

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC.

Petitioner

v.

KONINKLIJKE KPN N.V.

Patent Owner

Case IPR2023-00525

U.S. Patent 10,924,500

PATENT OWNER'S PRELIMINARY RESPONSE

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EXHIBIT LIST

Exhibit No.	Description
2001	Expert Declaration of Dr. Ding.
2002	<i>Curriculum Vitae</i> of Dr. Ding.
2003	Behrouz A. Forouzan, DATA COMMUNICATIONS AND NETWORKING (4 th Ed. 2007)
2004	MICROSOFT COMPUTER DICTIONARY (5 th Ed. 2002).
2005	First Amended Docket Control Order, <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , No. 2:22-CV-282-JRG, Doc. 101 (E.D. Tex. May 24, 2023)
2006	Administrative Office District Court Statistics, March 31, 2023, available at https://www.uscourts.gov/file/71612/download (fcms_na_distprofile0331.2023.pdf)
2007	Docket Navigator Time to Trial, Eastern District of Texas (Jan. 1, 2018-June 9, 2023)
2008	Docket Navigator Time to Trial, Judge Gilstrap (Jan. 1, 2018-June 9, 2023)
2009	Docket Report, <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , No. 2:22-CV-282-JRG, Doc. 101 (E.D. Tex.) (June 8, 2023)
2010	Ericsson's P.R. 3-3 Invalidity Contentions (served Mar. 16, 2023) (confidential information redacted)
2011	KPN's P.R. 3-1 Infringement Contentions Cover Pleadings (served Jan. 5, 2023)
2012	Unopposed Motion for Issuance of Letter of Request for International Judicial Assistance, <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , No. 2:22-CV-282-JRG, Doc. 99 (E.D. Tex. May 19, 2023)

Exhibit No.	Description
2013	Plaintiff's First Set of Requests for Admission (served Jan. 19, 2023)
2014	Plaintiff's First Set of Interrogatories (served Jan. 19, 2023)
2015	Defendants' First Set of Interrogatories (served Feb. 3, 2023)
2016	Defendants' Second Set of Interrogatories (served May 15, 2023)
2017	Ericsson's P.R. 4-2 Preliminary Constructions (Served June 20, 2023) in <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , No. 2:22-CV-282-JRG
2018	Ericsson's Amended P.R. 4-2 Preliminary Constructions (Served June 30, 2023) in <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , No. 2:22-CV-282-JRG
2019	KPN's P.R. 4-2 Preliminary Constructions (Served June 20, 2023) in <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , No. 2:22-CV-282-JRG

I. INTRODUCTION

The Board should exercise its discretion and deny institution under 35 U.S.C. § 325(d) because Eisl—the only asserted prior art reference—was already considered by the Office and the Examiner did not materially err by allowing the claims. *Infra* Section III. Even if the Petition were to be assessed on the merits, it fails to demonstrate a reasonable likelihood of unpatentability of any claim for at least two reasons.

First, all claims require “**counting**” a “number of occurrences of **a certain predetermined signal** associated with a mobile telecommunications device” that “**indicates handover** of the mobile telecommunications device” and “represent[s] an interaction between network devices ... **for normal processing of signals.**”¹ The Petition relies solely on Eisl for this limitation in Ground 1, but Eisl discloses only (and vaguely) determining a number of actions (e.g., completed handovers) based on collected *data* generally. Recognizing this, the Petition repeatedly conflates Eisl’s general teachings about determining actions based on *data* with the more specific requirement of counting “certain predetermined signals” as claimed. But because Eisl is silent about how it determines the number of actions based on the collected *data*, it cannot disclose this claim limitation. *Infra* Section IV.A.

¹ All emphasis herein has been added, unless otherwise indicated.

Recognizing this deficiency, in Ground 2 Petitioner alleges that this missing feature would have been obvious based solely on Eisl. However, Petitioner does not identify any prior art that allegedly discloses this missing feature. Petitioner instead relies on generic obviousness motivations that lack the necessary “articulated reasoning with some rational underpinning” and are not supported by the evidence of record. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). While the Petition does rely on the declaration of Dr. Olivier, he simply parrots the same unsubstantiated arguments *verbatim*, entitling his testimony to no evidentiary weight. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper No. 9 at 15 (Aug 24, 2022) (precedential as to conclusory declarations).

Second, all claims require that the certain predetermined signal “represent[s] an **interaction between network devices in the core network**.” The Petition simply ignores this limitation in both grounds, failing to identify where, or explain how, Eisl discloses it. *Infra* Section IV.B. This omission is all the more problematic because a handover refers to a mobile telecommunications device switching from one base station to another, but neither the mobile device nor base stations are “**in the core network**.” Consequently, the Board and Petitioner are simply left to guess as to how Petitioner contends this limitation is satisfied by Eisl.

Finally, in addition to the lack of substantive merit, the *Fintiv* factors heavily favor discretionary denial. *Infra* Section V. Trial in the parallel litigation will occur

nearly six months before any projected final written decision deadline and the parties have already expended significant resources in that proceeding.

