

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APTIV SERVICES US, LLC,
Petitioner,

v.

MICROCHIP TECHNOLOGY INC,
Patent Owner.

Case No. IPR2024-00646
U.S. Patent No. 9,471,074

PATENT OWNER'S PRELIMINARY RESPONSE

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LISTING OF EXHIBITS

Exhibit	Description
2001	U.S. Pat. 7,312,598 (“Huang”)
2002	Aptiv’s Responsive Claim Construction Brief and supporting Declaration of Stanley Shanfield, Ph.D. (March 22, 2024) in <i>Microchip Technology Inc. v. Aptiv Services US, LLC</i> , Case No. 1:23-cv-00778-JDW (D. Del.)
2003	Aptiv’s Sur-reply Claim Construction Brief and supporting Declaration of Stanley Shanfield, Ph.D. (May 3, 2024) in <i>Microchip Technology Inc. v. Aptiv Services US, LLC</i> , Case No. 1:23-cv-00778-JDW (D. Del.)
2004	U.S. Pat. 6,246,22 (“Xi”)
2005	Chronological File History for U.S. Pat. 9,471,074
2006	Aptiv’s District Court Invalidity Contentions (December 8, 2023) in <i>Microchip Technology Inc. v. Aptiv Services US, LLC</i> , Case No. 1:23-cv-00778-JDW (D. Del.)
2007	Microchip’s Opening Claim Construction Brief and supporting Declaration of Greg Taylor (March 1, 2024) in <i>Microchip Technology Inc. v. Aptiv Services US, LLC</i> , Case No. 1:23-cv-00778-JDW (D. Del.)
2008	Microchip’s Reply Claim Construction Brief and supporting Declaration of Greg Taylor (April 17, 2024) in <i>Microchip Technology Inc. v. Aptiv Services US, LLC</i> , Case No. 1:23-cv-00778-JDW (D. Del.)
2009	Docket in <i>Microchip Technology Inc. v. Aptiv Services US, LLC</i> , Case No. 1:23-cv-00778-JDW (D. Del.)

I. INTRODUCTION

Patent Owner Microchip Technology Inc. submits this preliminary response to Aptiv Services US, LLC's Petition for *Inter Partes* Review (Paper 1, the "Petition") of U.S. Pat. 9,471,074 (the "'074 patent").

The Board should deny institution for three reasons, each of which provides an independent basis for doing so. **First**, the Board should exercise its discretion to deny institution under 35 U.S.C. §325(d) because substantially the same prior art was before the Examiner during prosecution. *See* §II. This applies to both Ground 1 (where the primary "Al-Shyoukh" reference was the basis for rejection during prosecution (*see* EX2005, 107)) and Ground 2 (where Petitioner admits that the primary "Rincon-Mora" reference has "the same basic structure" and is "highly analogous" to Al-Shyoukh). *See* Petition, 77. The secondary reference ("Ivanov") Petitioner relies on for the "enable/disable" limitation in both Grounds 1 and 2 is cumulative in relevant part to U.S. Pat. 7,312,598 ("Huang," EX2001), which was squarely before the Examiner during prosecution. *See, e.g.*, EX2005, 51.

Second, the Board should deny institution because Petitioner has failed to establish a reasonable likelihood that any challenged claim is unpatentable. Petitioner tries to do too much by challenging 18 claims on multiple grounds under a variety of alternative claim interpretations using an incorrect claim construction standard, and in doing so fails to establish a reasonable likelihood that any

challenged claim is obvious. *See* §III.

To begin, Petitioner identifies two Grounds, but each is nothing more than a list of prior art references (*see* Petition, 9-10, listing five references for Ground 2 and three references for Ground 1) which it uses as a grab bag to form various different combinations throughout the Petition. Petitioner fails to identify (and sometimes misidentifies) the actual combinations it uses, merely grafting on references whenever and wherever desired without providing a holistic motivation to combine. Petitioner identifies both the Rincon-Mora patent (EX1013) and Rincon-Mora Paper (EX1014) as primary references for Ground 2 (Petition, 9-10), but fails to provide any meaningful motivation to combine, simply asserting that they “disclose[] substantially the same LDO.” *Id.*, 56. But this is not a public-use or on-sale bar challenge where multiple references describing a single system can be combined without a motivation. Rather, if Petitioner wished to rely on multiple Rincon-Mora references, Petitioner should have explained why a POSITA would have modified or otherwise combined each such reference.

A separate (but equally problematic) issue is that Petitioner fails to expressly identify any claim terms for construction, but provides numerous interpretations (some based on Patent Owner’s district court positions and others untethered to anything Patent Owner said). One example of the latter is claim element 1[b], where Petitioner tries to explain that the claimed “current buffer” should instead be

understood to mean “voltage buffer,” which would require lexicography. Petition, 17. More generally, to the extent Petitioner is engaging in claim construction, the only standard recited in Petitioner’s papers is legally incorrect for IPR. *See* EX1002, ¶14 (“claims are given their ***broadest reasonable construction*** consistent with the specification.”) (emphasis added). Use of this outdated and overly broad standard may explain why Petitioner frequently interprets the claims overbroadly.

Yet another problem is that Petitioner is less than forthcoming by failing to acknowledge that it contends all claims are indefinite in the district court. *See, e.g.,* EX2002, 12 (claim 1 indefinite), 16-17 (claim 4 indefinite), 19 (claims 8-9 indefinite). Even where the Petition relies on Patent Owner’s alternate district court constructions, Petitioner hides the fact that it contends such a construction does not “clarify[] the scope of the claim,” but “adds yet another layer of ambiguity” which “renders the term indefinite.” EX2003, 15-16. While it may sometimes be possible to apply the prior art to an indefinite claim, *see Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 812-14 (Fed. Cir. 2021), Petitioner does not even attempt to explain how the Board could apply the prior art to the allegedly indefinite terms in this IPR.

Third, the Board should exercise its discretion to deny institution under 35 U.S.C. §314(a) because Petitioner is pursuing the same Al-Shyoukh and Rincon-Mora based references in the district court and has not proffered any stipulation,

thus teeing up the very type of duplicative litigation that *inter partes* review was intended to avoid.

One commonality that runs throughout the Petition and cuts across various arguments above is that Petitioner seeks to hide the ball and obscure information from the Patent Owner and the Board at every turn. This includes ambiguity about what grounds are proposed, submarine attempts at claim construction (*e.g.*, “current buffer” term), lack of candor about is district court positions (*e.g.*, indefiniteness), and *de minimus* treatment of §325(d) (ignoring Huang reference). Such an approach should not be encouraged when seeking *inter partes* review and the Board should deny institution.

II. THE BOARD SHOULD EXERCISE ITS DISCRETION AND DENY INSTITUTION UNDER 35 U.S.C. §325(d)

Discretionary denial under 35 U.S.C. §325(d) applies to both Grounds and is appropriate here. Building on the *Becton, Dickinson* factors, the Board established a two-part framework for evaluating denial under §325(d): “(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics, LLC v. MED-EL*

Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6, 7-8 (PTAB Feb. 13, 2020) (precedential). As discussed further below, Petitioner’s cursory assertions spanning a mere 2 pages (*see* Petition, 13-14) fail on both prongs.

A. Ground 1 is Cumulative to Art Before the Examiner During Prosecution and Not Overlooked

To begin, Petitioner’s identification of Ground 1 is reproduced below.

Ground	35 U.S.C. §	Claims	Prior Art
1	103	1-18	<i>Al-Shyoukh (EX1004)</i> Ivanov (EX1005) Stanescu (EX1006)

Petition, 9. The primary reference is *Al-Shyoukh (EX1004)*. *Id.* (“the primary prior art references for each ground [are] in italics”).

Petitioner admits that “*Al-Shyoukh* was before the examiner during prosecution.” Petition, 13. But *Al-Shyoukh* was not just “before the examiner during prosecution,” it was the basis of a rejection. *See* EX2005, 107-112 (rejecting claims 1-5, 7-17, and 19-20 over *Al-Shyoukh*, but finding claims 6 and 18 allowable if rewritten in independent form). Thus, the Examiner was plainly aware of—and thoroughly considered—the primary reference Petitioner relies on.

*Id.*¹

Petitioner attempts an end run around §325(d) by combining Al-Shyoukh with Ivanov (EX1005) and/or Stanescu (EX1006). Petition, 10. Notwithstanding that Petitioner lists the combination of Al-Shyoukh, Ivanov, and Stanescu for claims 1-18 (*see* Petition, 9), as far as Patent Owner can discern, Petitioner combines Stanescu only for dependent claim 11 (*see id.*, 41-44). Thus, for independent claim 1 (and dependent claims 2-10 and 12-18), Petitioner appears to rely only on Al-Shyoukh combined with Ivanov.²

¹ Petitioner’s argument that “Patent Owner conceded during prosecution that Al-Shyoukh disclosed the feedback circuit that the [’074] patent proposes” (Petition, 2) is wrong and fundamentally misunderstands patent prosecution. Rather, Patent Owner elected to “amend[] the claims to include an ‘enable/disable function’ for the bias circuit” (*id.*), which in no way means that Patent Owner “conceded” Al-Shyoukh satisfied all other claim elements. *See, e.g., Google LLC v. Valtrus Innovations Ltd.*, IPR2022-01197, Paper 18, 25 (PTAB) (“presenting claim amendments is not a concession by an applicant that the Examiner’s underlying findings are correct.”).

² Petitioner also relies heavily on the knowledge of a POSITA for numerous claim elements throughout the Petition. *See* §III.

Petitioner asserts that “Ivanov was not before the examiner and disclosed the limitation Patent Owner added to overcome Al-Shyoukh.” Petition 13. On this basis—and this basis alone—Petitioner asserts Ground 1 is not cumulative and that §325(d) does not apply. *See id.*, 13-14. The *entirety* of Petitioner’s analysis regarding Ivanov is to state “[n]or is Ivanov cumulative.” *Id.*, 14. That is it. It is difficult to imagine a more conclusory assertion—or (as discussed in the next section) one that is more incorrect.

Petitioner takes an overly simplistic—and legally erroneous—view of §325(d). Section 325(d) is not limited to situations where a secondary reference was literally before the Examiner. Rather, the statute itself states that the test is whether “the same *or substantially the same prior art* or arguments previously were presented to the Office.” 35 U.S.C. §325(d) (emphasis added). *Advanced Bionics* and its progeny confirm this. *See Advanced Bionics*, IPR2019-01469, Paper 6, 7-11. Petitioner ignores this crucial aspect of the analysis. Under the proper test, Ground 1 is plainly cumulative to the art before the Examiner during prosecution.

