

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner

v.

ASUS TECHNOLOGY LICENSING INC.,
Patent Owner

IPR2024-01246
Patent No. 10,986,585

PATENT OWNER PRELIMINARY RESPONSE

Mail Stop “PATENT BOARD”
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. TECHNOLOGY BACKGROUND.....	2
A. The '585 Patent.....	2
1. Challenged Claims	3
2. Prosecution History	4
B. Alleged Prior Art.....	7
1. Ericsson (EX1007).....	7
2. Huawei (EX1018)	8
3. TS38.213 (EX1008)	9
4. Other References.....	10
III. CLAIM CONSTRUCTION.....	10
IV. ARGUMENT.....	11
A. Institution Should Be Denied Because the Petition Fails To Establish That Ericsson, Huawei, Or TS38.213 Qualify As Prior Art	11
1. Uploading To A File Server Is Legally Insufficient To Establish Public Accessibility.....	12
2. Additional Arguments in Petitioner's Expert Declaration That Are Not Stated In The Petition Should Not Be Considered	15
3. Further Preliminary Briefing Is Not Warranted.....	18
B. Grounds 1 and 5: Ericsson In View of TS38.213 and Sorrentino Does Not Disclose Or Suggest The Independent Claims	20

C.	Grounds 8 and 11: Huawei In View of TS38.213 and Sorrentino Does Not Disclose Or Suggest The Independent Claims	23
D.	Institution Should Be Denied Because The Petition Exceeds The Permitted Word Count And Provided An Incorrect Certification	26
V.	CONCLUSION	27

TABLE OF AUTHORITIES

Page(s)

Cases

<i>3M Co. v. Evergreen Adhesives, Inc.</i> , 860 Fed.Appx. 724 (Fed. Cir. 2021)	16
<i>Acceleration Bay, LLC v. Activision Blizzard Inc.</i> , 908 F.3d 765 (Fed. Cir. 2018)	14
<i>Intel. Bio-Systems, Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	19
<i>Medtronic, Inc. v. Barry</i> , 891 F.3d 1368 (Fed. Cir. 2018)	12
<i>Medtronic, Inc. v. Teleflex Life Sciences Ltd.</i> , 2023 WL 7800137 (Fed. Cir. Nov. 16, 2023)	16
<i>Microsoft Corp. v. DataTern, Inc.</i> , 755 F.3d 899 (Fed. Cir. 2014)	16
<i>SRI Int'l, Inc. v. Internet Sec. Sys., Inc.</i> , 511 F.3d 1186 (Fed. Cir. 2008)	14

Statutes

35 U.S.C. §103	5
35 U.S.C. §311	11
35 U.S.C. §312	16

Agency Decisions

<i>Cisco Systems, Inc. v. C-Cation Techs., LLC</i> , IPR2014-00454, Paper 12 (PTAB Aug. 29, 2014).....	16
<i>Microsoft Corp. v. Corel Software, LLC</i> , IPR2016-01083, Decision Denying Institution (Paper 14) (PTAB Dec. 1, 2016).....	19

<i>Microsoft Corp. v. Throughputer, Inc.</i> , IPR2023-00852, Decision Denying Institution (Paper 18) (PTAB Nov. 9, 2023)	17
---	----

<i>Vivint, Inc. v. SB IP Holdings LLC</i> IPR2022-00814, Paper 15 (PTAB Oct. 16, 2023); 2023 WL 6878619	17
---	----

Regulations

37 C.F.R. §42.108	19
37 C.F.R. §42.24	19, 20, 26, 27
37 C.F.R. §42.6	16

LIST OF EXHIBITS

Exhibit No.	Patent Owner's Exhibits
Ex. 2001	“What Is 5G Beam Management,” September 12, 2024, <i>available at</i> https://telcomatraining.com/what-is-5g-beam-management/ , <i>last accessed</i> November 14, 2024.