II. LEVEL OF ORDINARY SKILL IN THE ART

For purposes of this Preliminary Response only, Patent Owner does not dispute the qualifications of a person having ordinary skill in the art (“POSITA”) proposed by Petitioner. Petition, 17. All references to a POSITA herein are made pursuant to that definition. Patent Owner reserves the right to propose its own qualifications should the Board decide to institute trial. Patent Owner’s expert, Dr. Ding, far exceeds the qualifications of a POSITA. *See* Ex. 2001 ¶¶ 6-17, 47-48; Ex. 2002.

III. DISCRETIONARY DENIAL IS WARRANTED UNDER § 325(d)

The Board should deny institution under § 325(d) because Petitioner’s only asserted reference, Eisl, was previously considered by the Office during prosecution and the Petition fails to demonstrate that the Examiner erred in a material way.

A. The same art was previously presented to the office

The first part of the *Advanced Bionics* framework addresses whether the same or substantially the same prior art or arguments were previously presented to the Office. *See Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). As the Petition

acknowledges, Eisl is prior art of record. Ex. 1001 (“References Cited” listing Eisl under “FOREIGN PATENT DOCUMENTS”). Thus, it is “the same” art previously considered, and the first part of *Advanced Bionics* is satisfied.

B. The Examiner did not materially err in allowing the claims.

The second part of the *Advanced Bionics* framework addresses whether the Examiner materially erred during prosecution. *Advanced Bionics*, IPR2019-01469, Paper 6 at 8. “If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.” *Id.* at 9. The Board considers the following factors in assessing the second factor:

(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 arguments.

Id. at 9-10.

With respect to factor (c), Petitioner implies that the Examiner did not carefully consider Eisl because it was submitted in an IDS with Patent Owner’s last office action response before allowance. What Petitioner neglects to mention is that Eisl was *the only* prior art reference listed in that IDS. Ex. 1005, 639-640. Eisl is

also the only reference subsequently initialed by the Examiner:

FOREIGN PATENT DOCUMENTS								Remove
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
/P.T.V/	1	2011072719	WO	A1	2011-06-23	NOKIA SIEMENS NETWORKS OY		
If you wish to add additional Foreign Patent Document citation information please click the Add button								Add

Id. at 772. Consequently, this is not a circumstance where the patentee provided voluminous amounts of prior art in an IDS that might lead an examiner to overlooking the materiality of a reference. Given that Eisl was the sole referenced listed in the IDS and the only reference initialed by the Examiner, the only reasonable inference is that the Examiner carefully reviewed Eisl, just as the Examiner carefully reviewed and analyzed prior art in seven office action rejections, such as U.S. Patent Publication No. 2006/0230450 to Bu (“Bu”) and U.S. Patent No. 5,953,652 to Amin. *See e.g., id.* at 174, 179 (1st Office Action); *id.* at 358-359, 361, 366 (2nd Office Action); *id.* at 416-417, 419, 423 (3rd Office Action); *id.* at 453-455, 460 (4th Office Action); *id.* at 509-510, 515 (5th Office Action); *id.* at 559-561, 566 (6th Office Action); *id.* at 613-616, 622 (7th Office Action).

Petitioner also implies that the Examiner did not carefully consider Eisl because he did not initial it until after the interview leading up to allowance. However, the fact that Eisl was initialed shortly after the Examiner became aware of the final amendments, but a week before the claims were allowed, indicates that the Examiner carefully considered Eisl in light of the final claims before deciding to

issue the notice of allowance. *Id.* at 749 (Examiner-Initiated Interview Summary indicating “Date of Interview” on Oct. 15, 2020); *id.* at 772-773 (Examiner initialed IDS with a “Date Considered” of Oct. 23, 2020); *id.* at 736 (Notice of Allowance mailed Oct. 30, 2020).

Petitioner ultimately concludes that “factor (c) weighs heavily in favor of institution” based solely on the fact that Eisl was not applied in an office action rejection. But as Petitioner correctly states, this factor considers “the extent to which the asserted art was evaluated during examination.” There is no question that the Examiner specifically considered Eisl, not as one of many references submitted in an IDS form, but rather as the only reference submitted in a single IDS. Consequently, the mere fact that a reference was not applied in an office action does not “weigh heavily in favor” of finding the Examiner materially erred. At best, this factor is neutral given that Eisl was the only reference disclosed in the IDS and initialed by the Examiner and that the Examiner clearly considered Eisl in view of the final amended claims.

With respect to factor (e), the Petition alleges that “Petitioner has pointed to specific teachings of Eisl that disclose or render obvious all elements claimed by the ’500 Patent,” particularly focusing on the amendments added during prosecution in reference to Bu. But as demonstrated in Section IV below, the Petition fails to demonstrate that Eisl discloses two key elements, including those added in the final

amendment. For example, independent claim 1 was amended by Patent Owner to require that the telecommunications network be arranged to “count in the core network a number of occurrences of a certain predetermined_data_type_signal associated with the mobile telecommunications device, the certain predetermined signal representing an interaction between network devices in the core network for normal processing of signals” and further amended by the Examiner to require that said certain predetermined signal “indicates handover of the mobile telecommunications device.” *Id.* at 717-721; *id.* at 742, 746. The Petition fails to demonstrate that Eisl teaches counting ***certain predetermined signals*** that ***indicates handover*** and represents an interaction between network devices for ***normal processing of signals***. *Infra* Section IV.A. The Petition also fails to demonstrate that the alleged “certain predetermined signals” of Eisl represent an interaction between ***network devices in the core network***. *Infra* Section IV.B. The Petition thus fails to point out sufficiently how the Examiner allegedly erred in evaluating the asserted prior art. Indeed, Petitioner’s “analysis” of factor (e) vaguely alleges that the Examiner overlooked key limitations but neglects to even specifically identify what those limitations are.