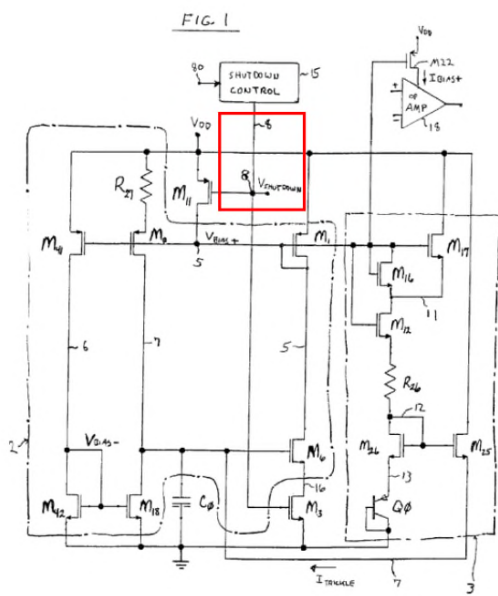
As best as Patent Owner can discern, Petitioner cites Ivanov for a single claim element—element 1[d]. Petition, 22 (“Al-Shyoukh with Ivanov discloses 1[d]”); *see generally id.*, 21-26 (citing EX1005 at 1:6-9, 1:12-18, 3:43-49, 3:54-63, 4:26-33, 5:19-25, 6:7-22, 6:47-52, Figs. 1-2). Element 1[d] is the “enable/disable”

limitation (discussed *infra* §III.A.2). Because Al-Shyoukh was indisputably before the Examiner, the question is simply whether Ivanov was cumulative of other art before the Examiner. It was.

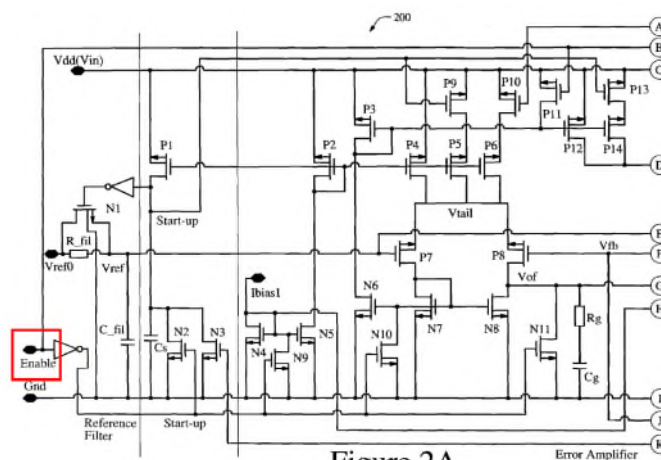
1. Petitioner’s Reliance on Ivanov is Misplaced Because Ivanov is Cumulative of Huang

To begin, it is important to recall that Petitioner relies exclusively on its interpretation of Patent Owner’s alternative means-plus-function construction for the “enable/disable” limitation (*i.e.*, claim element 1[d]). *See* Petition, 21-22. Petitioner states its understanding that “the claimed function is to enable/disable the biasing circuit for reducing standby current, and the corresponding structure is the signal input line at node M in Figure 3 [of the ’074 patent].” *Id.*

Petitioner relies on Ivanov’s purported disclosure of “a quick turn-on disable/enable bias control circuit” to satisfy element 1[d]. Petition, 22 (citing EX1005, 1:6-9). In particular, Petitioner points to the “Vshutdown” signal (in red below) in Ivanov Fig. 1 as providing the enable/disable signal. But U.S. Pat. 7,312,598 (“Huang,” EX2001) was before the Examiner during prosecution and contains “substantially the same” disclosure (35 U.S.C. §325(d)) vis-à-vis an “enable/disable” signal as that in Ivanov relied on by Petitioner as can be seen in the side-by-side comparison below:



EX1005, Fig. 1
(annotated by Petitioner)

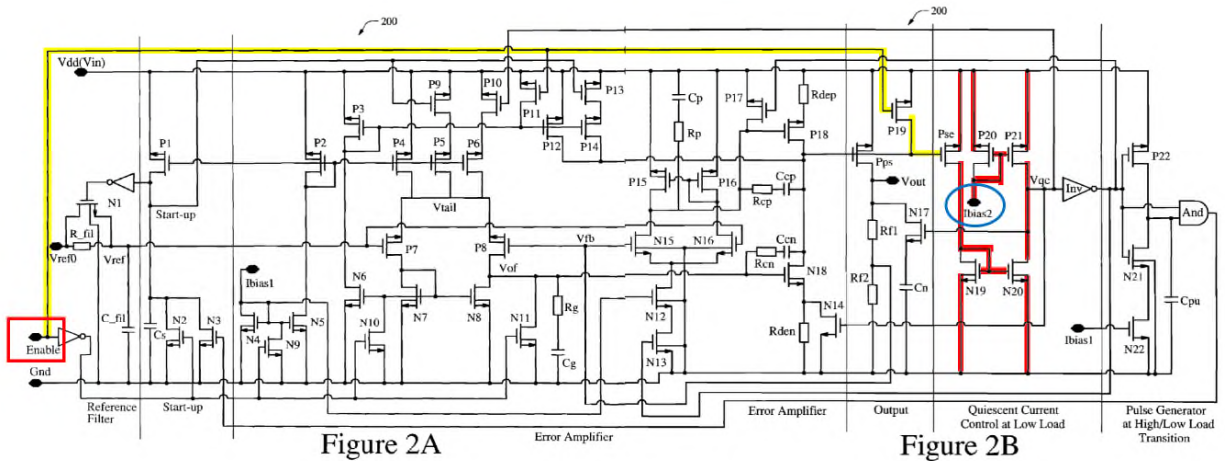


EX2001, Fig. 2A
(annotation by Patent Owner)

Compare also EX2001, Fig. 2, Abstract, 1:6-9, 2:3-16, 2:59-64, and 3:7-18 with EX1005 at 1:6-9, 1:12-18, 3:43-49, 3:54-63, 4:26-33, 5:19-25, 6:7-22, 6:47-52, Figs. 1-2.

According to Petitioner, “[t]he lynchpin of the enable/disable mechanism [in Ivanov] is [PMOS transistor M11] which receives at its gate ‘an external signal $V_{SHUTDOWN}$.’” Petition, 24 (citing EX1005, 3:43-49. Petitioner explains that “send[ing] a disable signal to M11 by setting $V_{SHUTDOWN}$ low” will “turn[] on transistor M11,” which, in turn, “shuts M22 off, disabling I_{BIAS+} .” *Id.*, 25 (citing EX1005). The signal path for disabling the I_{bias} current (circled in blue) is highlighted in yellow.

Fig. 2, as indicated by the red box on the left. EX2001, 2:50-51. In particular, setting the “Enable” signal low turns on PMOS transistor P19 which, in turn, shuts off PMOS transistor Pse, disabling I_{bias2}. The signal path for disabling the I_{bias2} current (circled in blue) is highlighted in yellow below. When the Pse transistor is turned off, the circuitry in red (including I_{bias2}) is disabled. Ivanov’s “Vshutdown” signal corresponds to Huang’s “Enable” signal. And Ivanov’s PMOS transistors M₁₁ and M₂₂ for disabling the I_{bias} current correspond to Huang’s PMOS transistors P19 and Pse, respectively, for disabling I_{bias2} current.



Id., Fig. 2A and 2B (annotations added).

The relevant path of the “enable” signal that controls the “I_{bias2}” current is highlighted in yellow. EX2001, 3:7-18. As can be seen, the “enable” signal controls PMOS transistor P19, which controls whether transistor Pse—and the two current mirrors connected thereto—turn on or off. The operation is simple—if the “enable” signal is low, P19 disables current flow in Pse and the two current mirrors

(highlighted in red). The two current mirrors are formed from (1) N19/N20 and (2) P20/P21, with the I_{bias2} current part of the P20/P21 current mirror. Conversely, when the “enable” signal is high, P19 allows the flow of current in both current mirrors.

As Huang itself explains, “in operation, some of the regulator’s components are disabled during low load current states, such as standby, so that a relatively low quiescent current is generated/ controlled and relatively less power is consumed.”

EX2001, 2:13-16. Huang explains in further detail:

In regard to the quiescent current control sub-circuit, PMOS transistor Pse is arranged to sense a relatively low load current By sensing this low load current state, such as a standby state, the operation of the regulator can be arranged to generate a relatively low quiescent current by disabling some components, and thereby consume less power. However, in a higher load current state, voltage V_{qc} is set logically “low” (zero volts/ground) so that any components disabled for the low load state are quickly enabled for full operation.

Id., 3:7-18.

Huang was submitted to the Patent Office in an IDS on December 17, 2014, early in prosecution, before the Examiner issued any Office Action. EX2005, 47. Thus, the Examiner was aware of Huang throughout prosecution.

PTO-1449 Information Disclosure Citation in an Application				Application No.		Applicant(s)			
				14/204,011		Huamin Zhou et al.			
				Docket Number		Group Art Unit		Filing Date	
				68354,225441		2838		March 11, 2014	
U.S. PATENT DOCUMENTS									
		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE		
	A.	2005/0168272 A1	08-04-05	Banerjee et al.	327	541	02-02-04		
	B.	2006/0192538 A1	08-31-06	Wang et al.	323	282	05-23-05		
	C.	7312598 B1	12-25-07	Huang	323	280	08-25-06		
	D.	2009/0009147 A1	01-08-09	Jian	323	280	03-04-08		
	E.								

Id.

In summary, Ivanov provided (in relevant part) “substantially the same” disclosure (*viz.*, enable/disable signal for an LDO regulator bias circuit) as “art previously [] presented to the Office” (*viz.*, Huang), and Petitioner has failed to explain any relevant differences. Accordingly, §325(d) applies and the Board should deny institution.

Insofar as Patent Owner can discern, Petitioner relies on Stanescu (EX1006) only for dependent claim 11, which requires that “the current buffer driver is an operational transconductance amplifier (OTA).” EX1001, cl. 11; Petition 41 (“Al-Shyoukh as modified by Stanescu includes a current buffer driver that is an operational transconductance amplifier.”); *see generally id.*, 41-44. But, once again, the prior art of record—this time the Xi reference (EX2004)—discloses that “[a]nother feature of the present invention is associated with a unity-gain feedback

configured Operational Transconductance Amplifier (OTA) gate drive circuit that substantially eliminates poor DC load regulation generally identified with conventional source follower drivers.” EX2004, 4:24-29. Moreover, the Examiner was plainly aware of Xi as it was the basis for a rejection. EX2005, 69; *see generally id.*, 66-76. Thus, Stanescu is also cumulative to the prior art of record, and Petitioner fails explain why/how Stanescu is different.

