ex. 1008 [Nicol] 3:66-4:6), Petitioner argues that in Figure 2, “Nicol’s target power level . . . is the lowest frequency that is needed to complete the task in the required time” and that “Nicol sets the corresponding lowest needed supply voltage, which is another example of determining a target power level.” *Id.*, 57. Petitioner does not actually argue that

these adjustments of clock frequency in response to an incoming “collection of tasks” are based on *both* future operational needs and current operating status of the circuit, or explain how Nicol’s discussion of this Figure 2 embodiment could teach this limitation if it did not expressly disclose it.

Then, Petitioner argues that Nicol’s Figure 4 teaches the limitation, arguing as follows:

In the context of the Figure 4 embodiment, Nicol explains that, in a computer system, “[i]t is possible to anticipate that memory stored in the fast memory is so old as to be unlikely to be accessed before a new application is called. When so anticipated, some of the fast memory can be released (storing some of the data that needed to be remembered) at a leisurely pace. That is, lower clock frequency can be employed in connection with the fast memory and the hard drive, with a corresponding lower supply voltage, resulting in an overall power saving in both the memory’s operation and in the operation of the hard drive.” Thus, Nicol discloses and renders obvious that based on needs and operation of the system (the memory in the fast memory can be discarded such that lower operating speed is needed for the fast memory and the hard drive), there is a determination of the target power level (lowest frequency and voltage required for that lower performance).

Pet., 57-58 (citations omitted). Again, Petitioner’s argument does not engage with the agreed-upon construction: it merely asserts that the unconstrued claim language is “disclosed and rendered obvious,” without explaining whether Petitioner is here

arguing that the cited disclosures *show* a change in target power level based on both future needs and current operating status of a circuit, or merely *render it obvious* (due, perhaps, to showing a change in target power level based on only one of those factors). And once again, Petitioner does not offer the evidentiary support that would be needed to make any such argument with specificity.

Finally, Petitioner attempts to expressly address the agreed-upon construction. Petitioner's entire analysis of the agreed-upon construction reads as follows:

Further, Nicol renders obvious “based on needs and operation of the integrated circuit” . . . under . . . the prior-agreed upon claim construction. First, Nicol's disclosure mirrors the '306 Patent's disclosure on this limitation, which is summarized in Ground 1A, element 1[a]. Further, Nicol's discussion that its system can “*anticipate* that memory stored in fast memory is so old as to be unlikely to accessed before a new application is called” such that “lower clock frequency can be employed in connection with the fast memory and hard drive”. . . shows that it responds to “future operational needs,” while Nicol's ability to set the lowest corresponding frequency and voltage needed for its operation responds to “current operational status” of the integrated circuit.

Pet., 58 (citations omitted). Again, Petitioner's expert merely repeats these assertions without further explanation. Ex. 1003 [Rosing-Decl.] ¶ 183-184.

Petitioner's first attempt to address the agreed-upon construction—that

“Nicol’s disclosure mirrors the ’306 Patent’s disclosure on this limitation, which is summarized in Ground 1A,” Pet. 58—does not even address the language of the construction. A statement that one disclosure “mirrors” another, moreover, is not an argument, even when accompanied by a string citation and a vague reference back to what “is summarized in Ground 1A,” *Id.* Petitioner’s further high-level references to “Nicol’s discussion,” “its system,” and “Nicol’s ability” to do certain things do not link this argument to any specific system, let alone a system that Petitioner actually discusses in connection with other limitations (such as the systems illustrated in Nicol’s Figures 2 and 4). “It is not the Board’s job to cobble together assertions from different sections of a petition or citations of various exhibits in order to infer every possible permutation of a petitioner’s arguments. Arguments in a petition must be made with particularity, not opacity.” *See Microsoft Corp. v. FG SRC, LLC*, 860 Fed. App’x. 708, 713 (Fed. Cir. 2021) (nonprecedential).

Although Petitioner attempts to locate Nicol’s reference to a situation where one can “anticipate that memory stored in the fast memory is so old as to be unlikely to be accessed before a new application is called,” Ex. 1008 [Nicol] 6:47-49, “[i]n the context of [Nicol’s] Figure 4 embodiment,” Pet., 57, the material quoted by Petitioner occurs in the context of a paragraph that begins as follows:

The principles disclosed above for a multiprocessor [are]
extendible to other system arrangements. This includes systems with a

plurality of separate processor elements that operate at different frequencies and operating voltages, as well as components that are not typically thought of as processor elements.