I. INTRODUCTION

The Board should deny institution for several reasons. First, the Petition does not meet its burden to demonstrate that Ericsson, Huawei or TS38.213 were publicly available before the priority date for the '585 Patent. The Petition relies on conclusory statements about the public availability of these documents without providing any analysis or explanation in support. Such incorporation by reference is improper.

Second, the Ericsson and Huawei documents do not disclose or suggest the challenged claims. Ericsson discloses reporting PHR for a single beam. Petitioner's interpretation requiring measurements from two different beams misinterprets Ericsson and would result in a non-functional system.

Huawei teaches a method of averaging path loss across groups of beams and finding the differences between those average values. It does not "derive[] a first pathloss value from a first pathloss reference" or "a second pathloss value from a second pathloss reference" as required by the claims. Instead, it discloses average path losses from a group of beams.

Because Petitioner has not demonstrated a reasonable likelihood of succeeding on any challenged claims, the Board should deny institution.

II. TECHNOLOGY BACKGROUND

A. The '585 Patent

The '585 Patent is directed to 5G wireless technologies. EX1001 ['585 Patent], 1:33-42. In particular, the '585 Patent is directed to innovative methods for triggering power headroom reports in 5G wireless communications systems that use multiple pathloss references. *Id.*, Title, 1:16-21. Power headroom reports (abbreviated as “PHR”) are reports sent from a mobile device (a “UE” or User Equipment) to a base station (generally referred to in the '585 Patent as an access network (“AN”), but “may also be referred to as [] a Node B, a base station, an enhanced base station, an evolved Node B (eNB), or some other terminology.”) *Id.*, 3:56-60.

The PHR indicates the transmission power of the UE. The '585 Patent explains that the “[p]ower headroom report is provided by the UE to the base station to allow base station realize how much extra transmission power is available in the UE and how to schedule resource to the UE properly, e.g. is it proper to schedule more resource to the UE (e.g. UE has more power headroom).” EX1001 ['585 Patent], 6:62-67. PHRs are “calculated from the difference between a current calculated transmission UE power (if there is transmission) and a maximum transmission power of the UE.” *Id.*, 6:67-7:3.

PHRs are sent from the UE periodically when changes in the network require it. For example, when the downlink pathloss characteristics change (e.g., the received downlink pathloss significantly increases or decreases), a new PHR may be triggered. *Id.*, 27:10-11

The '585 Patent is directed to how new PHRs are triggered in 5G networks. *See generally id.*, 27:10-49. The '585 Patent explains as follows:

When there are multiple pathloss references configured for a UE, so that there would be multiple pathloss values available (for a given time or for a given slot). How to design properly regarding choosing pathloss values for pathloss change comparison need to be taken care. With properly [sic] design, PHR trigger results from pathloss change comparison could be more efficient.

EX1001 ['585 Patent], 27:50-56. The specification describes several potential solutions for when to trigger new PHRs. *Id.*, 28:24-59.

1. Challenged Claims

The claims of the '585 Patent relate to the concept of triggering new power headroom reports (PHRs). Claims 1 and 10 are independent methods for deriving pathloss change that require the UE to determine “whether a second power headroom report is triggered” when “pathloss change is more than a threshold.”

EX1001 ['585 Patent], cls. 1 and 10. The pathloss change is derived from the difference in a first pathloss value from a first pathloss reference and a second

pathloss value from a second pathloss reference. *Id.* Claim 17 is an apparatus version of claim 1, directed to a UE. *Id.*, cl. 17. The remaining claims 2-9, 11-16 and 18-20 depend from the independent claims.

Illustrative claim 1 is shown below:

1. A method for deriving a pathloss change, comprising:
a UE (User Equipment) derives a first pathloss value from a first pathloss reference of a serving cell, wherein the first pathloss value is used for deriving a power headroom value included in a first power headroom report;
the UE derives a second pathloss value from a second pathloss reference of the serving cell after deriving the first pathloss value, wherein the second pathloss reference is separate from the first pathloss reference and is used for power control for a first Physical Uplink Shared Channel (PUSCH) transmission on the serving cell;
the UE derives the pathloss change based on the first pathloss value and the second pathloss value; and
the UE determines whether a second power headroom report is triggered based on whether the pathloss change is more than a threshold.