Finally, the Petition asserts that factor (f) favors institution because “Petitioner has submitted a declaration by Dr. James Olivier—not considered by the Examiner—that explains why the prior art either anticipates or renders obvious each

of the Challenged Claims.” Pet., 12. However, Dr. Olivier simply parrots the Petition *verbatim* with respect to the limitations that the Examiner allegedly “overlooked” in Eisl. *Compare id.* at 32-42, with Ex. 1003 ¶¶ 108-118.² Given that such testimony is entitled to “little or no weight,” it cannot plausibly support weighing this factor in favor of institution. *Xerox Corp.*, IPR2022-00624, Paper No. 9 at 15 (precedential as to conclusory declarations).

Ultimately, Petitioner carries the burden of demonstrating that the Examiner materially erred by failing to find that Eisl anticipates, or renders obvious, the independent claims. As demonstrated above, the Examiner clearly considered Eisl—again the only reference listed in the final IDS and initialed by the Examiner—and did not find it sufficient to justify rejecting the claims in view of the final amendments. Nor did the Examiner initiate an interview with Patent Owner based on Eisl, as the Examiner had done multiple times before to discuss prior art believed

² Other than an unreasonable single-citation to more than eighty-five (85) paragraphs of Dr. Olivier’s declaration, paragraphs 109-111, 115, and 117 of his declaration are never even cited in the Petition. See Pet., 1, 3, 12, 17, 22 (each page citing “EX1003, ¶¶93-170”). Thus, paragraphs 109-111, 115 and 117 should not be considered. But even if they are, as shown they are just carbon copies of the arguments from the Petition and thus entitled to no evidentiary weight.

to be applicable to the claims. Ex. 1005, 624, 749. The Examiner was correct in his conclusion, as Eisl fails to disclose or render obvious at least two limitations of the independent claims. The Petition should thus be denied under § 325(d).

IV. THE PETITION SHOULD BE DENIED ON THE MERITS

A. The Petition fails to demonstrate that Eisl discloses or renders obvious “counting” the number of occurrences of a “certain predetermined signal” as claimed.

Independent claim 1 requires a telecommunication network arranged to “**count** in the core network a number of occurrences of a **certain predetermined signal** associated with the mobile telecommunications device,” where said signal “**indicates handover** of the mobile telecommunications device” and “represent[s] an interaction between network devices ... for **normal processing of signals**.”³ Independent claim 11 is phrased slightly differently, but contains the same requirement.

Contrary to Petitioner’s assertion, Eisl does not disclose counting **certain predetermined signals** as claimed. Rather, Eisl teaches only (and vaguely) counting

³ While the Petition proposes no construction for, nor attempts to explain the meaning of, the claim language “normal processing of signals” pursuant to 37 U.S.C. § 42.104(b)(3), Petitioner asserts that language is indefinite in the underlying lawsuit. Ex. 2018, 16.

“handover actions” based on collected **data** from the mobile device and/or network elements. Ex. 2001 ¶ 51 (citing Ex. 1004 ¶¶ [0048] (“Those changes are detected by a network element based on the **data provided and/or collected** from other network elements and/or the mobile device(s).”), [0058] (discussing a network element that “collects **information about changes** to the connection of one or more mobile device.”) [0059] (discussing policy rules that are “used to check from **the collected data** if frequent changes to the connection of one or more mobile devices are detected”), [0062] (discussing “reporting **information** related to detected frequent changes”)).

The Petition ignores the well-known distinction between a **predetermined signal** amenable to **normal processing** of signals, and **data** generally, instead treating them as one and the same. But within the context of the ’500 Patent, the **certain predetermined signal** as claimed would be understood by a person of ordinary skill in the art to be a waveform that carries data in a format specified in a technical specification, such as the 3GPP protocol. *Id.* ¶ 52 (citing Ex. 2003, 32; Ex. 2004, 3). That is precisely why the signal is “certain predetermined” and “for normal processing.” *Id.* The specification of the ’500 Patent provides several examples of such certain predetermined signals amenable to normal signal processing, such as attach request signals and handover signals. *Id.* (citing Ex. 1001, 3:16-34 (discussing normal signal processing of an attach request), 7:5-20 (discussing the normal

processing of signals in a 2G, 3G and 4G network), 7:28-30, 8:27-30 (“In parallel with the **normal processing of the attach requested** the network performs the following steps.”)). *Data*, on the other hand, is information conveyed **by** signal and is not limited to any specific format. *Id.*