2. The Board’s Decisions Support Patent Owner

Petitioner cites three decisions purportedly supporting its position that the art of record is not cumulative and §325(d) does not apply. *See* Petition, 13-14. Each is distinguishable, and the cases are myriad where the Board found that IPR art not before the examiner was cumulative to art that was. *See, e.g., Parse Biosciences, Inc. v. 10X Genomics, Inc.*, IPR2023-01033, Paper 8, 13-14 (PTAB Dec. 19, 2023) (“[W]e also agree with Patent Owner that [Ivanov] is cumulative of art that was before the Examiner, and [Huang] in particular, because [Huang] teaches [the same relevant disclosure as Ivanov] and [Huang] was before the Examiner”); *ADT LLC v. Vivint, Inc.*, IPR2022-00612, Paper 8, 21-23 (PTAB Aug. 22, 2022) (“[W]e agree with Patent Owner that [the references before the Examiner] disclose essentially the same subject matter for which Petitioner relies on [in the IPR reference]”); *Nokia of Amer. Corp. v. Alexander Soto et al*, IPR2023-00680, Paper 10, 19-23 (PTAB Nov. 3, 2023). In summary, the Board has frequently found that

IPR art not before the examiner was cumulative of art that was before the examiner, and should do so here.

Turning now to Petitioner’s cited decisions. In *Thorne Research, Inc. v. Trustees of Dartmouth Coll.*, the patent owner “d[id] not address whether the combination of Beiganowski and Rosenbloom as presented in the first ground is the same or substantially the same art as what was previously presented to the Office during prosecution.” IPR2021-00491, Paper 18, 8 (PTAB Aug. 12, 2021). Here, by contrast, Patent Owner has demonstrated how Petitioner’s combined references are cumulative.

Similarly, in *BMW of N. Am., Inc. v. Mich. Motor Techs., LLC*, the patent owner “neither identifie[d] how [nor why] the references are cumulative” and “d[id] not provide any explanation as to how both [references] operate or how their operations are substantially the same as the operations disclosed by the references asserted in the Volkswagen IPR.” IPR2023-01031, Paper 12, 14 (PTAB Jan. 23, 2024). Here, by contrast, Patent Owner has provided a detailed analysis of how, *e.g.*, the Huang and Ivanov references are substantially similar vis-à-vis their enable/disable disclosure in an LDO voltage regulator.

And *Samsung Elecs. Co. v. Headwater Rsch. LLC* is readily distinguishable as well. IPR2023-01226, Paper 9, 6-7 (PTAB Feb. 8, 2024). There, the Board found that the relevant disclosure in the reference before the examiner was “more

generic” than the reference used in IPR which “more clearly teaches” what was at issue. *Id.* Here, by contrast, the Huang reference before the Examiner contained granular disclosure (discussed in the Abstract, specification, and illustrated in detailed transistor level schematic diagrams) in at least the same level of detail as the Ivanov reference Petitioner relies on. Moreover, in *Samsung*, the reference before the Examiner “was one of about 1,500 references identified in information disclosure sheets.” *Id.* Here, the Huang reference was one of only approximately a dozen references before the Examiner.

3. The Examiner Did Not “Overlook” Al-Shyoukh, Huang, or Xi

Under part two of the *Advanced Bionics* framework, *Becton Dickinson* factors (c), (e), and (f) are considered in the evaluation of whether the examiner materially erred during prosecution. *Advanced Bionics*, IPR2019-01469, Paper 6, 10-11. *Becton Dickinson* identifies these factors as (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (e) whether Petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or argument. *Becton Dickinson*, Paper 8 at 17-18.

To begin, “Ppetitioner bears the burden of showing that the Examiner materially erred.” *Fitesa Simpsonville, Inc. v. The Procter & Gamble Co.*,

IPR2023-01451, Paper 11, 19 (PTAB Mar. 20, 2024). Petitioner has failed to carry its burden. Petitioner does not even contend that the Examiner overlooked or erred regarding Al-Shyoukh. *See* Petition, 13-15. And the Petition is silent concerning Huang. Instead, Petitioner argues that “the examiner’s rejections were not based on the hypothetical cumulative art” (whatever that is supposed to mean) and that “the examiner would have erred materially by ‘overlooking something persuasive.’” Petition, 14 (citing *Advanced Bionics*). The Huang reference is not “hypothetical” at all—it was a real reference squarely disclosed to the Examiner at the beginning of prosecution (*see* EX2005, 47) and appears on the face of the ’074 patent (EX1001, 1). And as explained in more detail below, it is difficult to believe that the Examiner “overlook[ed]” Huang during examination.

Indeed, in the first Office Action (dated August 31, 2015), the Examiner expressly stated that “[t]he information disclosure statement[] (IDS) submitted on 12/17/2014 [which disclosed Huang] has been considered by the examiner.” EX2005, 69. Moreover, the Examiner initialed the IDS, confirming that he had considered Huang. *Id.*, 78.

PTO-1449		Application No. 14/204,011		Applicant(s) Huamin Zhou et al.			
Information Disclosure Citation in an Application		Docket Number 68354,225441		Group Art Unit 2838		Filing Date March 11, 2014	
U.S. PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A.	2005/0168272 A1	08-04-05	Banerjee et al.	327	541	02-02-04
	B.	2006/0192538 A1	08-31-06	Wang et al.	323	282	05-23-05
	C.	7312598 B1	12-25-07	Huang	323	280	08-25-06
	D.	2009/0009147 A1	01-08-09	Jian	323	280	03-04-08
	E.						
...							
NON-PATENT DOCUMENTS							
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)					DATE
	S.	International Search Report and Written Opinion, Application No. PCT/US2014/023962, 16 pages					11-03-14
	T.						
	U.						
EXAMINER /Jue Zhang/					DATE CONSIDERED 08/23/2015		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.Z./

Id. The reason Huang was submitted in an IDS is because it was identified in an International Search Report (the “Search Report”) for a counterpart PCT application³ to the ’074 patent. *Id.*, 47 (showing Search Report submitted in same IDS), 51 (Search Report listing Huang as one of four references identified).

The Search Report did not merely identify Huang without any further

³ The counterpart PCT application is PCT/US2014/023962. EX2005, 48.

guidance, it specifically identified “figure 2A” of Huang (which, as was shown above, illustrates the enable/disable signal that matches the disclosure in Ivanov that Petitioner relies on).

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/168272 A1 (BANERJEE JAIDEEP [IN] ET AL) 4 August 2005 (2005-08-04) abstract; figures 1,2 -----	1-6,8,9, 13-17, 19,20
X	US 2006/192538 A1 (WANG WEI [CN] ET AL) 31 August 2006 (2006-08-31) abstract; figure 4 -----	1-6,8,9, 13-16, 19,20
A	US 2009/009147 A1 (JIAN MING-HONG [TW]) 8 January 2009 (2009-01-08) abstract; figure 8 -----	1-6,8,9, 13-17, 19,20
A	US 7 312 598 B1 (HUANG SHENGMING [GB]) 25 December 2007 (2007-12-25) abstract; figure 2A -----	1-6

EX2005, 51 (annotations added). And, with respect to claim 1-6 (to which Huang was identified as being relevant), the Search Report noted that those claims were directed to a “[v]oltage regulator having *a biasing circuit with an enable/disable function.*” *Id.*, 53 (emphasis added). Moreover, Huang is among the first references listed on the face of the ’074 patent.

(56)

References Cited

U.S. PATENT DOCUMENTS

6,246,221 B1 * 6/2001 Xi G05F 1/575
323/280
7,312,598 B1 12/2007 Huang et al. 323/280
7,656,224 B2 * 2/2010 Perez H03F 1/0261
323/282
7,683,720 B1 * 3/2010 Yehui H03F 3/45192
30/252
2002/0171403 A1 * 11/2002 Lopata H03F 3/45183
323/280

(Continued)

EX1001, 1 (annotation added). And the Examiner's search history further shows that the Examiner specifically searched on U.S. Pat. 7,312,598 (*i.e.*, Huang), as shown below:

EAST Search History (Prior Art)

S13	3	S12 gm voltage regulator	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2015/08/09 14:54
S14	1	((("200500168272") or ("200600192538") or ("7312598") or ("200900009147"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/08/09 14:56
S15	4	((("20050168272") or ("20060192538") or ("7312598") or ("200900009147"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/08/09 14:56
S16	0	((("201361780985") or ("201414204011"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/08/09 14:58

EX2005, 82; *see also id.*, 118, 122, 145, 149 (similar).

In view of these facts, it is highly unlikely that the Examiner “overlooked” Huang or otherwise materially erred vis-à-vis Huang’s enable/disable disclosure, especially considering that Huang is a relatively short reference and the relevant functionality appears in the Abstract and Fig. 2 (which was highlighted by the

Search Report). Rather, the logical conclusion is that the Examiner did his job, considered Huang for all it teaches, and allowed the claims.

4. The Board’s Decisions Support Patent Owner

Petitioner’s three cited decisions are unavailing. *Google LLC v. Geoscope Techs. Pte. Ltd.* (see Petition, 14) is distinguishable on multiple grounds.

IPR2023-01212, Paper 14, 19-21 (PTAB Feb. 20, 2024). In *Google*, the Board declined to discretionarily deny institution under §325(d) where “the prosecution history does not provide evidence that the Examiner fully considered all the disclosure of Spain.” *Id.* Here, as described above, there is copious evidence the Examiner fully considered the Huang reference, which was cited in a Search Report—including its relevant disclosure—and was one of only a handful of references even before the Examiner.

In *InductEV, Inc. v. WiTricity Corp.* (see Petition, 14), the Board declined to discretionarily deny institution under §325(d) where the “Patent Owner [did] not dispute that the Cook and Bennett combination teaches the limitations that were the basis for allowing claims 1–18.” IPR2023-01208, Paper 9, 7 (PTAB Feb. 20, 2024). Here, by contrast, Patent Owner disputes that any of Petitioner’s Grounds (as best as Patent Owner can decipher them) teach all of the limitations of challenged claims 1-18. For example, Petitioner has failed to show that the cited prior art satisfies claim element 1[b] for “a gm enhanced current buffer driver.”

See §III.A.1.