2. Prosecution History

The '585 Patent claims priority from US Provisional Application No. 62/669,461, filed on May 10, 2018. EX1004 ['461 Provisional]. The application that issued as the '585 Patent (Appl. No. 16/395,760) was filed on April 26, 2019. EX1003 ['585 Patent FH], 572. On April 15, 2020, the Examiner issued an office

action rejecting as-filed claims 1-20 of the '760 Application under 35 U.S.C. §103 as being unpatentable over Lee (Publ. No. 20170359734) and further in view of Nigam (Publ. No. 20150282150). *Id.*, 290-300.

On July 1, 2020, the applicant filed a response to the non-final rejection. *Id.*, 276-283. The applicant argued that Lee does not disclose the UE “derives the pathloss change based on the first pathloss value and the second pathloss value” as recited in the claims because “the first pathloss value and the second pathloss value are derived from different pathloss references.” *Id.*, 281-282. The Applicant further disputed that Lee discloses the UE “derives a second pathloss value from a second pathloss reference of the serving cell” because “it is unclear which pathloss value of Lee the Office Action equates to the ‘second pathloss value’ recited in the claims, and which pathloss reference of Lee the Office Action equates to the ‘second pathloss reference’ recited in the claims.” *Id.*, 282. With respect to Nigam, Applicant argued that “[e]ven if the variable ‘P_{PUSCH}’ disclosed in Nigam could be equated to the ‘second pathloss reference’ recited in the claims, Lee and Nigam fails to disclose how ‘P_{PUSCH}’ is used to derive the ‘second pathloss value.’ In fact, as discussed above, Lee does **not** even disclose the UE ‘derives a second pathloss value from a second pathloss reference of the serving cell.’” *Id.*, 283.

On September 30, 2020, the Examiner issued a final rejection. *Id.*, 173-184. The Examiner argued that “Lee discloses the UE derives a second pathloss value from a second pathloss reference of the serving cell after deriving the first pathloss value (Para. 99: Pathloss change calculated based on the first and another pathloss value. Para. 103: dl-Pathloss Changed) & (Para. 131: Multiple pathloss value calculation for dl).” *Id.*, 183.

In response, the applicant filed a request for continued examination and amended the claims to state that the second pathloss reference is separate from the first pathloss reference. *Id.*, 151-158. Applicant explained as follows:

Applicant respectfully disagrees with this interpretation of Lee and asserts that Lee merely teaches general path loss measurement based on a single pathless reference and fails to teach or suggest at least deriving a second path loss value from a second pathless reference **after deriving the first pathless value, and wherein the second pathless reference is separate from the first pathless reference**, as now recited in each of Applicant's independent claims 1, 10, and 17. Applicant's amended claims make it clear that the first pathless value and the second pathless value are **derived from wholly separate pathless references**.

Id., 157. On the basis of this amendment, the Examiner allowed the application, stating “[t]he prior art of the record does not disclose each and every aspect of the

above claim.” *Id.*, 12-16. The ’585 Patent issued on April 20, 2021. EX1001 [’585 Patent].

B. Alleged Prior Art

1. Ericsson (EX1007)

R2-1713484 (referred to by Petitioner as “Ericsson”) appears to be a technical contribution from Ericsson to the 3GPP TSG-RAN WG2. Ericsson is a revision of R2-1711182 that “analyzes RAN2 aspects for PHR to enable further progress in RAN2.” EX1007 [Ericsson], 1. Ericsson contains several technical proposals for implementing PHR in 5G (referred to as “NR”, or New Radio in Ericsson). *Id.*, 1-4. Nothing in EX1007 indicates when or whether Ericsson was published or otherwise made publicly available.