A POSITA would understand that there is a major benefit to counting a certain predetermined signal as claimed rather than generally assessing collected data to identify handovers. For one, it allows handovers to be identified more quickly, which is important when attempting to identify malicious activity in real time. *Id.* ¶ 53. Second, relying on predetermined signals takes advantage of the established signaling interaction procedures used in telecommunications networks to determine the number of handovers. *Id.* Rather than having to generate and monitor a new type of signal that is not compatible with “normal processing of signals” to indicate handovers, the claims monitor the signals that have already been predetermined or predefined as part of the standards governing telecommunications networks. *Id.*

While the ’500 Patent does disclose embodiments where the number of handover events for a mobile station is determined based on *data* generally, the claims are not directed toward those embodiments. *Id.* ¶ 54 (citing Ex. 1001, 2:14-30). Instead, the claims are directed toward embodiments that count a **certain predetermined signal** that are subject to the **normal processing of signals**. *Id.* (citing Ex. 1001, 4:29-34 (“[T]he network monitors for, and detects when the frequency of

a ***certain predetermined signal*** ... becomes too high.”); *Id.* at 7:24-30, 8-25-30 (“In parallel with the ***normal processing of*** the attach request the network performs the following steps.”)).

The prosecution history further reflects the distinction between monitoring *data* generally and counting ***certain predetermined signals*** that are amenable to the ***normal processing of signals***. *Id.* ¶ 55. The independent claims originally recited a telecommunication network “arranged to monitor an occurrence in the *data* streams of the data of the first type and is arranged to register when the occurrence exceeds a level indicating acceptable behaviour.” Ex. 1005, 155, 157. The Examiner then issued several office action rejections against claims where data was monitored to determine whether the level of acceptable behavior is exceeded. *Id.* at 170-181 (1st Office Action Rejection), 192-197 (1st Set of Amended Claims), 356-368 (2nd Office Action Rejection), 382-387 (2nd Set of Amended Claims), 413-425 (3rd Office Action Rejection), 435-440 (3rd Set of Amended Claims), 451-463 (4th Office Action Rejection), 471-476 (4th Set of Amended Claims), 507-517 (5th Office Action Rejection), 535-541 (5th Set of Amended Claims); 557-568 (6th Office Action Rejection); 587-593 (6th Set of Amended Claims); 610-623 (7th Office Action Rejection). It was not until after the seventh office action that the claims were amended to eliminate the language requiring the monitoring of *data* and instead reciting that the telecommunications network is arranged to “count in the core

network a number of occurrences of a ***certain predetermined signal*** associated with the mobile telecommunications device” and the “for ***normal processing*** of signals” language. *Id.* at 717-722 (7th Set of Amended Claims). The claims were then allowed with some additional Examiner-suggested amendments that the number of occurrences is “of the ***certain predetermined signal***” and further requiring that the predetermined signal “indicates ***handover*** of the mobile telecommunications device.” *Id.* at 740-748. Thus, the claims were amended to more specifically require the counting of a ***certain predetermined signal*** that indicates ***handover*** and is subject to ***normal processing*** of signals. Ex. 2001 ¶ 55.

While the Petition repeatedly concludes that Eisl teaches counting a ***certain predetermined signal*** as claimed, none of the citations to Eisl support that assertion. Petitioner first discusses paragraph [0047] of Eisl and then references Eisl’s “example of using a threshold for the number of handover actions in a policy rule.” Pet. at 32-34 (citing Ex. 1004 ¶¶ [0086]-[0087]). But these disclosures merely teach that changes to a connection may be “detected” and that thresholds for determining when such changes are “abnormal” may be established. Ex. 2001 ¶¶ 56-57. The paragraphs do not disclose *how* the detection occurs, including whether said detection involves counting a ***certain predetermined signal*** associated with the mobile device or whether any such signal is amenable to ***normal processing***. *Id.* ¶ 57.

The Petition further alleges that:

Eisl describes the use of policy rules which may be implemented in the core network, to detect abnormal behavior of mobile telecommunications devices—including embodiments where the system counts instances of connection changes and/or handover actions by generating parameters **from data** indicating the connection changes and/or handover actions (*i.e.*, predetermined signals) associated with the mobile device and compares them to a threshold.

Pet., 34 (citing Ex. 1004 ¶¶ [0038], [0076], [0077], [0079]–[0080]). It is of course true that Eisl teaches determining the number of handover actions “from *data*.” Ex. 2001 ¶ 58. But that does not support the Petitioner’s conclusion that Eisl makes its determination by counting **certain predetermined signals** associated with the mobile device, or that the alleged signals are subject to **normal signal processing**. *Id.*

The Petition also argues that “Figure 4 shows that the network device *data* (*i.e.*, signals) is used to generate network related parameters (4-10) including the number of completed actions (4-20) such as handovers, which are used for determining if policy rules are violated (4-2).” Pet., 35. The Petition then concludes that “the number of signals indicating ‘the number of actions’ are counted to create a parameter.” *Id.* at 36. Once again, the Petition mistakenly conflates *data* (in this case “network device *data*”) with the claimed **predetermined signals**. Ex. 2001 ¶ 59. Even viewing the discussion of Figure 4 in a light most favorable to Petitioner, it merely discloses that the number of handover actions can be determined from