And in *CODE200, UAB v. Bright Data Ltd.* (see Petition, 14), the Board declined to discretionarily deny institution under §325(d) where the primary reference (“Crowds”) “was not the basis of rejection in the prosecution of the ’344 patent nor was identified by the parties as the basis of rejection in any of the related patents.” IPR2022-00353, Paper 8, 10 (PTAB July 1, 2022). This “weigh[ed] strongly against exercising [] discretion to deny institution.” *Id.* That alone distinguishes the present case where Al-Shyoukh—the primary reference in Ground 1—was the basis for rejection during prosecution. EX2005, 107-111. And, as discussed in §II.B, Petitioner admits the other primary references (the Rincon-Mora references) disclose “the same basic structure.” Petition, 77.

A case with facts more analogous to those at issue here is *Google LLC v. Valtrus Innovations Ltd.*, IPR2022-01197, Paper 18, 18-28 (PTAB Jun. 13, 2023) (order denying institution under §325(d)). In *Google*, the petitioner argued that the reference before the examiner “was not the basis for a rejection of the ’809 patent claims,” that “the extent of the Examiner’s ‘evaluation’ ... was an initialed IDS,” and “the prosecution history is silent on how the Examiner viewed [the reference’s] teachings relative to the ’809 Patent claims.” *Id.*, 18. The Board “disagree[d] with Petitioner’s attempts to minimize the Examiner’s consideration of this reference. Even though the Examiner did not discuss [the reference] in

detail, e.g., in a rejection, the Examiner indicated that [reference] was ‘considered’ on April 1, 2004. [] Thus, [the reference] appears on the face of the ’809 patent along with five other references. [] Because [the reference] was ‘considered’ by the Examiner during prosecution, we find that the asserted art in this proceeding [] was evaluated to some extent. Thus, factor (c) weighs slightly in favor of us exercising discretion to deny institution under § 325(d).” *Id.*, 19.

Google is analogous in another respect as well. The petitioner in *Google* argued that the patent owner “never challenged the [] anticipation finding during prosecution of the ’231 application, and instead only gained allowance there by limiting the ’231 application claims.” *Id.*, 25. Likewise, in support of its §325(d) argument here, Petitioner contends that “Patent Owner conceded during prosecution [that Al-Shyoukh] disclosed every other limitation.” Petition, 14-15. But the Board in *Google* rejected an identical argument: “To the extent Petitioner is asking us to infer that the *Vea* rejection in the ’231 application was so strong that Patent Owner was forced to make an amendment to overcome it, we will not join in Petitioner’s speculation. There are a multitude of reasons that may drive a patent applicant to amend claims instead of presenting arguments against a particular rejection, and presenting claim amendments is not a concession by an applicant that the Examiner’s underlying findings are correct.” *Google*, IPR2022-01197, Paper 18, 25. The Board should likewise reject Petitioner’s identical

argument here.

At a minimum, on the facts laid out above, “reasonable minds [could] disagree regarding the purported treatment of the art or arguments,” in which case “it cannot be said that the Office erred in a manner material to patentability.” *Fitesa*, IPR2023-01451, Paper 11, 19 (quoting *Advanced Bionics*). In summary, Huang was a relatively short reference which prominently featured the relevant disclosure (e.g., in the Abstract) and repeated it in the text and figures, the Examiner expressly acknowledged Huang multiple times, and the relevant disclosure was specifically identified in an international search report submitted to the Examiner. Petitioner has plainly failed to carry its burden of showing that the Examiner “overlook[ed]” Huang, which is the only “material error” Petitioner even asserts. Petition, 14; *see e.g.*, *Google*, IPR2022-01197, Paper 18, 18-28 (denying institution under §325(d) on similar facts); *Fitesa*, IPR2023-01451, Paper 11, 21-22 (“Petitioner merely disagrees with the Examiner’s findings and conclusions, which is insufficient to establish material error by the Office”); *Vital Connect, Inc. v. Bardy Diagnostics, Inc.*, IPR2023-00381, Paper 7, 20 (PTAB Jul. 11, 2023) (“Here, we defer to the Office’s previous consideration of the prior art of record because Petitioner’s statements (i.e., that the Petition presents grounds of unpatentability not previously considered and/or applied by the Examiner) do not demonstrate[] that the Office erred in a manner material to the patentability of

challenged claims.”) (internal quotations and citation omitted); *id.* (“[W]hile there are no ‘magic words’ necessary to address material error, Petitioner’s alleged grounds of unpatentability cannot establish material error *per se* under our binding precedent.”).

B. Ground 2 (Rincon-Mora, EX1013) is Also Cumulative

Petitioner is completely silent regarding the applicability of §325(d) to Ground 2. *See* Petition, 13-15 (addressing §325(d) only for Ground 1). But Ground 2 is also cumulative, and subject to §325(d) denial for similar reasons as Ground 1. Indeed, Petitioner has essentially admitted as much, as explained below.

Recall that the primary references for Ground 2 are the Rincon-Mora patent and Rincon-Mora Paper. *See* Petition, 9-10 (the “primary prior art references for each ground [is] in italics”). And Petitioner combines Rincon-Mora with Al-Shyoukh in Ground 2, as shown below.

Ground	35 U.S.C. §	Claims	Prior Art
2	103	1-18	<i>Rincon-Mora (EX1013)</i> <i>Rincon-Mora Paper (EX1014)</i> Al-Shyoukh (EX1004) Ivanov (EX1005) Stanescu (EX1006)

Petition, 9-10 (annotation added).⁴ Notwithstanding that Petitioner lists the combination with Al-Shyoukh for claims 1-18, as far as Patent Owner can tell, Petitioner does **not** combine Al-Shyoukh for independent claim 1. But Petitioner does cite and/or combine Al-Shyoukh with the Rincon-Mora references for certain dependent claims. *See, e.g.*, Petition, 73 (citing Al-Shyoukh for claim 5), 76-78 (combining Al-Shyoukh for claims 8-10).

In support of combining Al-Shyoukh (which was indisputably before the Examiner) with Rincon-Mora, Petitioner asserts that “their respective LDOs are highly analogous. Not only do they have the same basic structure, but they also address the same goals of power efficiency and improved transient response, and seek to achieve them with the same general approach (using feedback mechanisms to boost current at the buffer driver).” Petition, 77. In substance, Petitioner admits that Rincon-Mora is cumulative to Al-Shyoukh vis-à-vis the independent claim, and the dependent claims for which Petitioner does not cite Al-Shyoukh.

⁴ Elsewhere for Ground 2, Petitioner asserts that “[t]he challenged claims [*i.e.*, claim 1-18] were obvious in view of two related references that describe the same LDO.” Petition, 52. On the very next page, Petitioner contends that “the ‘Rincon-Mora References’[], ***in combination with Al-Shyoukh***, Ivanov, and/or Stanescu, render obvious each claim of the ’074 patent”) (emphasis added). *Id.*, 53.

Otherwise, Petitioner would have cited Al-Shyoukh in Ground 2 for those claim elements since Petitioner was already combining Al-Shyoukh for other claim elements (*e.g.*, claims 8-10).

As it relates to the dependent claims where Petitioner does cite Al-Shyoukh (*viz.*, claims 5 and 8-10, which correspond to application claims 7 and 10-12, respectively), the Examiner already allowed those claims over Al-Shyoukh. *See* EX2005, 108-109. Petitioner does not even argue that the Examiner erred in doing so as it ignores §325(d) completely for Ground 2.

The cumulateness of Ivanov and Stanescu (claim 11) has already been addressed above in §II.A for Ground 1, and Petitioner relies on Ivanov and Stanescu in Ground 2 in the same way it did for Ground 1. *See* Petition, 62 (stating, for element 1[d], that “Ivanov provides [enable/disable disclosure] ... [a]s discussed above under Ground 1”), 78 (stating, for claim 11, “[a]s discussed under Ground 1, Stanescu discloses ...”).

In summary, Petitioner has admitted that Rincon-Mora is cumulative to Al-Shyoukh in relevant part, and the claims were already allowed over the “highly analogous” Al-Shyoukh reference that employs “the same general approach (using feedback mechanisms to boost current at the buffer driver)” as Rincon-Mora. Petition, 77. Accordingly, the Board should exercise its discretion to deny institution of Ground 2 as well.

III. THE PETITION FAILS TO ESTABLISH A REASONABLE LIKELIHOOD OF SUCCESS FOR ANY CHALLENGED CLAIM

The Petition suffers from numerous deficiencies which—individually and collectively—warrant denial. In pressing unpatentability on multiple grounds, for 18 claims, under various alternative quasi-constructions, the Petition fails to establish a reasonable likelihood that any challenged claim is obvious. Petitioner challenges all 18 claims of the '074 patent on multiple grounds. The Petition purports to raise two Grounds, as shown below.

Ground	35 U.S.C. §	Claims	Prior Art
1	103	1-18	<i>Al-Shyoukh (EX1004)</i> Ivanov (EX1005) Stanescu (EX1006)
2	103	1-18	<i>Rincon-Mora (EX1013)</i> <i>Rincon-Mora Paper (EX1014)</i> Al-Shyoukh (EX1004) Ivanov (EX1005) Stanescu (EX1006)

Petition, 9-10.

But Petitioner's table of Grounds is misleading (and deficient) in multiple respects. **First**, each Ground is just a list of references that purportedly apply to all 18 claims and fails to identify the actual combinations for each claim. A "Ground" is not simply a grab bag of references from which a Petitioner can pick and choose. Petitioner's approach runs contrary to 37 CFR §42.104 which requires Petitioner to

provide “a statement of the precise relief requested *for each claim challenged.*”

Petitioner’s approach—which obscures the actual Grounds—improperly “shifts the burden of deciphering Petitioner’s arguments onto Patent Owner and the Board, which is contrary to the statutory and regulatory provisions governing *inter partes* review proceedings.” *US Well Services, LLC et al v. Halliburton Energy Services, Inc.*, IPR2022-01164, Paper 11, 17 (PTAB Dec. 20, 2022) (denying institution).

Second, Petitioner’s purported identification of Grounds is misleading as there are far more than just two Grounds—indeed, Patent Owner is unable to reasonably discern all the different grounds Petitioner is pursuing. For example, Petitioner relies on Al-Shyoukh in combination with Ivanov (but not Stanescu) for claim 1. Petition, 21-26; *see generally id.*, 15-29. For dependent claim 11, Petitioner relies on “Al-Shyoukh as modified by Stanescu,” with no mention of Ivanov. *Id.*, 41. But dependent claim 11 depends from claim 1, which does require Ivanov. Regardless of whether Petitioner intended to rely on Al-Shyoukh+Ivanov+Stanescu or just Al-Shyoukh+Stanescu for claim 11, that creates a different Ground than just Al-Shyoukh+Ivanov relied on for claim 1.