Ex. 1008 [Nicol] 6:34-49. Petitioner does not explain how or what Nicol expressly terms a discussion of the extension of “principles disclosed above” to “systems with a plurality of separate processor elements” and both “fast memory” and a “hard drive,” *id.*, 6:39-56, illustrates the operation of any embodiment of Nicol that Petitioner analyzes in connection with other claim elements (such as Nicol’s Figure 4, which does not disclose these features). Nor does Petitioner explain how a disclosure about what can happen when one can “*anticipate* that memory stored in the fast memory is so old as to be *unlikely to be accessed* before a new application is called,” *id.*, 6:46-49, is a disclosure of determining a target power level based on future operational needs *and* current operating status of the integrated circuit. Simply stating that a reference discloses a limitation is not a proper inherency analysis, which requires a showing that the limitation is “necessarily present, not merely probably or possibly present,” in the cited art. *Trintec*, 295 F.3d at 1295.

Petitioner’s second argument as to why Nicol teaches the agreed-upon construction is a string citation offered in support of the statement that “Nicol’s ability to set the lowest corresponding frequency and voltage needed for its operation responds to ‘current operational status’ of the integrated circuit.” Pet., 58-59 (citing

Ex. 1008 [Nicol] Abstract, 2:22-27, 4:54-5:2, 5:66-6:2, cl. 1). Here, Petitioner combines—without explanation or argument—citations to Nicol’s Abstract, a portion of Nicol’s “Summary of the Invention,” Ex. 1008 [Nicol] 2:22-27, a discussion of Nicol’s Figure 3, *id.*, 4:54-5:2, and the introduction Nicol’s discussion of its Figure 4. *Id.*, 5:66-6:2. Petitioner does not acknowledge that its argument draws on such a variety of disclosures, let alone explain why a POSITA—or indeed, anybody who was not simply using hindsight to hunt for parallels between an agreed-upon construction and portions of Nicol—would or could have combined these teachings. Even if a POSITA were assumed to have combined these teachings (as Petitioner does not even expressly propose), Petitioner does not explain how any “ability to set the lowest corresponding frequency and voltage needed for . . . operation” reflects consideration of the **current** operational status of a circuit, as distinguished from considering only what would potentially be “needed for . . . operation” in the future. This does not show that Nicol teaches the agreed-upon construction. *See Novartis AG v. Torrent Pharms.*, 853 F.3d 1316, 1326 n.2 (Fed. Cir. 2017) (finding that an argument presented by one conclusory sentence and a string cite “amount[ed] to little more than a request that the Board peruse the cited evidence and piece together a coherent argument on [a party’s] behalf”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (Petitioner “has the

burden from the onset to show with particularity why the patent it challenges is unpatentable”); *see also, e.g., Intel Corp. v. VLSI Technology LLC*, IPR2019-01196, Paper 11, 11 (Jan. 7, 2020) (reference not shown to teach limitation when “Petitioner also lists a string of citations to [a reference] but does not explain how these disclosures teach” the limitation).

It is possible to read the Petition as arguing, perhaps in the alternative, that if there is no disclosure anywhere in Nicol of “determining a target power level based on future operational needs *and* current operating status of the integrated circuit,” a POSITA would nevertheless have found this obvious in view of a collection of disclosures that relate at most to setting power levels in other ways. *See generally* Pet. 58-59. But Petitioner does not describe why a POSITA would be motivated to combine the variously cited teachings of Nicol together, when some of these disclosures arise in discussion of distinct embodiments, while others arise in a context of general remarks about “other system arrangements” to which Nicol’s “principles” are “extendible to.” Ex. 1008 [Nicol] 6:34-39.

Even in the context of single-reference obviousness, a motivation must exist for combining features of different embodiments or otherwise modifying the teachings of a reference. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). In determining whether there is a motivation to combine, there must be

“particular” findings of a reason the ordinary artisan, with no knowledge of the claimed invention, ““would have selected these components for combination in the manner claimed.”” *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1069 n.4 (Fed. Cir. 2018). Petitioner does not even offer argument (let alone evidence) that could support such findings.

Thus, as Petitioner has failed to carry its burden regarding the “determining a target power level . . . based on needs and operation of the integrated circuit” limitation and as that limitation is present in every independent and dependent claim, institution should be denied.