Petitioner relies on Ericsson for its final proposal in section 2.3.2 involving “PHR with beam switch.” *See, e.g.*, Pet., 21-26; EX1007 [Ericsson], 3. That is, Ericsson is discussing generating PHRs when a UE switches from one beam to another. In particular, Petitioner relies on Ericsson’s discussion of “Option 2: the UE only reports PHR for the beam used for PUSCH transmission.” EX1007 [Ericsson], 3. Ericsson discusses that the UE measures on a new beam using an old beam as a reference measurement:

When evaluating if a PHR can be trigger during the beam switch, the UE MAC entity may compare PL measurements between different

beams (i.e. the measurement on a new beam but the reference measurement is from the old beam). In other words, the LTE parameter “*dl-PathlossChange*” is sufficient for PHR during beam-switches.

Id. If the difference is more than the predefined LTE parameter “*dl-PathlossChange*,” a new PHR may be generated. *Id.*

2. Huawei (EX1018)

R1-1710475 (referred to by Petitioner as “Huawei”) appears to be a technical contribution from Huawei to the 3GPP TSG-RAN WG1 NR group. Huawei is titled “Discussion on PHR calculation.” EX1018 [Huawei], 1. Huawei summarizes several “Agreements” relating to beam specific power control, and several proposals for implementing power headroom calculation in NR (i.e., 5G). *Id.*, 1-4. Nothing in EX1018 indicates when or whether Huawei was published or otherwise made publicly available.

Petitioner focuses on Huawei section 2.1, titled “PHR for multi-beam operation.” *See, e.g.*, Pet., 46-51, EX1018 [Huawei], 2. In particular, Petitioner relies on Huawei Figure 2, (an “illustration of BPL group based PHR”) and the corresponding discussion:

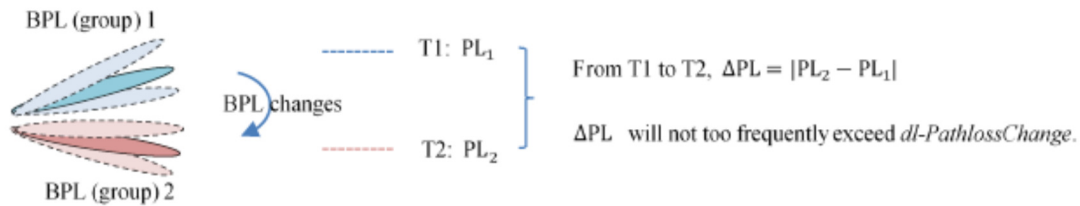


Figure 2. Illustration of BPL group based PHR

Id. “BPL” stands for “Beam Pair Link,” meaning the pair of (1) the transmitting beam at the base station and (2) the receiving beam at the UE. EX2001 [Telcoma], 2. With respect to Fig. 2, the BPLs are arranged into groups. EX1018 [Huawei], 2. “Thus PL [path loss] can be averaged from multiple BPLs within one group.” *Id.* “Change of PL [path loss] for PHR triggering is also be based on a BPL group level.” *Id.* Thus, Huawei is averaging path loss among a group of BPLs rather than having an individual path loss for each BPL. Huawei acknowledges that using this averaging technique “would be simple but suffer minor PH accuracy loss, due to one PH for a group of BPLs.” *Id.* Huawei does not discuss the use of reference signals in calculating path loss.

3. TS38.213 (EX1008)

TS38.213 purports to be version 15.1.0 of the 3GPP technical specification 38.213. EX1008 [TS38.213], 1. TS38.213 “specifies and establishes the characteristics of the physical layer procedures for control operations in 5G-NR.” *Id.*, 6. a previous version of TS38.213 (v.14.0.0) is incorporated by reference into

the '585 Patent. EX1001 ['585 Patent], 3:10-11. Petitioner refers to TS38.213 primarily for its disclosure regarding uplink power control. *See, e.g.*, Pet., 18-19, 21-22; EX1008 [TS38.213], 13-14, 24.

4. Other References

The Petition uses four additional alleged prior art references that this POPR does not directly discuss. Pet., 9-14. Patent Owner does not discuss those references herein.