The problem is even more pronounced for Petitioner’s “Ground 2,” which consists of nothing more than a list of five references for all 18 claims. Petition, 9-10. Petitioner’s statement at the beginning of its “Ground 2” analysis does nothing to clarify the actual combination, stating only that “[t]hese references (collectively,

the ‘Rincon-Mora References’), in combination with Al-Shyoukh, Ivanov, and/or Stanescu, render obvious each claim of the ’074 patent.” *Id.*, 53. The various combinations of five references result in 120 permutations. While Petitioner does not invoke all 120 permutations, it is unclear exactly which ones are it issue.

Insofar as Patent Owner could discern, Petitioner relies on the combination of the Rincon-Mora patent, possibly the Rincon-Mora Paper, and Ivanov for claim 1. *See* Petition, 57-69. For claim 9, Petitioner invokes Al-Shyoukh. *Id.*, 76 (“Rincon-Mora renders claim 9 obvious in view of Al-Shyoukh”). But dependent claim 9, through intervening depending claim 8, depends from claim 1, which (at a minimum) requires Ivanov. Regardless of whether Petitioner intended to rely on one or both of the Rincon-Mora references combined with just Al-Shyoukh, or with Ivanov and Al-Shyoukh, that creates a different combination than was used for claim 1. Similarly, for dependent claim 11, Petitioner relies on “Rincon-Mora as modified by Stanescu.” *Id.*, 78. Once again this raises not only confusion about what the actual combination(s) is/are, but results in more permutations no matter how the combination was intended. This results in a jumbled mess. The Board should deny institution for Petitioner’s failure to adequately identify the grounds/combinations asserted for each claim.

Third, Petitioner improperly treats the “Rincon-Mora References” (in the plural) as system art (*i.e.*, a single system) for purposes of combination. According

to Petitioner, “[t]he challenged claims were obvious in view of two related references that describe the same LDO.”⁵ Petition, 52. The “two related references” Petitioner relies on are the Rincon-Mora patent (EX1013, U.S. Pat. 6,046,577) and the Rincon-Mora Paper (EX1014).⁶ Oddly, Petitioner identifies *both* as primary references for Ground 2, as one would expect for a system art challenge where multiple documents describe a single system. *See* Petition, 9-10 (stating “the primary prior art references for each ground in italics” and italicizing both). But if the art is “describ[ing] the same LDO” (*id.*, 52) as Petitioner contends, there should be no need to rely on differences between the references.

Patent Owner cannot reasonably discern whether, or when, Petitioner is relying on just one “primary reference,” or on both “primary references.” Putting aside the propriety (and confusion) of having two primary references for a single

⁵ Once again, this is misleading as there is no combination of just the Rincon-Mora patent and Rincon-Mora Paper that Petitioner contends invalidates any claim. All of Petitioner’s Rincon-Mora based combinations require at least the Ivanov reference. *See* Petition, 62 (combining Ivanov for independent claim element 1[d]).

⁶ To muddy the waters further, Petitioner also sometimes relies on the Rincon-Mora Dissertation (EX1015) as well. *See, e.g.*, Petition, 72, 85.

ground, Petitioner improperly combines the Rincon-Mora patent (EX1013) and the Rincon-Mora Paper (EX1014) as if they were system art. No motivation to combine is needed to rely on multiple documents describing the same system ***if invalidity is based on the public use or on-sale bars applicable to system art.*** *Ioengine, LLC v. Paypal Holdings, Inc.*, 607 F. Supp. 3d 464, 518-19 (D. Del. 2022) (J. Bryson sitting by designation) (“[I]t is permissible for a defendant to establish anticipation by using several documents that reveal how a single prior art system works.”). But the public-use and on-sale bars based on system art are not available in an IPR. *See* 35 U.S.C. §311(b) (“A petitioner in an *inter partes* review may request to cancel as unpatentable 1 or more claims of a patent only on a ground ... consisting of patents or printed publications.”). As such, Petitioner must provide a motivation to combine. *See, e.g., Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 887 (Fed. Cir. 2024) (“KSR did not do away with the requirement that there must exist a motivation to combine various prior art references in order for a skilled artisan to make the claimed invention.”).

Petitioner’s only rationale for combining the Rincon-Mora patent and the Rincon-Mora Paper is that “a POSITA implementing the LDO would have considered both of the Rincon-Mora References to [fully] understand the invention, including the transient boost circuit.” Petition, 56. That’s it. Petitioner cites to ¶137 of its expert’s declaration for support, but Petitioner’s expert

declaration is equally conclusory. *See* EX1002, ¶137. This is woefully insufficient. Moreover, Petitioner’s expert was confused, believing there were *three* Rincon-Mora references that required combining: “I believe a POSITA would have considered the disclosures of *all three of [the Rincon-Mora] references* when implementing the LDO.” *Id.* (emphasis added). One would reasonably expect Rincon-Mora’s patent and the Rincon-Mora Paper to reference one another if they were “the same LDO” as Petitioner contends (Petition, 56), but neither one makes any reference to the other. Further, if it were as trivial to combine the references as Petitioner seems to assume, it should have been an easy exercise for Petitioner (or at least its expert) to provide actual motivations to combine/modify the references. But Petitioner provides no such analysis (perhaps due to trying to cram a multiplicity of grounds for 18 claims under various claim constructions into one petition).

Fourth, Petitioner’s identification of Grounds fails to acknowledge its heavy reliance on the purported knowledge of a POSITA. Beginning with the very first claim element 1[a] (“an operational amplifier”), Petitioner points to a different component (an “error amplifier”), and relies on the knowledge of a POSITA to close the gap. Petition, 15 (“Al-Shyoukh’s LDO includes an error amplifier, which a POSITA would have understood to be an operational amplifier”). This continues throughout the Petition. For example, for claim element 1[b] (“a gm enhanced

current buffer driver”), Petitioner invokes the purported knowledge of a POSITA to contend that the claimed “current buffer” is in fact a “voltage buffer.” *Id.*, 16-17 (“A POSITA would therefore have understood the patent to be using what was conventionally known as a **voltage buffer.**”) (emphasis added); *see infra* §III.A.1.

Elsewhere, Petitioner relies on the knowledge of a POSITA to satisfy entire claim elements. For example, claim 16 requires “capacitors in the biasing circuit for improving noise immunity thereof.” Petitioner states that “[i]t would have been obvious to a POSITA to use capacitors in the bias circuit for Al-Shyoukh’s LDO to improve noise immunity” because “a POSITA would have recognized that decoupling capacitors were a conventional solution for reducing noise.” Petition, 49-50; *see also, e.g., id.*, 71-74 (invoking POSITA knowledge for claim 5).

While there is nothing inherently wrong with relying on the knowledge of a POSITA, Petitioner should not force Patent Owner (or the Board) to wade through the Petition to identify when and where Petitioner does so. Petitioner’s expert is only marginally better, but at least acknowledges at the outset his reliance on the knowledge of a POSITA, stating that the claims are obvious over the Rincon-Mora patent and the Rincon-Mora Paper “*in view of the background knowledge of a POSITA*, Al-Shyoukh, Ivanov, and/or Stanescu.” EX1002, ¶125 (emphasis added); *see also id.*, ¶40. What this acknowledgement does, however, is make clear that the Rincon-Mora combination is tantamount to a six-way combination,

which further muddies what combinations/grounds are actually at issue.

In summary, by sprinkling purported combinations throughout the Petition (and forcing Patent Owner and the Board to play archaeologist to figure things out), Petitioner fails to adequately identify the actual grounds, let alone explain how *all* five references (*e.g.*, for Ground 2) can be combined. *See* Petition, 9-10 (identifying “Ground 2” as “*Rincon-Mora [EX1013], Rincon-Mora Paper (EX1014), Al-Shyoukh (EX1004), Ivanov (EX1005), Stanescu (EX1006)*”).

Indeed, Petitioner fails to even provide a motivation to combine the Rincon-Mora patent (EX1013) and the Rincon-Mora Paper (EX1014), other than to (improperly) treat them as if they were system art that required no motivation to combine since they purportedly “describe the same LDO.” Petition, 52.

Rather, Petitioner’s approach is to just graft on an additional reference from its grab bag whenever, and wherever, it pleases. To the extent Petitioner argues that different combinations of the five references (for Ground 2) or three references (for Ground 1) apply to different claims, this just serves to highlight Petitioner’s failure to adequately identify the combinations/grounds in the first instance (*i.e.*, Ground 2 is not a single ground, but instead presents numerous different combinations). This piecemeal approach to obviousness does not establish a reasonable likelihood that any challenged claim is unpatentable.

An IPR petition must identify “with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. §312(a)(3) (2012); *see also* 37 C.F.R. § 42.104(b) (2019). The Federal Circuit has explained that “[i]t is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (quoting 35 U.S.C. §312(a)(3)). Where, as here, “the Petition does not provide the requisite threshold identification of the grounds for its challenges,” the Board should deny institution. *PayPal, Inc. v. IOENGINE, LLC*, IPR2019-00906, Paper 16 (Order denying institution), 20 (PTAB, Apr. 4, 2019).

A. Claim Construction⁷

Petitioner obscures the fact that it is taking claim construction positions on the same patent in district court, including that claim 1 (the only independent claim) is indefinite. *See, e.g.*, EX2002, 12-16.

⁷ For completeness, Patent Owner provides both parties’ district court *Markman* briefing. *See* EX2002-2003 (Petitioner’s briefs) and EX2007-2008 (Patent Owner’s briefs).

No.	Claim Term	Microchip's Proposed Construction	Aptiv's Proposed Construction
3	“an enable/disable function to enable/disable the biasing circuit for reducing standby current” '074 patent, claim 1	Not subject to 35 U.S.C. § 112 ¶ 6. To the extent the court determines that § 112 ¶ 6 applies: Function: to enable/disable the biasing circuit for reducing standby current Structure: enable/disable signal input line (Node M)	Indefinite; Subject to 35 U.S.C. § 112 ¶ 6 without any corresponding structure

Id., 12 (annotations added). Nor does Petitioner even attempt to explain how the Board could apply the prior art Grounds to the “enable/disable” limitation if the claim is indefinite, as Petitioner contends. *See Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 812-14 (Fed. Cir. 2021).⁸

Petitioner likewise hides the fact that it is proposing an alternate construction

⁸ This stands in contrast to Microchip’s IPRs challenging Aptiv’s patents where Microchip expressly disclosed the indefiniteness issues and asked the Board to proceed if the district court did not find the claims indefinite. *See, e.g.*, IPR2024-00496, Paper 2 (Petition), 24 (PTAB Feb. 27, 2024) (“Petitioner argues in district court that claim 1 is indefinite. ... But if the district court adopts Aptiv’s proposed interpretation of claim 1 [], the PTAB should analyze patentability under the district court’s claim construction.”).

for the “enable/disable” term in district court: “the claim scope should be limited to Node M [in the ’074 specification], arranged with transistors ‘320, 330, 334 and 336’ of Figure 3, and equivalents thereof.” EX2003, 12. Petitioner makes no attempt to map the prior art Grounds to the “enable/disable” limitation under its proposed alternate construction.