“network related *data*” (element 4-5). *Id.* It neither teaches nor suggests that the number of handover actions is determined by counting ***predetermined signals*** associated with the mobile device or that the alleged signals are amenable to ***normal processing*** of signals. *Id.*

The Petition’s assertion that “the number of ***signals*** indicating ‘the number of actions’ are counted to create a parameter...” lacks evidentiary support. Pet., 36 (citing Ex. 1004 ¶ [0083]–[0084], [0089]–[0090])). Eisl only teaches only that the number of actions is determined based on network related *data* and that the number of *actions* is counted. Ex. 2001 ¶ 60. In fact, in the immediately following paragraph Petitioner argues that “Eisl specifically explains that the ‘number’ of ***completed actions*** or connection changes are determined because ***they are ‘counted.’***” Pet., 37 (citing Ex. 1004, ¶ [0078]). That is precisely the point—Eisl vaguely teaches counting actions (not signals) and identifying those actions based on collected *data*, not from counting ***certain predetermined signals*** associated with the mobile telecommunications device and amenable to ***normal processing of signals***. Ex. 2001 ¶ 60. In other words, Eisl is completely silent on how it determines the number of handovers, other than to vaguely say it relies on “data” from the mobile device and/or other network elements indicating a planned or completed handover. *Id.* Eisl thus does not include the requisite level of specificity to teach or disclose counting ***certain predetermined signals*** as claimed. *Id.*

Recognizing this, the Petition alleges that “counting is an implementation detail that would have been obvious to a POSITA at the time of the ’500 Patent.” Pet., 37. However, the proffered obviousness theory does not amount to “articulated reasoning with some rational underpinning.” *KSR*, 550 U.S. at 418.

Petitioner first asserts that “a POSITA would have been motivated to use counting to generate the number of, for example, signals indicating completed actions ***to reliably generate that information.***” Pet., 37. Petitioner does not explain how or why Eisl’s disclosed method of analyzing data to determine the number of completed actions is in any way “unreliable” or how counting ***certain predetermined signals*** as claimed would somehow improve reliability over Eisl’s disclosed method, which collects data relating to a handover action and then counts the number of handover events. Ex. 2001 ¶ 62. In fact, as Petitioner acknowledges Eisl repeatedly teaches that it is able to determine the number of actions (e.g., handovers) from data indicating the handover actions to detect malicious activity. Pet., 34 (citing Ex. 1004 ¶¶ [0038], [0076], [0079]–[0080]). Nothing in Eisl suggests that its method is in any way unreliable or inaccurate or that Eisl recognized that counting predetermined signals as claimed could improve reliability or accuracy. Ex. 2001 ¶ 62. The Petition thus fails to provide a legitimate rationale for modifying Eisl to count ***certain predetermined signals*** indicative of a handover that are associated with the mobile device and amenable to ***normal processing of signals***. There are simply no facts or

evidence supporting this purported rationale. *Id.*

Petitioner also asserts that “estimating the number of signals indicating an action would be less reliable and introduce unnecessary complication.” Pet., 37. However, there is no teaching or suggestion in Eisl that it “estimates” the number of signals indicating an action to determine the number of actions. Ex. 2001 ¶ 63. Petitioner is fabricating an allegedly flawed method—i.e., “estimating”—that is not even disclosed or suggested in Eisl to justify its proposed modification.⁴ *Id.* While the Petition also refers vaguely to “other methods” that may be “less reliable” and “introduce unnecessary complication,” the Petition does not explain or elaborate on what these “other methods” are or how counting predetermined signals as claimed could improve them. *Id.* Consequently, that portion of this motivation is conclusory and unexplained and cannot support a showing of obviousness.

The Petition further argues that “POSITA would have understood that

⁴ During prosecution, Patent Owner argued that the prior art reference Bu does not count the number of occurrences of a certain predetermined signal as claimed, but rather that it “estimates ‘signaling cost to data ratio.’” Ex. 1005, 725. It appears then that Petitioner is improperly conflating the teachings of Bu with the teachings of Eisl to justify its proposed modifications. But Eisl simply says nothing about “estimating” or “signals” at all.

counting would have been the most obvious and natural way to arrive at a ‘number’ of performed or planned events such as handovers.” Pet., 38 (citing Ex. 1004, ¶¶ [0077], [0079]). Once again, this says nothing about whether it would have been obvious to count ***certain predetermined signals*** associated with a mobile device, that ***indicate handover***, and that are amenable to ***normal processing*** of signals. There is no dispute that Eisl “counts” the number of handovers but that number is based on a vague reference to collected *data*. Ex. 2001 ¶ 64. But Eisl does not teach that it is based on counting ***certain predetermined signals*** as claimed. *Id.* In other words, the issue is not whether it would be obvious to count *the number of actions* but whether it would be obvious to count ***certain predetermined signals*** as claimed. *Id.* Petitioner’s entire obviousness analysis incorrectly focuses on the former issue, not the latter.