C. Even If The Board Were To Apply No Construction, Petitioner Still Fails To Show The “Determining A Target Power Level Based On Needs And Operation Of The Integrated Circuit” Limitation Is Met.

As discussed in the preceding sections, institution should be denied because Petitioner fails to show that the limitation “determining a target power level for one of the power islands based on needs and operation of the integrated circuit” is satisfied under any of its grounds based upon the universally agreed upon construction. But even if the Board were to disregard this construction, Petitioner’s grounds still fail to demonstrate the limitation is disclosed and/or obvious in any of its grounds.

1. Petitioner Fails to Show that Nowka Renders the Asserted Claims Obvious Under the “Plain and Ordinary Meaning” (Ground 1A).

For Nowka, Petitioner presents several arguments that the limitation “determining a target power level for one of the power islands based on needs and operation of the integrated circuit” is met under the alleged plain and ordinary meaning. Each of these arguments, discussed in turn below, fails.

Petitioner’s argument begins as follows:

Nowka discloses that its SOC allows for “performance demands of the application to be met” (needs and operation of the integrated circuit) while “minimizing the dynamic power consumption” (determining a target power level). Nowka discloses a number of actions to reduce the power level “when resource demands are low” (needs and operation of the integrated circuit) such as “dynamic voltage scaling, dynamic frequency scaling, unit and register level functional clock gating,” and standby modes.

Pet., 10 (citations omitted). Here, Petitioner’s use of parentheses implies that Nowka’s disclosure of “minimizing the dynamic power consumption” might later be shown to be a teaching of “determining a target power level,” and that Nowka’s disclosure of allowing for “performance demands of the application to be met” might later be shown to be a teaching that this determining is “based on needs and operation of the integrated circuit.” *Id.* (Petitioner’s expert does the same thing: expressly

equating these excerpts from Nowka with claim language, without elaboration. *See* Ex. 1003 [Rosing-Decl.] ¶ 52.) But the material subsequently cited by Petitioner does not establish this. Petitioner fails to appreciate the distinction—a distinction clearly drawn in both the '306's claims and disclosure, as already discussed in Section II.B.1—between performing an action to change a power consumption level versus determining a target power level in the first instance. Nowka does describe changes that affect power consumption; but for the reasons discussed below, it does not follow that Nowka teaches “determining a target power level based on needs and operation of the integrated circuit.”

Petitioner first contends that Nowka's Figures 5 and 6, which discuss the Dhrystone 2.1 and MPEG-Decoder benchmarks, allegedly “demonstrate that the target power level of a power island . . . is shifted in response to needs and operation of the integrated circuit.” Pet., 11. This argument fails, however, because Figures 5 and 6 simply disclose that Nowka's SOC ran certain benchmarks while operating at a lower voltage or frequency than the nominal voltage or frequency. They do not, for example, show that Nowka determined a target power level, much less did so “based on needs and operation of the integrated circuit.” Nowhere in the discussion of Figures 5 and 6 does Nowka state, as Petitioner contends, that any target power level is determined in Nowka, let alone “shifted in response to needs and operation

of the integrated circuit.” Pet., 11. Nowka states that a “supply was lowered” (Ex. 1004 [Nowka] 1444), while not stating how or why the supply was lowered, let alone that supply was lowered as a result of a determination of a target power level based on needs and operation of the integrated circuit.

Petitioner seems to imply that a showing that a voltage is changed is enough to show that a target power level is determined based on needs and operation of the integrated circuit. As already discussed above in connection with the agreed-upon construction, *see* Section II.B.1, this interpretation is contrary to the claims, which separately recite “determining a target power level” from “determining at least one of actions to change a power consumption level . . . to the target power level,” and “performing at least one of the actions to change the power consumption level . . . to the target power level”

Petitioner’s implicit treatment of a determination based on “needs and operation” as a limitation that can be shown by a single disclosure of “performance demands of the application” being “met,” Pet., 10, similarly fails to address the claim language. In particular, the claim separately recites “needs” and “operation,” while Petitioner’s analysis does not distinguish between, let alone give any effect to, these separately recited elements. “Needs” and “operation,” being different claim terms, would presumptively have different meanings, *see Bd. of Regents of the Univ. of Tex.*

Sys. v. BENO Am. Corp., 533 F.3d 1362, 1371 (Fed. Cir. 2008), and yet Petitioner gives no analysis of why it would be appropriate in this case not to “giv[e] effect to all terms in the claim.” *See, e.g., Becton Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010).