Nor is this an isolated oversight, as Petitioner asserts in district court that multiple other challenged claims of the ’074 patent are indefinite. *See* EX2002, 16-19 (claim 4 indefinite), 19-21 (claims 8-9 indefinite).

Further obfuscating things, the Petition lacks any formal claim construction analysis and fails to provide adequate notice of what, if any, terms Petitioner is actually construing. This runs contrary to the Patent Trial and Appeal Board Consolidated Trial Practice Guide (November 2019), which provides that “If a petitioner believes that a claim term requires an express construction, the petitioner must include a statement identifying a proposed construction of the particular term and where the intrinsic and/or extrinsic evidence supports that meaning. On the other hand, a petitioner may include a statement that the claim terms require no express construction.” CTPG, 44.

It also runs contrary to basic principles of notice and fairness, and the underlying purpose motivating the guidance. Patent Owner cannot fairly discern what terms Petitioner is construing (either expressly or impliedly), what

Petitioner’s constructions actually are, or even what claim interpretation standard Petitioner is using.⁹ See EX1002, ¶14 (Petitioner’s expert applying the “broadest reasonable construction” standard, which is plainly incorrect as the PTAB has applied the *Phillips* standard for years). Any ambiguities or vagueness in Petitioner’s positions should be resolved against Petitioner. *Liberty Mutual Ins. Co., v. Progressive Casualty Ins. Co.*, CBM2012-00003, Paper 8, 10 (PTAB Oct. 25, 2012) (representative decision) (“[W]e will address only the basis, rationale, and reasoning put forth by the Petitioner in the petition, and resolve all vagueness and ambiguity in Petitioner’s arguments against the Petitioner.”); see also *Tyco Fire Prods. LP v. Victaulic Co.*, IPR2016-00278, Paper 13, 12 (PTAB Sept. 7, 2016) (“We consider the petition as written, not as the Petitioner wished it had written it.”).

The Board’s decision in *Samsung Elecs. Co., Ltd. v. Dodots Licensing Solutions LLC*, IPR2023-00701, Paper 10, 24-29 (PTAB Mar. 10, 2023) is

⁹ The CTPG explains that “parties should point out the specific portions of the specification, prosecution history, and relevant extrinsic evidence they want considered, and explain the relevancy of any such evidence to the arguments they advance. Each party bears the burden of providing sufficient support for any construction advanced by that party.” CTPG, 46.

instructive. In *Samsung*, like here, the petitioner’s expert used the same erroneous claim construction standard as Petitioner’s expert here:

Samsung’s Expert	Aptiv’s Expert
“I understand that ... the terms appearing in the patent claims should be interpreted according to their ‘broadest reasonable construction in light of the specification of the patent in which it appears.’ 37 C.F.R. § 42.100(b).” <i>Id.</i>, 24 (quoting Samsung’s expert) (emphasis added).	“I have been informed and understand that claims are construed from the perspective of a POSITA at the time of the claimed invention, and that during <i>inter partes</i> review, claims are given their broadest reasonable construction consistent with the specification.” EX1002, ¶14 (emphasis added).

In *Samsung*, the Board agreed this standard was “incorrect,” and that “[t]he claim construction standard for claims of challenged unexpired patents in this forum was changed from BRI to the *Phillips* standard in 2018, long before Dr. Schmidt signed the Declaration (Feb. 22, 2023).” *Samsung*, IPR2023-00701, Paper 10, 27.

The Board ultimately instituted IPR, but it did so because “the Petition articulate[d], unequivocally, the correct claim construction standard and goes into some detail in explaining what the *Phillips* standard entails.” *Id.*; *see also id.* (“[i]t [was] undisputed that the Petition state[d] that ‘[a]ll claim terms should be construed according to the *Phillips* standard.’”). That is not the case here.

The instant Petition is completely silent regarding the appropriate claim interpretation standard and neither the Petition itself nor Petitioner’s expert declaration make any references whatsoever to the *Phillips* claim construction

standard. Rather, the only claim interpretation standard recited in Petitioner’s papers is the erroneous “broadest reasonable construction” standard. EX1002, ¶14. Thus, unlike *Samsung* where the “Petitioner’s alleged ‘failure to use the correct claim construction standard’ [was] not supported by the totality of the evidence” (*Samsung*, IPR2023-00701, Paper 10, 26), here the “totality of the evidence” is that Petitioner *did* use the wrong claim construction standard. Further, in *Samsung*, the constructions at issue had been “endorsed by the Federal Circuit under the *Phillips* standard,” which “bolster[ed] [the Board’s] view that the Petition was unequivocal about using the *Phillips* standard to interpret the challenged claims, notwithstanding the Declaration’s mention of the BRI standard.” *Id.*, 28. Neither the Federal Circuit (not any district court) has adopted Petitioner’s claim interpretations.

Moreover, the Board in *Samsung* “emphasize[d] that Patent Owner does not yet address or dispute any of Petitioner’s contentions on claim construction grounds.” *Id.* That is not the case here, as exemplified by the “current buffer” discussion below. More generally, the remainder of this section outlines examples of Petitioner’s failures and deficiencies vis-à-vis claim construction.

1. The “current buffer driver” claim term (claim element 1[b])

Claim element 1[b] requires “a gm enhanced current buffer driver.”

EX1001, cl. 1. But Petitioner’s expert opines that “the ’074 patent does not

actually seem to describe or disclose a ‘current buffer driver’ in its description of the supposed invention. What the ’074 patent calls a ‘current buffer’ is something a POSITA would have recognized as a *voltage* buffer.” EX1002, ¶54 (emphasis in original); *see also* Petition, 17 (“A POSITA would therefore have understood the patent to be using what was conventionally known as a *voltage* buffer, which provides low output impedance and was a well-known application for source followers.”) (emphasis in original).

In other words, Petitioner *rewrites the claim* as follows: “a gm enhanced ~~current~~ voltage buffer driver.” *See also* EX2006, 28 (Petitioner’s district court invalidity contentions stating that “current buffer” lacks written description support because “[w]hat is actually disclosed in the [’074 patent] specification, however, is not a current buffer at all, but rather a voltage buffer.”).¹⁰ No matter what Petitioner calls the exercise of revising the claim, it is engaging in claim

¹⁰ This is not a unique example. Claim element 1[a] requires “an operational amplifier.” EX1001, cl. 1. Petitioner hides its district court position as to this term as well, contending that it lacks written description support in the specification because “[w]hat is actually disclosed in the [’074 patent] specification [] is not an operational amplifier (‘OpAmp’), but rather an operational transconductance amplifier (‘OTA’).” EX2006, 28.

construction (and relies heavily on its expert who applied the wrong claim construction standard). EX1002, ¶¶54-55, 143-144.

If Petitioner believed the claim term meant something other than its plain and ordinary meaning (*i.e.*, a current buffer), Petitioner must engage with the well-established claim construction law regarding lexicography and disclaimer. *See, e.g., Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (“To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning. ... It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.”) (internal citations omitted); *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“We depart from the plain and ordinary meaning of claim terms based on the specification in only two instances: lexicography and disavowal.”). But Petitioner ignores this case law altogether, pretends it is not construing “current buffer,” and relies on a legally erroneous and overly broad claim interpretation standard. Petition, 16-17, 58-59; EX1002, ¶¶54-55, 143-144.

Petitioner does not even allege a POSITA would not know the plain and ordinary meaning of “current buffer.” And Petitioner’s expert tacitly admits as much when he contrasts the “convention[al]” characteristics of a current buffer and

voltage buffer. EX1002, ¶54 (“But a low output impedance was conventionally understood to be a characteristic of voltage buffers, in contrast with current buffers, which have high output impedance.”). In tacit recognition that “current buffer” actually means “current buffer,” not “voltage buffer,” Petitioner does not seek to construe (or otherwise change the meaning of) the term in the district court proceedings. *See generally* EX2002 and EX2003.

Petitioner’s expert’s ultimate conclusion is that “regardless of what precisely is meant by ‘current buffer driver,’ Al-Shyoukh discloses the same current buffer driver that the ’074 patent discloses.” EX1002, ¶55. But this violates a fundamental canon of invalidity analysis—*i.e.*, that the prior art is compared to the properly construed claims, not the specification. *See, e.g., Brassica Prot. Prods. LLC v. Sunrise Farms (In re Cruciferous Sprout Litig.)*, 301 F.3d 1343, 1349 (Fed. Cir. 2002) (“Having construed the claim limitations at issue, we now compare the claims to the prior art to determine [invalidity].”); *Johnson & Johnston Assocs. v. R.E. Serv. Co.*, 285 F.3d 1046, 1052 (Fed. Cir. 2002) (“[A] patent applicant defines his invention in the claims, not in the specification.”).

Petitioner does lip service to the “current buffer” disclosure in the specification. *See* Petition, 16-17. The ’074 specification refers to a “low impedance current buffer amplifier” (EX1001, 3:31), “a low-impedance current buffer driver 204” (*id.*, 3:57), a “current buffer driver 204 [that] acts like a low

impedance driver” (*id.*, 4:4-5), and explains that “the current buffer driver 204 pushes this pole to a high frequency beyond unity-gain frequency due to its low-impedance characteristics” (*id.*, 4:11-13). *See also id.*, 4:57-67 (similar). This usage is consistent with the claim language of a “gm enhanced current buffer driver.” In other words, the ’074 patent intentionally and specifically refers to a “current buffer,” not a “voltage buffer” as Petitioner wishes. Even if Petitioner’s expert were correct that low output impedance was often associated with voltage buffers, it is not an exclusive, defining characteristic of a voltage buffer. Conversely, a high-output impedance is not an exclusive, defining characteristic of a current buffer. Indeed, it is certainly possible, as the ’074 specification discloses, to have a low output impedance current buffer. Petitioner’s logic is like saying that a vehicle can’t be a pickup truck simply because the vehicle gets good gas mileage. In reality, using the claimed current buffer is (in part) what helps achieve the beneficial pole-splitting, which is akin to a vehicle solution that would allow a pickup truck to get better gas mileage.