Petitioner also alleges that a “POSITA would further have had a reasonable expectation of success in generating the number of actions through counting signals indicating associated actions because counting is routine and well-known practice.” Pet., 37-38. For one, the conclusion in the first half of this statement is unsupported by the second half of the statement. Petitioner is asserting that because ***counting anything*** is routine and well-known practice, there would have been a reasonable expectation of success in ***counting certain predetermined signals as claimed*** to determine the number of handover events. Regardless, even if the statement is

accepted as true it merely addresses the distinct inquiry of whether there would have been a reasonable expectation of success, not whether there was a *reason* for a POSITA to count predetermined signals in the first place. *See Axonics, Inc. Medtronic, Inc.*, IPR2020-00715, Paper 65 at 46-47 (PTAB Sept. 13, 2021) (explaining that “motivation to combine and reasonable expectation of success ... are distinct inquiries”); Ex. 2001 ¶ 65.

While the Petition relies on the testimony of Dr. Olivier to support its obviousness theory, he simply parrots the obviousness arguments *verbatim*. *Compare* Pet., 37-38, *with* Ex. 1003 ¶ 114. He provides no additional analysis or reasoning beyond the attorney-argument in the Petition. As the Board explained in *Xerox Corp. v. Bytemark, Inc.*, such testimony is entitled to “little or no weight”—explaining:

We have reviewed this excerpt from Dr. Jones’ declaration and note that it merely repeats, *verbatim*, the conclusory assertion for which it is offered to support. . . . Dr. Jones does not cite any additional supporting evidence or provide any technical reasoning to support his statement. ***Thus, the cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight.***”

IPR2022-00624, Paper No. 9 at 15 (citing 37 C.F.R. § 42.65(a), which states that “[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Dr. Olivier’s conclusory testimony is particularly problematic here because it is not being offered to provide a motivation to combine, “but rather to supply a limitation missing from the prior art.” *Id.* at 16. Indeed, Petitioner identifies no prior art that discloses counting the number of ***certain predetermined signals*** associated with a mobile device that ***indicate handover*** and are amenable to ***normal signal processing*** to determine whether malicious activity is present. Instead, Petitioner relies solely on vague statements in Eisl about counting actions based on “data” and a cursory obviousness analysis premised entirely on *verbatim* parroting by Dr. Olivier.

B. The Petition fails to demonstrate that the alleged predetermined signal of Eisl “represent[s] an *interaction between network devices in the core network*.”

In addition to counting a predetermined signal associated with a mobile device that indicates handover and is subject to normal signal processing, the claims also require that said signal “represent[s] an ***interaction between network devices [i.e., plural] in the core network*** for normal processing of signals.” Ex. 1001, claims 1, 11. This plainly requires that the predetermined signal represents an interaction between ***multiple*** network devices ***in the core network***. Ex. 2001 ¶ 66. The Petition fails to demonstrate, or even attempt to explain how, this requirement is satisfied by Eisl. See *Kranos Corp. d/b/a/ Schutt Sports, v. Riddell, Inc.*, IPR2016-01649, Paper 25 at 29 (PTAB Feb. 7, 2018) (citing 37 C.F.R. § 42.104(b)(4), (5)) (“Our rules

require a petition to ***specify where*** each element of the claim is found in the prior art patents or printed publications relied upon.”); *Callminer, Inc. v. Mattersight Corp.*, IPR2020-00271, Paper 14 at 9 (PTAB June 18, 2020) (explaining that a petition must “explain the ‘***relevance*** of the evidence to the challenged raised.’”) (citing 37 C.F.R. 42.104(b)(4), (5))

The Petition first addresses the requirement that the interaction is “for normal processing of signals.” Pet., 39-40. Specifically, the Petition argues that Eisl teaches monitoring signals in the core network that indicate/represent normal behavior (e.g., handovers) and sets policy rules to detect frequent changes to a connection indicating abnormal behavior. *Id.* The Petition concludes “[t]hus, the signals that Eisl counts to generate parameters used to determine whether a policy rule has been violated represent ***normal processing of signals***.” *Id.* at 40. Even if true, Petitioner’s analysis here does not explain or address how the counted “predetermined signal associated with the mobile telecommunications device” represents an interaction between ***multiple*** network devices ***in the core network*** as required by the plain language of the claim. Ex. 2001 ¶ 67.

The Petition next focuses on the language “in the core network.” Pet., 40-42. The Petition addresses arguments made during prosecution that Bu “does not teach ***counting in the core network***” and further argues that Eisl teaches that the alleged signals “need not come from the mobile, but can come from other network elements

in the core network that are aware of, for example, handover actions.” *Id.* (citing Ex. 1004 ¶ [0058]). This is just a rehash of the Petition’s prior assertion that Eisl teaches “counting in the core network.” *Compare id.* at 34-37 with *id.* at 40-42. Even assuming that Petitioner’s characterization of Eisl “counting [actions] in the core network” is correct, that says nothing about whether the alleged predetermined signals represent an interaction between **multiple** network devices **in the core network**. Consequently, this argument also fails to address or explain how this limitation is accounted for by the teachings of Eisl. Ex. 2001 ¶ 68.