III. CLAIM CONSTRUCTION

The Petition argues that the plain meaning of the claims applies. Pet., 8. However, the Petition also states “[f]or clarity, ‘first’ and ‘second’ as used throughout the claims do not identify a sequence, but instead reflect multiple instances of the same type of thing (*e.g.*, ‘first pathloss reference’ and ‘second pathloss reference’).” *Id.*

Petitioner is incorrect because the claims expressly require a sequence. Each independent claim requires that “the UE derives a second pathloss value from a second pathloss reference of the serving cell *after deriving the first pathloss value...*” EX1001 ['585 Patent], cl. 1, 10, 17. Thus, according to their plain language, the claims expressly require a sequence wherein the second pathloss

value is derived from the second pathloss reference after the first pathloss value is derived from the first pathloss reference. *Id.*

IV. ARGUMENT

The Petitioner asserts 12 grounds against the 20 challenged claims covering seven alleged prior art references. Of these, grounds 1 (Ericsson in view of TS38.213), 5 (Ericsson in view of TS38.213 and Sorrentino), 8 (Huawei in view of TS38.213) and 11 (Huawei in view of TS38.213 and Sorrentino) are the only grounds that challenge independent claims 1, 10 and 17. Sorrentino is only used for the hardware component limitations of claim 17, while the Petition uses Ericsson, Huawei and TS38.213 for the functionality claimed in claim 17. Pet., 47-50, 73-76. Thus, the arguments in this POPR focus on Ericsson, TS38.213 and Huawei.

A. Institution Should Be Denied Because the Petition Fails To Establish That Ericsson, Huawei, Or TS38.213 Qualify As Prior Art

The Petition is facially defective because it fails to state legally sufficient reasoning to establish that Ericsson, Huawei or TS38.213¹ are printed publications under 35 U.S.C. §311(b). Having failed to carry its burden, the Petition should be

¹ Petitioner refers to Ex. 1004 as “3GPP-4.60-v860-Specification” but no such title is found on Ex.1004. For accuracy and simplicity, we refer to it as Ex. 1004.

denied institution. *See Medtronic, Inc. v. Barry*, 891 F.3d 1368, 1380 (Fed. Cir. 2018) (“Petitioner bears the burden of establishing that a particular document is a printed publication.”). Grounds 1-7 in the Petition each rely on Ericsson and TS38.213. Grounds 8-12 in the Petition each rely on Huawei and TS38.213. No ground states a basis for unpatentability once these exhibits are disqualified.

The Petition’s allegations that Ericsson, Huawei, and TS 38.213 are prior art are conclusory and based entirely on the assertion that the references were uploaded to a “public file server” before the critical date for the ’585 Patent. Such conclusory arguments are without merit and do not establish public accessibility of the references. Further, any additional arguments that Petition may attempt to incorporate by reference from its expert declaration are not entitled to consideration. *Medtronic*, 891 F.3d at 1380.

1. Uploading To A File Server Is Legally Insufficient To Establish Public Accessibility

The Petition’s only allegations of public accessibility are (1) that Ericsson and Huawei were “made available” on a “public file server” and (2) that TS38.213 was “publicly accessible” “because it was uploaded” to the 3GPP website.” For Ericsson, the Petition states:

Ericsson is a technical contribution submitted to 3GPP TSG RAN WG2 for a meeting held in 2017. EX-1016, ¶54; EX-1007, p.1. Ericsson was

submitted to RAN WG2 in 2017, and was made “available on the 3GPP public file server...where an interested member of the public exercising reasonable diligence could freely access” it. EX-1016, ¶55. Ericsson was publicly available on November 17, 2017. *Id.*, ¶57. Ericsson is prior art under post-AIA 35 U.S.C. §102(a)(1).