Petitioner next contends that Nowka’s Figure 8 teaches this limitation, but Petitioner’s arguments are flawed in the same way. Pet., 12. Petitioner states that “Figure 8 shows the corresponding decrease and increase and power consumption in response to frequency and voltage changes, which a POSITA would have understood to be executed ‘in anticipation of [] performance demands’ (needs and operation of the integrated circuit).” Pet., 12. Again, Petitioner is arguing that whenever frequency and voltage changes are made “‘in anticipation of [] performance demands’” (Pet., 12), a target power level must have been determined based on needs and operation of the integrated circuit. But Nowka’s own disclosures do not suggest this.

As already explained in connection with the agreed-upon construction in Section II.B.1, Nowka states that its Figure 8 depicts “measurements of . . . dynamic voltage and dynamic frequency scaling” during a benchmark test. Ex. 1004 [Nowka] 1444. Nowka states that (1) “initially [in the test] the logic supply is at 1.8 V and the frequency is set at 266 MHz,” (2) that a subsequent change in frequency from

266 MHz to 66 MHz resulted in “logic power fall[ing] by about 70%,” (3) that during a subsequent change in voltage “from 1.8 V to 1 V,” “the execution of [the benchmarking application] [was] uninterrupted,” with “[t]he only change is a significant drop in power consumption,” and (4) that finally, “the logic supply [was] raised to 1.8 V without interrupting execution and the clock and power management software raise[d] the frequency via a write to the PLL control register at times t3 and t4, respectively.” *Id.* Even if Petitioner’s initial mild characterization of these disclosures—that Nowka’s “Figure 8 shows the corresponding decrease and increase and power consumption in response to frequency and voltage changes,” Pet. 12—is assumed to be accurate, it simply does not follow from Petitioner’s placing of “(needs and operation of the integrated circuit)” adjacent to these disclosures that Figure 8 teaches what Petitioner is arguing—namely, that Figure 8 discloses at least two determinations of a “target power level based on needs and operation of the integrated circuit.”

Finally, Petitioner points to other miscellaneous actions in Nowka such as “inactive registers and cores, as well as putting the system in various standby modes, which changes the power state of the logic domain, when certain registers and units, or the entire logic domain, does not need to be active.” Pet., 13. This argument suffers from the same flaw as Petitioner’s arguments about Figures 5, 6, and 8:

disclosures of *actions* capable of affecting power consumption are not disclosures of determinations of a target power level, much less a determination based on needs and operation of the integrated circuit.

Even if the agreed-upon construction is not adopted, Petitioner’s argument—that a POSITA would understand that Nowka determinations of a target power level based on needs and operation of an integrated circuit because it teaches “actions . . . well-understood in the art as mechanisms for adjusting power level” (Pet., 13)—is unsupported attorney argument. Petitioner has not shown that Nowka teaches “determining a target power level for one of the power islands based on needs and operation of the integrated circuit.”

2. Petitioner Fails to Show that Nicol Renders the Asserted Claims Obvious Under the “Plain and Ordinary Meaning” (Ground 2A).

For Nicol, Petitioner points to the Figure 2 and Figure 4 embodiments and contends that they render obvious determining a target power level for one of the power islands based on needs and operation of the integrated circuit. Pet., 56. Petitioner’s arguments fail for similar reasons as such arguments failed for Nowka, *see* Section II.C.1, and for the same reason that Petitioner’s arguments failed to engage with the agreed-upon construction of the term, *see* Section II.B.2: Petitioner simply equates changes that affect power consumption with determinations “based on needs and operation” of an integrated circuit.

Petitioner's analysis of Figure 2 repeatedly states that the "real time operating system (RTOS) in PE 100" of that Figure determines a "target power level." Pet., 56. Putting this assertion to one side, Petitioner's only attempt to connect any alleged teachings in Nowka's Figure 2 of a "target power level" with the rest of the claim limitation—"based on needs and operation of the integrated circuit"—is a sentence that equates what Petitioner describes as the "goal" of the system depicted in Nowka Figure 2 with that claim language. Pet., 57 ("In other words, the goal (or 'needs and operation') in the Figure 2 embodiment is to load the PEs as evenly as possible so that the task in its entirety can be completed as fast as possible"). This statement is entirely conclusory, being supported only by a string of citations to Nowka that Petitioner does not elaborate upon, and a citation to Petitioner's expert saying the same thing. Ex. 1003 [Rosing-Decl.] ¶ 178.