The Petition’s failure to explain how, or specifically identify where, Eisl teaches this limitation is particularly troublesome given that a “handover” refers to the transferring of a mobile device from one base station (or cell) to another base station (or cell). Ex. 2001 ¶ 68 (citing Ex. 1001, 2:52-64 (describing handovers)). As the ’500 Patent explains, neither the mobile device nor the base stations are “in the core network” and thus it is unclear based on the Petition how the interaction between the mobile device and base stations can represent interactions between **multiple** network devices **in the core network** for normal processing of signals.” *Id.* (citing Ex. 1001, 6:61-7:4 (explaining that the base station is not part of the core

network, but transmits signals *to the core network*)).⁵ Petitioner’s failure to address the “between network devices in the core network” limitation thus leaves both the Board and Patent Owner left to guess where or how that limitation is allegedly satisfied by Eisl.

As the Board has explained:

The burden of proof here lies with Petitioner, not Patent Owner, and we do not ourselves create and adopt unpatentability arguments on behalf of Petitioner as to whether or how [the prior art] might teach a [claim limitation]. See *Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1286 (Fed. Cir. 2017) (“It 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.” (quoting *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016))); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (“[W]e find no support for the PTO’s position that the Board is free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR.”); *DeSilva v. DiLeonardi*, 181 F.3d 865, 866-67 (7th Cir. 1999) (“A brief must make all arguments accessible to the judges, rather than ask them to play

⁵ Petitioner expressly acknowledges that a handover is a “process for shifting a **mobile device** from **one base station** to another.” Pet., 39. But again, neither the mobile device nor base stations are “in the core network.”

archeologist with the record.”).

Samsung Electronics Co., Ltd. v. RightQuestion, LLC, IPR2022-00251, Paper 17 at 38-39 (PTAB June 9, 2022) (alterations added). Consequently, the Petition should be denied because it fails to identify where, or explain how, Eisl teaches that the alleged predetermined signal “represent[s] an interaction ***between network devices in the core network*** for normal processing of signals.”

V. DISCRETIONARY DENIAL IS WARRANTED UNDER *FINTIV*

The Board should deny institution because the six factors set forth in *Apple Inc. v. Fintiv, Inc.* weigh in favor of discretionary denial. IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv I*”). Petitioner has offered no stipulation. The parallel litigation between Patent Owner and Petitioner is in an advanced state, with a trial date firmly set for April 1, 2024—*i.e.*, nearly *six months before* the projected statutory deadline for a final written decision in these proceedings. Petitioner has presented identical invalidity issues in the litigation, and the parties have already invested substantial resources in the underlying litigation. By the time the Board issues its institution decision, the investment of the parties and the Court will be much greater. And finally, the merits of the Petition are weak, which further tips the balance of the *Fintiv* factors toward the exercise of discretionary denial.

Factor 1: Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted.

No motion to stay has been filed and there is no specific indication from Judge Gilstrap that a stay is likely. This factor is thus neutral as acknowledged by Petitioner. Pet., 8 (citing *HP Inc. v. Slingshot Printing LLC*, IPR2020-01084, Paper 13 at 9 (PTAB Jan. 14, 2021)).

Factor 2: Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision.

Trial in the parallel litigation is set to start on April 1, 2024. Ex. 2005, 1. There is no evidence that this date would change or be postponed, and should therefore be taken at face value. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 13 (PTAB May 13, 2020) (informative) (“*Fintiv II*”); *Samsung Elecs. Co., Ltd. v. Ancora Techs., Inc.*, IPR2020-01184, Paper 11 at 13 (PTAB Jan. 5, 2021)). (“Petitioner fails to provide sufficient evidence to show that the trial date has been changed or will be postponed”). Based on the filing date of this preliminary response, the statutory deadline for a final written decision in this proceeding (if instituted) is projected to be October 10, 2024. This is nearly six months after the jury trial.

In addition, recent guidance from Director Vidal directs the Board to “consider the median time from filing to disposition” in the district court. Interim Procedure, 3. From March 31, 2018 to March 31, 2023, the average median time in

all civil cases from filing to trial in the Eastern District of Texas is about 19 months. Ex. 2006, 35. The median time for only patent cases, as well as patent cases before Judge Gilstrap, was even shorter, at only 18 months. Exs. 2007, 2008. As the case was filed on July 25, 2022 (Ex. 2009, 7), this would result in a trial in January or February 2024, even before the scheduled trial date. Thus, there is no reason to expect the scheduled trial date to slip, and this factor weighs heavily in favor of discretionary denial. *See Fintiv II* at 13 (finding factor favored denial when the trial would take place only two months before the final written decision).

Factor 3: Investment in the parallel proceeding by the court and the parties.

This factor considers “the amount and type of work already completed in the parallel litigation by the court and the parties at the time of the institution decision.” *Fintiv I* at 9. This includes, among other things, whether the court in the parallel proceeding will have issued substantive and/or claim construction orders. *Id.* at 9-10. This factor “is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs.” *Id.* at 10. This factor weighs heavily toward denial.