Petitioner also gives short shrift—a single sentence—to the Xi reference (EX2004, U.S. Pat. 6,246,221) that was overcome during prosecution. Petition, 8. The Examiner rejected claims 1-4, 7-10, 13-17, 20 as anticipated by Xi. EX2005, 69. In particular, the Examiner mapped the claimed “gm enhanced current buffer driver” to “the circuits comprising 202, 210” in Xi Fig.2. *Id.* In response, the

Applicant argued that Xi lacked a “a gm enhanced current buffer driver.” *Id.*, 97 (emphasis in original). The Applicant explained that “Xi neither discloses nor suggest[s] such a buffer” because in Xi “a unity gain **voltage buffer is implemented** as buffer 210” and “the output of operational amplifier 212 will be the same voltage as the input voltage.” *Id.* (emphasis added). The Examiner did not subsequently maintain its rejection based on Xi for this claim element. *Id.*, 105-115.

Notwithstanding that the Applicant overcame the Examiner’s “current buffer” rejection on the basis that the cited prior art (Xi) had a voltage buffer instead of a current buffer, Petitioner maintains (without regard to the canons of claim construction) that the claimed “current buffer” is nevertheless actually a “voltage buffer.” Petition, 58; *see also id.*, 16-17. And on that basis Petitioner applies the Al-Shyoukh and Rincon-Mora prior art. *Id.*

Petitioner’s argument for Al-Shyoukh is that its “buffer is equivalent to the ’074 patent’s buffer” and that “[a] POSITA would thus have understood Al-Shyoukh to disclose limitation 1[b] in the same way the patent does.” Petition, 17. But this is the wrong comparison—Petitioner is required to compare the prior art to the claim language (as properly construed), and not merely to the specification. *See, e.g., Johnson & Johnston*, 285 F.3d at 1052 (“a patent applicant defines his invention in the claims, not in the specification. After all, the claims, not the

specification, provide the measure of the patentee’s right to exclude.”); *cf.* *CommScope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th 1289, 1295 (Fed. Cir. 2021) (“the court first determines the scope and meaning of the patent claims asserted, and then the properly construed claims are compared to the allegedly infringing device”) (internal quotations and citations omitted). Nor is mere “equivalen[ce]” the correct test for an invalidity analysis. The doctrine of equivalents is a concept relevant to infringement, and has no place when assessing obviousness. *See, e.g., Siemens Med. Sols. USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, 637 F.3d 1269, 1282 (Fed. Cir. 2011) (“[W]ith regard to Saint-Gobain’s contention that equivalence is tantamount to obviousness, we disagree. The two legal principles require different analytical frameworks.”).

Petitioner’s argument regarding Rincon-Mora fares no better and fails for the same reasons. *See* Petition, 58 (“As discussed above under Ground 1 for this limitation, the patent describes its ‘current’ buffer as a ‘source follower’ that ‘creates a low impedance environment,’ which are two characteristics of *voltage* buffers.”) (emphasis in original). Petitioner argues that “[a] POSITA would therefore have understood Rincon-Mora to disclose a ‘gm enhanced current buffer driver’ in the same way the ’074 patent does.” *Id.*, 59. Again, this is the wrong comparison. *See Johnson & Johnston*, 285 F.3d at 1052.

In summary, Petitioner’s conclusory assertions attempting to rewrite the

claim are insufficient to establish by a preponderance of the evidence that claim 1 (or any dependent claims) is unpatentable.

2. The “enable/disable” limitation (claim element 1[d])

Claim element 1[d] requires “an enable/disable function to enable/disable the biasing circuit for reducing standby current.” EX1001, cl. 1. Petitioner is less than forthcoming with the fact that it is simultaneously pursuing a claim construction in district court that the “enable/disable” term is indefinite. In particular, Petitioner contends that the “enable/disable” limitation is subject to means-plus-function treatment and is indefinite because there is no corresponding structure in the ’074 specification.

No.	Claim Term	Microchip’s Proposed Construction	Aptiv’s Proposed Construction
3	“an enable/disable function to enable/disable the biasing circuit for reducing standby current” ’074 patent, claim 1	Not subject to 35 U.S.C. § 112 ¶ 6. To the extent the court determines that § 112 ¶ 6 applies: Function: to enable/disable the biasing circuit for reducing standby current Structure: enable/disable signal input line (Node M)	Indefinite; Subject to 35 U.S.C. § 112 ¶ 6 without any corresponding structure

EX2002, 12 (annotations added); *see generally id.*, 12-16 and EX2003, 7-13.

Petitioner makes no attempt to explain how the Board could apply the prior art Grounds to the “enable/disable” limitation if the claim is indefinite, as

Petitioner contends. *See Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 812-14 (Fed. Cir. 2021).

Petitioner likewise hides the fact that it is proposing an alternate construction for the “enable/disable” term in district court: “the claim scope should be limited to Node M [in the ’074 specification], arranged with transistors ‘320, 330, 334 and 336’ of Figure 3, and equivalents thereof.” EX2003, 12. Petitioner again makes no attempt to map the prior art Grounds to the “enable/disable” limitation under its proposed alternate construction.

Contrary to its position in district court, Petitioner does not maintain that §112(6) applies in this IPR to the “enable/disable” term. “Where claim language may be construed according to 35 U.S.C. § 112(f), a petitioner must provide a construction that includes both the claimed function and the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function. 37 C.F.R. § 42.104(b)(3). A party may choose to elaborate why §112(f) should or should not apply to the limitation at issue. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). A petitioner who chooses not to address construction under § 112(f) risks failing to satisfy the requirement of 37 C.F.R. § 42.104(b)(3).” CTPG, 45. Petitioner has failed to carry its burden of establishing that the “enable/disable” term is a means-plus-function term, let alone identify the required function and structure.

Instead, Petitioner states that it “understands Patent Owner to contend that 1[d] is not a means-plus-function element under Section 112 ¶ 6, and to the extent it is, the claimed function is to enable/disable the biasing circuit for reducing standby current, and the corresponding structure is the signal input line at node M in Figure 3. Under that construction, Al-Shyoukh with Ivanov discloses 1[d].” Petition, 21-22; *see also id.*, 62 (same for Rincon-Mora grounds).

At a minimum, Petitioner’s approach counsels in favor of denying institution. The Board’s decision in *Facebook, Inc. v. Sound View Innovations, LLC* is instructive, and demonstrates that petitioners should inform the PTAB of related district court claim construction arguments, especially if inconsistent with arguments advanced at the PTAB. IPR2017-00998, Paper 13 (PTAB Sept. 5, 2017). In *Facebook*, the petitioner filed a petition without expressly seeking any specific claim constructions (*id.* 8) and without notifying the board that, in related district court litigation, the petitioner had argued the challenged claim was indefinite (*id.*, 11, 17). In its POPR, the patent owner notified the Board of petitioner’s inconsistent positions on claim construction and subsequent failure to notify the Board of them. *Id.* 17. The Board found that, while it is not improper for a party to take inconsistent claim construction positions in district court and PTAB proceedings, the party who does so is obligated to inform the Board of its prior arguments. *Id.*, 17-18 (“[Petitioner] did not inform the panel that Petitioner

had taken a very different claim construction position before the district court ... Instead, Petitioner left it to Patent Owner to advise us of Petitioner's differing claim construction arguments to the district court. ... At the very least, Petitioner's failure to inform us of its differing claim construction arguments before the district court raises the specter of lack of candor."). This is precisely the case here. The Board in *Facebook* denied institution, partly due to "Petitioner's failure to inform us of its seemingly inconsistent claim construction positions." *Id.*, 18. The Board should do the same here.

None of the decisions cited by Petitioner address the *Facebook* panel's concern, and are distinguishable in any event. For example, in *3Shape A/S v. Align Tech., Inc.* (Petition, 20), the petitioner relied on claim constructions adopted by the ITC, and thus the Board stated that "subjective belief of the correctness of the construction" was not necessary, but still denied institution on other grounds. IPR2020-00174, Paper 14, 9-12 (PTAB Jun. 12, 2020). Here, neither the ITC nor the district court have adopted the constructions Petitioner relies on.

In *Gen. Elec. Co. v. Vestas Wind Sys. A/S* (Petition, 20), the petitioner "***provide[d] its own interpretation of what the phrases mean***, but also indicates what it believes to be 'Patent Owner's expected interpretation[s].'" IPR2018-00928, Paper 9, 12 (PTAB Nov. 5, 2018) (emphasis added); *see also id.*, 16 ("[T]he rule does not prohibit a petitioner from submitting more than one

construction.”). That is not the case here, where Petitioner hides its contradictory district court positions and submits only the Patent Owner’s construction.

Indeed, Petitioner takes pains to avoid disclosing its contrary district court positions, apparently hoping to avail itself of the outdated BRI standard to take different positions in the IPR. But Petitioner should not be rewarded for hiding its positions, and, as the *Facebook* panel held, should have disclosed them.

While some Board decisions applying *Western Digital* have found it relevant whether a petitioner “expressly disagrees” *in its petition* (as opposed to district court) with a patent owner’s construction, such a rationale/distinction elevates form over substance and should be rejected. *See CareFusion Corp. v. Baxter Int’l, Inc.*, IPR2016-01456, Paper 9, 6-7 (PTAB Feb. 6, 2017) (denying institution where “Petitioner [] states that it *does not agree that [Patent Owner’s district court] constructions are in fact correct.*”) (emphasis in original). To hold that a petitioner can obtain institution by silently withholding its true contrary positions (especially where the same claim construction standard now applies in both the PTAB and district court) incentivizes dubious practices and should not be encouraged. If Petitioner had disclosed its contrary district court claim constructions to the Board—which it should have done—*Carefusion* and *Hologic* counsel in favor of denying institution. *See Hologic, Inc. v. Enzo Life Sciences, Inc.*, IPR2018-00019, Paper 21, 2 (PTAB Nov. 28, 2018) (“This case presents an issue of claim

construction: in a proceeding applying the *Phillips* claim-construction standard, may Petitioner satisfy its obligations under our rules by conducting unpatentability analysis only under a claim construction with which it expressly disagrees? In our Decision on Institution, we concluded that Petitioner may not do so.”). The result should be no different where Petitioner fails to disclose its positions.

3. Petitioner Maintains Claim 4 Is Indefinite

Claim 4 depends from claim 2 and requires that “the gm-boost circuit enables the current buffer driver to have a large gm value.” EX1001, cl. 4. Once again, Petitioner fails to disclose its true claim construction position from district court—that claim 4 is indefinite: “The term ‘large gm value’ is indefinite because it fails to inform a POSITA with reasonable certainty of the scope of the invention.” EX2002, 17; *see generally id.*, 16-19, 45-48 and EX2003, 13-15, 22-26.