Pet., 9-10. For Huawei, the Petition states:

Huawei is a technical contribution submitted to 3GPP TSG RAN WG1 for a meeting held in 2017. EX-1016, ¶88; EX-1018, p.1. Huawei was made “available on the 3GPP public file server...where an interested member of the public exercising reasonable diligence could freely access” it. EX-1016, ¶89. Huawei was publicly available on June 17, 2017. *Id.*, ¶91. Huawei is prior art under post-AIA 35 U.S.C. §102(a)(1).

Pet., 10-11. For TS38.213, the Petition states:

TS38.213 was made publicly available by 3GPP in March 2018 after the “plenary meeting responsible for” TS38.213. EX-1016, ¶61. TS38.213 was publicly accessible via the 3GPP website because it was uploaded on April 8, 2018. *Id.*, ¶64. TS38.213 is prior art under post-AIA 35 U.S.C. §102(a)(1).

Pet., 11-12.

Uploading a document to a file server does not by itself show public accessibility sufficient to establish a document as a printed publication. *SRI Int’l*,

Inc. v. Internet Sec. Sys., Inc., 511 F.3d 1186, 1195 (Fed. Cir. 2008) (“this court does not find enough evidence in the record to show that [a file posted on a file server] was publicly accessible and thus a printed publication.”). This is true even if the document was technically accessible. *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018) (“The Board then correctly noted that ‘public accessibility’ requires more than technical accessibility.”). But those are the only arguments presented in the Petition specific to Ericsson, Huawei and TS38.213 supposedly being a printed publication.

To establish a reference as a printed publication, a petition must show the reference was publicly accessible, i.e., “searchable or indexed [or otherwise organized] in a meaningful way so that a person of ordinary skill in the art would have located [the reference].” *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018). But the present Petition does not allege Ericsson, Huawei or TS38.213 were ever indexed for search or actually disseminated to the interested public. Further, the Petition does not state these exhibits were meaningfully organized in any other way, such as finding the name of specific subject matter from these exhibits in a catalog or the like. Pet., 1-82.

Having failed to state a sufficient reason to consider Ericsson, Huawei and TS38.213 as publicly accessible before the priority date, the Petition should be denied.

2. Additional Arguments in Petitioner's Expert Declaration That Are Not Stated In The Petition Should Not Be Considered

Rather than setting forth with particularity the evidence allegedly establishing Ericsson, Huawei and TS38.21 as printed publications as required, the Petition purports to incorporate Exhibit 1016 (a seventeen hundred and fifty (1750) page declaration from Craig Bishop) to support the Petition's single-sentence conclusions that Ericsson, Huawei and TS38.213 were publicly available. Pet., 9 ("Ericsson was submitted to RAN WG2 in 2017, and was made 'available on the 3GPP public file server...where an interested member of the public exercising reasonable diligence could freely access' it."), 10 ("Huawei was made 'available on the 3GPP public file server...where an interested member of the public exercising reasonable diligence could freely access' it. EX-1016, ¶89."), 11 ("TS38.213 was publicly accessible via the 3GPP website because it was uploaded on April 8, 2018. *Id.*, ¶64.").

Relying on incorporation by reference for the entire analysis of public accessibility is improper, especially here, where the Petition is at or over the

statutory word limit. *See infra*, §IV.D. The Petition itself must “identif[y], in writing and 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). It is impermissible to incorporate by reference from another document. 37 C.F.R. §42.6(a)(3) (“[a]rguments must not be incorporated by reference from one document into another document.”). *Cisco Systems, Inc. v. C-Cation Techs., LLC*, Case IPR2014-00454, Paper 12 (PTAB Aug. 29, 2014) (informative) (“This practice of citing the Declaration to support conclusory statements that are not otherwise supported in the Petition also amounts to incorporation by reference.”).