The litigation was filed in July 2022 and is at an advanced stage. Ex. 2009, 7-15. As of this filing, the parties have exchanged infringement and invalidity

contentions, preliminary claim constructions, and both sides have collectively served and responded to multiple interrogatories and requests for admission. *See* Exs. 2010, 2011, 2013-2019. Petitioner has also deposed Patent Owner's Chief Intellectual Property Officer. The parties have collectively produced over 90,000 documents, and Patent Owner has performed several hundred hours of code review. Petitioner has also requested, and the Court has issued, a letter request for international judicial assistance to the judicial authority of the Netherlands, seeking extensive discovery (including individual and corporate depositions and document requests) from a third party. Ex. 2012; Ex. 2009, 14. By the projected institution deadline, the parties will have completed claim construction briefing and the *Markman* hearing will have already been held. Ex. 2005, 4.⁶

Based on the level of investment and effort that will have been expended on claim construction briefing, infringement and invalidity contentions, document production, written discovery, and source code review, this factor weighs heavily in favor of discretionary denial. *See Fintiv II* at 14.

⁶ All expert reports are due by December 11, 2023, a mere two months after the projected institution date. Ex. 2005, 4.

Factor 4: Overlap between issues raised in the petition and in the parallel proceeding.

This factor addresses concerns of inefficiency and the possibility of conflicting decisions between the Board and the district court; if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this factor favors denial. *Fintiv I* at 12; *Fintiv II* at 14-15. Petitioner's invalidity contentions include the same prior art relied on in this proceeding. Ex. 2010, 12-13 (identifying Eisl as asserted art). Moreover, Petitioner challenges all claims asserted by Patent Owner in the district court. *Id.* at 1. This total overlap of issues weighs heavily against institution.

Factor 5: Whether petitioner and the defendant in the parallel proceeding are the same party.

Petitioner is a party to the parallel litigation. Accordingly, this factor favors exercising discretion to deny institution. *See Samsung Electronics Co. v. Cal. Inst. of Tech.*, IPR2023-00133, Paper 10 at 18 (PTAB May 4, 2023); *Supercell Oy v. Gree, Inc.*, PGR2020-00039, Paper 14 at 18 (PTAB Sept. 14, 2020).

Factor 6: Other circumstances that impact the Board's exercise of discretion, including the merits.

Where, as here, the balance of the first five *Fintiv* factors favor exercising discretion to deny of institution, the Board considers whether there are compelling merits that would nevertheless justify institution. *See CommScope Techs. LLC v.*

Dali Wireless, Inc., IPR2022-01242, Paper 23 at 4-5 (PTAB Feb. 27, 2023) (precedential). This is a higher standard than the standard for institution, and requires a determination that the Petition presents challenges “in which the evidence if unrebutted at trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Id.* at 3-4 (citing Interim Procedure at 4). To meet this standard, it must be “highly likely that the petitioner would prevail with respect to at least one challenged claim). *Id.* (citing *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102, 49 (PTAB Oct. 4, 2022) (precedential)).

As discussed in Section IV above, Petitioner’s challenges here do not even rise to the lower standard for institution. The Petition thus fails to present compelling evidence of unpatentability, warranting discretionary denial.

Holistic Balancing of the Factors

As shown, Factor 1 is neutral. Factors 2, 3, 4 and 5 weigh heavily in favor of discretionary denial. Petitioner has not submitted a *Sotera* stipulation that would make discretionary denial inappropriate. Likewise, the Petition does not provide compelling evidence of unpatentability under Factor 6.

Moreover, one more consideration impacts the concerns of efficiency and integrity important when considering discretionary denial. In the parallel district court proceeding, Patent Owner has asserted that Petitioner infringes multiple claims

of five patents, including the patent here. Ex. 2010, 1. Petitioner has also filed petitions requesting review of the other asserted patents, which are pending under the following case numbers: IPR2023-00524, IPR2023-00581, IPR2023-00582 and IPR2023-00583. In only two of the five total proceedings⁷ has Petitioner offered any stipulation that it will not pursue the same grounds as those raised in the underlying litigation. But even those stipulations were narrowly crafted under *Sand Revolution*. Based on their accorded filing dates, all these proceedings will reach a final written decision around the same time as this proceeding (if instituted)—that is, around six months after the jury trial. Rather than a series of IPR proceedings that will conclude many months behind the single trial, all of the validity issues presented in those proceedings could be handled sooner and more efficiently in a single trial before the district court. Accordingly, the Board should exercise its discretion to deny the institution under § 314(a).

VI. CONCLUSION

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

⁷ IPR2023-00582 and IPR2023-00583.

Dated: July 10, 2023

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e)(4), the undersigned certifies that on July 10, 2023, a copy of the foregoing document (*Patent Owner's Preliminary Response*, including all Exhibits), was served via electronic mail on the following attorneys of record at the indicated e-mail address(es):

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CERTIFICATE OF COMPLIANCE

The undersigned certifies that this document complies with the type-volume limitations set forth in 37 C.F.R. § 42.24 *et seq.* This document, excluding those portions excluded pursuant to § 42.24(a)(1), contains 6,951 words as calculated by the “Word Count” feature of Microsoft Word for Office 365, the program used in creating it.

/Stephen D. Zinda/
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