The Petition states that “[t]he ’074 patent does not explain what ‘large’ means in claim 4” and purports to rely on Patent Owner’s construction from district court. *See* Petition, 33 and 71. But even then, Petitioner took the position in the district court that, “[r]ather than clarifying the scope of the claim,” Patent Owner’s position “creates more confusion.” EX2002, 18. According to Petitioner, “Microchip’s attempt to provide stability for the scope of its claims it actually pins the claim scope to a moving target, making it impossible for a POSITA to

determine with reasonable certainty whether a given gm value is sufficiently large to fall within the scope of the claim.” *Id.*, 19. In summary, Petitioner contends that claim 4 is indefinite under any party’s interpretation and fails to explain how the Board can evaluate the prior art in this circumstance. In particular, Petitioner contends in district court that “the same exact voltage regulator will behave differently when connected to different loads” such that “the very same regulator would be infringing under some conditions and not under others.” EX2003, 14-15. But Petitioner makes no attempt in this IPR to explain the load conditions that would allow the voltage regulator in either Ground 1 or Ground 2 to satisfy claim 4. Indeed, the Petition’s analysis for claim 4 says nothing about load conditions at all. *See* Petition, 33 (Ground 1) and 71 (for Ground 2).

4. Petitioner Maintains Claims 8-10 Are Indefinite

Claim 8 depends from claim 1 and recites “the operational amplifier is a low gain and high bandwidth amplifier.” EX1001, cl. 8.¹¹ Once again, Petitioner fails to disclose its true claim construction position from district court—that claim 8 is indefinite: “The ’074 patent’s requirement of a ‘low gain and high bandwidth amplifier’ provides insufficient guidance to inform a POSITA, with reasonable certainty, of the scope of the claimed invention. ... [N]either the claims nor the

¹¹ Claims 9 and 10 each depend from claim 8 and are subject to the same argument.

specification give context that would allow a POSITA to know when an amplifier is sufficiently ‘low gain’ or sufficiently ‘high bandwidth’ to satisfy the claims’ limitations. Without such guidance, it is impossible to determine with reasonable certainty whether a given product falls within the scope of the claim.” EX2002, 19-20; *see generally id.*, 19-21, 49-51 and EX2003, 15-18, 26-28.

The Petition states that “[t]he ’074 patent does not explain what ‘low’ or ‘high’ means in claim 8” and purports to rely on Patent Owner’s construction from the district court. *See* Petition, 36-37 and 75-77. But even then, Petitioner took the position in the district court that Patent Owner’s construction “only adds further to th[e] ambiguity” and “creates yet another ambiguous boundary—this time on the lower end of the scale” and concludes that “the term ‘low gain and high bandwidth amplifier’ is indefinite for failing to provide a POSITA with ‘reasonable certainty’ regarding the scope of the claim.” EX2002, 21; *see also* EX2003, 15-16 (“That this is the most reasonable construction Microchip was able to offer highlights why there is no ‘plain and ordinary meaning’ for this term that would inform a POSITA, with reasonable certainty, of what it is the patentee claims.”). In summary, Petitioner contends that claim 8 is indefinite under any party’s interpretation and fails to explain how the Board can evaluate the prior art in this

circumstance.¹²

5. Claim 14

Claim 14 depends from claim 1 and recites “the current feedback circuit provides a feedback voltage from an output voltage node.” EX1001, cl. A14. Petitioner asserts that “[t]he ’074 patent does not explain what ‘feedback voltage’ or ‘output voltage node’ means in claim 14.” Petition, 46. Petitioner further asserts that “a POSITA would have been unable to make sense of claim 14 without *assuming* that the applicant meant to refer to 1[g]’s ‘feedback loop’ rather than ‘the current feedback circuit.’” *Id.*, 47 (emphasis added).

This is yet another example of Petitioner’s flawed approach. Petitioner’s core position seems to be that the claim is indefinite (*viz.*, “a POSITA would have been unable to make sense of claim 14”), in which case Petitioner offers no prior art unpatentability analysis. Instead, rather than saying “this term requires

¹² Petitioner states in passing it “understands” that Patent Owner argues “that a folded cascode operational amplifier with a single stage of gain (comprising a differential input and a cascode load) is necessarily a low gain and high bandwidth amplifier.” Petition, 38. But Petitioner provides not basis or evidence for this purported “understanding.” Lacking any support whatsoever for its assertion, the Board should disregard this conclusory and underdeveloped argument.

construction and it means XYZ under *Phillips*,” Petitioner merely proceeds on the “assum[ption]” (Petition, 47) of what the claim could mean. And Petitioner’s “assum[ption]” is a position which Patent Owner has never taken. This is not how an *inter partes* review should proceed, and the Board should deny institution.

IV. PETITIONER OFFERS NO STIPULATION AND THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. §314(A)

Petitioner raises no argument against discretionary denial under §314(a) in its Petition, and offers no stipulation that would dispense with a *Fintiv* analysis. The ’074 patent is currently being litigated in Delaware district court by the same parties in the case captioned *Microchip Technology Inc. v. Aptiv Services US, LLC*, No. 1:23-cv-00778-JDW (DED).

The Board should exercise its discretion to deny institution because Petitioner is pursuing the same Al-Shyoukh (EX1004) and Rincon-Mora (EX1013 and EX1014) based prior art references in the district court. *See* EX2006, 6 (reference 15 is Rincon-Mora patent), 7 (reference 20 is Rincon-Mora Paper and 23 is Al-Shyoukh). Petitioner creates the very situation—simultaneous and costly/duplicative litigation in multiple forums—that *inter partes* review was intended to avoid.

Factor 1. The district court case has not been stayed. Microchip is asserting two unrelated patents in the district court action and the Court has not indicated

whether it would stay the case if institution was granted as to only one patent.¹³ As such, the factor is neutral. *See, e.g., Samsung Elecs. Co. Ltd. v. Mojo Mobility Inc.*, IPR2023-01094, Paper 11, 7 (PTAB Feb. 09, 2024) (*Fintiv* “cautions against speculating whether the district court would grant a stay if one were requested ... Therefore, we weigh Factor 1 as neutral.”).

Factor 2. The projected statutory deadline for a final written decision is September 27, 2025. No trial date has been set in the district court. As such, prognosticating about a trial date would be speculative, but Patent Owner recognizes that some Board decisions have viewed this circumstance as weighing against exercising discretion to deny institution.

Factor 3. The parties and court have made significant investments in the district court action. The Court held a *Markman* hearing on June 21, 2024. *Microchip*, No. 1:23-cv-00778, Dkt. 72; EX2009 (June 21, 2024 minute entry). And the parties have already served infringement and invalidity contentions. *See id.*, Dkt. 34 (infringement contentions served October 27, 2023), EX2006 (Petitioner’s invalidity contentions dated December 8, 2023). Moreover, the

¹³ Petitioner has challenged the second patent in IPR2024-00803, which was filed later in time and does not have an institution decision deadline until November 13, 2024.

parties have already engaged in substantial discovery, including taking and defending depositions, producing numerous documents and source code inspections, serving multiple third-party subpoenas, and serving and responding to numerous interrogatories. *See, e.g. id.*, Dkt. 28, 38, 49, 90 (third-party subpoenas); 18, 23, 26, 30, 32, 35-37, 41, 48, 50-51, 55-56, 58, 70, 73, 77, 79, 86, 93, 106-107, and 122 (interrogatories and responses). By the time of an institution decision, even more fact discovery will already be complete. This factor favors denying institution. *Samsung Elecs.*, IPR2023-01094, Paper 11, 9 (“this factor favors exercising our discretion to deny institution” where “[district court litigation] has already advanced well beyond the pleadings stage,” “claim construction will have been briefed and argued” before an institution decision, and “fact discovery is well underway”).

Factor 4. As noted, Petitioner is asserting substantially the same prior art references in district court, including all of the primary references (and most of the secondary and background references) relied on in its IPR Petition. *See* EX2006, 6-8 (listing Al-Shyoukh, Rincon-Mora patent, Rincon-Mora Paper, Rincon-Mora Dissertation, Stanescu, MIC59300, and many others). And Petitioner has not entered any stipulation that would eliminate (or even reduce) duplicative litigation. This is significant because IPR statutory estoppel would not take effect until a final written decision in the fall of 2025. Thus, there is substantial overlap with the IPR

and this factor favors discretionary denial. *See, e.g., Intel Corp. v. Koninklijke Philips N.V.*, IPR2021-00328, Paper 16, 5 (PTAB Mar. 29, 2022) (“We also emphasized that complete overlap is not required, that substantial overlap of issues may be sufficient, and that Petitioner had provided no stipulation that it would not pursue any ground that could be raised under §§ 102 or 103 on the basis of prior art patents or printed publications.”); *Apcon, Inc. v. Gigamon Inc.*, IPR2020-01579, Paper 9, 26 (PTAB Mar. 16, 2021) (denying institution where “the art appears substantially the same, and no stipulation has been filed by Petitioner agreeing not to assert the same art.”).

Factor 5. The parties are the same in district court and the IPR. This factor favors discretionary denial. *See, e.g., Samsung Elecs.*, IPR2023-01094, Paper 11, 13 (“[T]his factor weighs in favor of a discretionary denial” where “the same parties are involved in both the present proceeding and the parallel [district court litigation]”).

Factor 6. As described herein, the Petition suffers from substantial defects and shortcomings (*e.g.*, failure to properly identify actual grounds, incorrect claim construction standard and misleading/improper constructions, missing motivations to combine, significant §325(d) issues, etc.) which provide independent bases for denial. And collectively these issues counsel in favor of discretionary denial under *Fintiv* Factor 6.

In summary, the majority of the *Fintiv* factors favor denial (or are neutral) and the Board should exercise its discretion under §314(a) to deny institution.

V. **CONCLUSION**

For the above reasons, Patent Owner respectfully requests that the Board deny institution of *inter partes* review of the '074 patent.

Respectfully submitted,

Dated: June 27, 2024

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CERTIFICATE OF WORD COUNT

The undersigned certifies that pursuant to the word count limits set forth in 37 C.F.R. §42.24(b)(1), this Preliminary Response contains 12,303 words, based on the word count indicated by the utilized word-processing system used to generate the Preliminary Response and excluding those portions exempted by 37 C.F.F. §§ 42.24(a) and (b).

Respectfully submitted,

Dated: June 27, 2024

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CERTIFICATE OF SERVICE

The undersigned certifies that on June 27, 2024, a copy of the following was served in its entirety via electronic mail, upon the following attorneys of record for Petitioner:

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