Federal Circuit caselaw supports that Rule. For example, in *3M Co. v. Evergreen Adhesives, Inc.*, the Federal Circuit rejected 3M’s arguments not made in the petition because its reference to expert testimony was “an attempt to introduce argument by citation.” 860 Fed.Appx. 724, 725-727 (Fed. Cir. 2021) (The Board is not to be forced to “play archeologist with the record” for arguments made outside the parties’ briefing). *See also, e.g., Medtronic, Inc. v. Teleflex Life Sciences Ltd.*, 2023 WL 7800137 (Fed. Cir. Nov. 16, 2023) at *4 (rejecting incorporation by reference); *Microsoft Corp. v. DataTern, Inc.*, 755 F.3d 899, 910 (Fed. Cir. 2014) (rejecting incorporation by reference as “fundamentally unfair”).

As the Board explained in *Vivint, Inc. v. SB IP Holdings LLC*: “What a petitioner may not do is to simply state conclusions in the petition, and rely on the expert declaration to provide all of the reasoning, explanation, and analysis.” IPR2022-00814, Paper 15 (PTAB Oct. 16, 2023); 2023 WL 6878619 at *5 (emph. added). That is precisely what the present Petition attempts to do: simply assert the conclusion that Ericsson, Huawei and TS38.213 were publicly accessible before the priority date and rely on an expert declaration to provide all the reasoning, explanation, and analysis. Pet., 9-12.

The requirement that the Petition itself must state the evidence supporting the grounds—and not just incorporate an expert declaration by reference—applies to the requirement to establish a reference as a printed publication. *Microsoft Corp. v. Throughputer, Inc.*, IPR2023-00852, Decision Denying Institution (Paper 18) at 17-18 (PTAB Nov. 9, 2023).

Moreover, the paragraphs of the Bishop Declaration cited by the Petition incorporate additional materials that are not discussed in the Petition. For example, Bishop Decl. ¶55 (cited at Pet., 10), refers to Appendix 23, a 62 page listing of several thousand technical contributions to a 3GPP meeting starting at page 841 of the Bishop Declaration of which Ericsson was purportedly one. Likewise, Bishop Decl. ¶57 (cited at Pet., 10) similarly refers to Appendix 21 (at Bishop Decl. page

272) and Appendix 22 (212 pages, starting at Bishop Decl. page 273). *See also* Pet., 11(citing Bishop ¶89, which cites to Appendix 32 (a 62 page listing of several thousand technical contributions starting at page 1430), and Bishop ¶61, citing to Appendix 24 (a 173 page document starting at page 455), Appendix 10 (a 10 page document starting at page 224) and Appendix 32.

Neither Patent Owner nor the Board should be forced to “play archeologist” with the record and comb through over seventeen hundred pages of declaration and associated appendices in an attempt to discern what reasoning, explanation, and analysis might support the Petition’s one-sentence conclusions that Ericsson, Huawei and TS38.213 were publicly accessible because they were allegedly uploaded to public file servers. This first referenced section of the Bishop declaration does not substitute for the reasoning, explanation, and analysis that was required to appear in the Petition itself to establish Ericsson, Huawei and TS38.213 as publicly accessible printed publications.

3. Further Preliminary Briefing Is Not Warranted

To the extent Petitioner realizes from this Preliminary Response that its Petition was deficient and seeks further preliminary briefing, it should be denied. Not only is Petitioner undoubtedly aware the Petition improperly incorporates by

reference, Petitioner did so to circumvent the word count limit imposed by 37 C.F.R. §42.24(a)(1)(i).

Further briefing may only be authorized upon a showing of good cause. *See* 37 C.F.R. §42.108(c). “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.’” *Intel. Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (emphasis added).

It should come as no surprise to Petitioner that its Petition was deficient. Demonstrating that a reference qualifies as a printed publication is a “fundamental element of Petitioner’s contentions” in its Petition. *Microsoft Corp. v. Corel Software, LLC*, IPR2016-01083, Decision Denying Institution (Paper 14) at 13, fn.5 (PTAB Dec. 1, 2016). A Petitioner reading a Patent Owner Preliminary Response and realizing the Petition failed to state a threshold showing that a reference is a printed publication “does not support a finding of good cause” for additional briefing. *Id.* The same applies here.