Petitioner is similarly incorrect in arguing that the Figure 4 embodiment "discloses and renders obvious that based on needs and operation of the system. . . there is a determination of the target power level." Pet., 57-58. Petitioner does not point to a component or set of components which allegedly disclose and render obvious the above limitation. Instead, Petitioner points to a hypothetical application of the "principle" of its disclosures, which discusses power consumption on computers with "fast memory" and a "slower hard drive." *See generally* Ex. 1008

[Nicol] 6:43-56. But the details of how any such system would operate are not even stated, let alone shown to teach this limitation.

Although Petitioner argues that Nicol’s discussion of “fast memory” applications is based on Figure 4, Pet., 57 (stating that “Nicol explains” potential fast memory applications “[i]n the context of the Figure 4 embodiment”), Nicol itself does not support this otherwise-unsupported statement. On this point, Petitioner cites its expert, who simply pairs the same disclosure from Nicol with the same statement that the excerpted material is “[i]n the context of the Figure 4 embodiment.” Ex. 1003 [Rosing-Decl.] ¶ 180. Nicol begins the discussion of hypothetical “fast memory” applications by stating “[t]he principles disclosed above for a multiprocessor is [*sic*] extendible to *other* system arrangements,” Ex. 1008 [Nicol] 6:34-35—that is, arrangements other than the ones actually discussed in Nicol. *See also* Section II.B.2 (discussing the “fast memory” disclosures of Nicol in connection with Petitioner’s failure to link these disclosures to the agreed-upon construction). Here, in other words, Petitioner combines distinct purported teachings of Nicol, without anything resembling a formal obviousness analysis. *See, e.g., Graham*, 383 U.S. at 17–18.

Petitioner has therefore not demonstrated a likelihood of success under the supposed “plain and ordinary meaning” of the “determining a power island . . .” limitation.

III. PETITIONER DOES NOT SHOW THAT ITS SINGLE-REFERENCE GROUNDS TEACH DETERMINING “AT LEAST ONE OF ACTIONS TO CHANGE A POWER CONSUMPTION LEVEL OF THE ONE OF THE POWER ISLANDS TO THE TARGET POWER LEVEL” (GROUNDS 1A, 2A; ALL CLAIMS CHALLENGED UNDER THESE GROUNDS).

The claims require not just a determination of a “target power level” “based on needs and operation of the integrated circuit,” *see* Section II, but that there also be a determination of “at least one of actions to change a power consumption level . . . to the target power level.” Ex. 1001 [’306] cls. 1, 16, 37.

Petitioner’s analysis of this limitation fails, for example, because the cited art already fails to teach the determination of a “target power level” in the sense required by the claims. *See* Section II. In listing “actions” disclosed in Nowka that may affect power consumption in connection with this limitation, for example, *see, e.g.*, Pet., 15-16, or in describing adjustments to frequencies and supply voltages in Nicol, *see, e.g.*, Pet., 59-60, Petitioner is simply inviting the Board to presume that any disclosure of an “action” affecting power consumption *necessarily* involves a determination to take that action to change power consumption to a previously recited “target power level” that was determined “based on needs and operation of

the integrated circuit.” But the Petition does not show that these references ever teach a “target power level” determined as the claim requires. *See* Section II.

IV. PETITIONER’S MULTIPLE-REFERENCE GROUNDS INCORPORATE THE FLAWS OF PETITIONER’S SINGLE-REFERENCE GROUNDS (GROUNDS 1B, 1C, 2B, 2C, 2D, CLAIMS 5, 9-10, 12-15, 21, 24-25, 27-30, 34-35, 45-46, 48-51).

Petitioner’s multiple-reference obviousness grounds, which are directed to dependent claims only, incorporate Petitioner’s single-reference obviousness arguments as to independent claims without supplementation. In particular, these grounds do not offer any additional evidence or argument that Nowka or Nicol teach determining “a target power level for the one of the power islands based on needs and operation of the integrated circuit” or determining “at least one of actions to change a power consumption level” in the sense of the ’306 patent. For this reason, the Board does not need to address these grounds in its institution decision.

As a first example, Petitioner’s Ground 1B combines Nowka with Borkar. Ground 1B challenges dependent claims 9, 13, 24, 28, 45, and 49, which add various recitations involving a “threshold voltage” or a “threshold level” to their respective independent claims. Petitioner’s analysis of Ground 1B provides an overview of Borkar, Pet., 35-38, and an overview of the Nowka-Borkar combination, Pet., 38-41, in which Petitioner admits that “Nowka does not explicitly disclose comparing the power consumption to a threshold and performing an action based on the

crossing of the threshold level” and that “Nowka also does not explicitly disclose changing a threshold voltage to control the power consumption,” but argues that “[a] POSITA would have been motivated to look to Borkar’s threshold-comparing technique” and “Borkar’s threshold voltage-tuning solution” to fill these gaps. Pet., 40-41. Petitioner’s claim-by-claim analysis accordingly focuses on Borkar’s alleged teachings regarding modifying a “threshold voltage” or determining a “threshold level.” *See generally* Pet., 41-46. Petitioner does state that Borkar’s ***threshold voltages*** “are changed to change the power consumption based on needs and operation of the system,” Pet. 42, but does not equate Borkar’s “threshold voltages” with any determined “target power level,” or otherwise explain how changes in Borkar’s “threshold voltages” would relate to determining a target power level based on needs and operation of the system. *See id.* Similarly, citing a statement in Borkar that certain changes in Borkar’s “threshold voltages” may occur “when the battery level signal is below a certain level,” Pet., 42 (quoting Ex. 1006 [Borkar] 5:25-30), Petitioner suggests that some (unidentified) determination of a target power level is “based on needs and operation of the system.” Pet., 42. But Petitioner offers no argument connecting the state of the battery in Borkar with the “needs and operation of the integrated circuit” in the sense of the challenged claims. In particular, none of the arguments advanced in Petitioner’s Ground 1B would show why the proposed

combination of Nowka and Borkar would disclose or render obvious determining “a target power level for the one of the power islands based on needs and operation of the integrated circuit” if Nowka alone is not already assumed to do this in Petitioner’s Ground 1A.

Petitioner’s ground that combines Nicol and Borkar, Ground 2C, makes only the same vague suggestions that Borkar’s battery-level-based changes in “voltage thresholds” may relate in some fashion to what Petitioner only describes as “changing needs and operations”—again, failing to connect any teachings in Borkar to an underlying “target power level,” based on needs and operation of an integrated circuit, that Petitioner appears to presume is already taught by the underlying single-reference Nicol Ground 2A. Pet., 81-83.

Petitioner’s other multi-reference grounds have the same dependence upon Petitioner’s Grounds 1A and 2A. Petitioner’s Ground 1C combines Nowka with a reference called Boerstler for alleged disclosures regarding the structure of “voltage multiplexing circuitry,” Pet., 48-50, but does not even mention the limitations of the underlying independent claim; Petitioner’s Ground 2D combines Nicol with a reference called Naffziger for the same purpose, with the same silence on the underlying independent claim. Pet., 88-91. Petitioner’s ground that combines Nicol and Nowka, which characterizes Nowka as “provid[ing] a physical implementation

of the power-management scheme of Nicol,” refers to an alleged motivation of the POSITA to “incorporate Nowka’s standby modes in Nicol” and “incorporate Nowka’s PLL circuitry in Nicol’s PLL” for purposes of arguing that dependent claims are obvious (Pet., 74), but does not supply additional argument regarding the “target power level” as discussed by Petitioner in the single-reference Grounds 1A and 2A.

In focusing on how elements from dependent claims are allegedly taught by proposed combinations of Nowka and Nicol with other references, and Petitioner does not address the defects in its arguments that each of Nowka and Nicol—on their own—already show all elements of the corresponding independent claims. Thus, for at least the same reasons that Grounds 1A and 2A fail, Petitioner’s remaining grounds fail as well, and the Board’s institution decision does not need to address them.

V. CONCLUSION.

For each of the foregoing reasons, the Board should not institute trial.

Respectfully submitted,

LOWENSTEIN & WEATHERWAX LLP

Dated: July 1, 2024

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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Preliminary Response (the “POPR”) consists of 9,463 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The POPR complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Respectfully submitted,

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Dated: July 1, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the following documents were served
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EXHIBIT 2004

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