Moreover, Petitioner is clearly incorporating by reference in order to circumvent the 14,000 word limit imposed under 37 C.F.R. §42.24(a)(1)(i). Although Petitioner certified that “this Petition contains less than 14,000 words,

excluding the parts of the petition exempted by 37 C.F.R. §42.24(a), as determined using the word count provided by Microsoft Word, which was used to prepare this Petition” (Pet., A-1), Patent Owner converted the relevant portions of the Petition into a Word document and independently verified that the Petition contains 14,184 words, as determined using the word count provided by Microsoft Word, not counting the parts of the petition exempted by 37 C.F.R. §42.24(a), the images in the Petition, or the annotations Petitioner made to the images in the Petition. *Infra*, §IV.D Petitioner is obviously incorporating by reference because the Petition is over the allowable number of words.

This is further demonstrated by Petitioner cramming twelve grounds and seven alleged pieces of prior art in a single Petition that challenges only twenty claims. *See* Pet., 9-15. Not only can Petitioner not show good cause for additional briefing, such additional briefing would prejudice Patent Owner by circumventing the word limit on the Petition. Accordingly, the Board should refuse any request for additional briefing and deny institution.

B. Grounds 1 and 5: Ericsson In View of TS38.213 and Sorrentino Does Not Disclose Or Suggest The Independent Claims

For ground 1, Ericsson does not disclose at least the claim limitation “the UE determines whether a second power headroom report [to include the second

power headroom value] is triggered based on whether the pathloss change is more than a threshold.” EX1001 [’585 Patent], cls. 1, 10.

Petitioner relies on Ericsson’s discussion of section 2.3.2 (“PHR with beam switch”) and specifically on “Option 2: the UE only reports PHR for the beam used for PUSCH transmission.” Pet, 16-26; EX1007 [Ericsson], 3. Thus, the UE in Ericsson only reports the PHR for the beam used for PUSCH transmission.

Petitioner argues that Ericsson teaches a “UE derives a first pathloss value from a first pathloss reference of a serving cell” and that the “UE derives a second pathloss value from a second pathloss reference of the serving cell after deriving the first pathloss value.” Pet., 16-17, 20-21. In doing so, Petitioner relies on the following disclosure from Ericsson:

For Option 2 such a situation would imply, in the case of a beam switch, that the UE measures on the new beam but the reference measurement is from the old beam. If the DL PL change (referred to as “*dl-PathlossChange*”) becomes more than *dl-PathlossChange* dB when switching beam, a new PHR would be triggered.

Id.

Petitioner is misinterpreting Ericsson. The cited portion of Ericsson says that “the UE measures on the new beam but the reference measurement is from the old beam.” *Id.* [Underline added.] But Ericsson states that it “only reports PHR for the

beam used for PUSCH transmission.” Thus, Petitioner’s interpretation contradicts Ericsson. One of skill in the art would understand “only report[] PHR for the beam used” as using both measurements from the beam being used.

Moreover, since these two sentences both describe “Option 2,” it would be impossible to implement as interpreted by Petitioner. Since the UE is reporting PHR for the beam used for PUSCH transmission, it cannot use measurements from a different beam.

This is confirmed later in Ericsson when it states “It is unnecessary to update PHR format and trigger with respect to the change of serving beams.” EX1007 [Ericsson], 3. At a minimum, under Petitioner’s interpretation, the PHR report and trigger would have to change in some way to indicate whether a new beam is being used (while still using an old beam as well). It would be hindsight to say that one would automatically use beam measurements from both beams. Contrarily, one of ordinary skill in the art would use two measurements from the old beam or two measurements from the new beam to trigger a PHR.

For ground 5, Petitioner introduces Sorrentino for the hardware limitations. Pet., 46-50. However, Petitioner relies on its analysis of Ericsson and TS38.213 in ground 1 claim 1 for the claimed functionality of claim 17. Pet., 50. Accordingly, ground 5 fails for the same reason as ground 1.

Because grounds 1 and 5 (which address independent claims 1, 10 and 17) rely on Ericsson for the limitation “the UE determines whether a second power headroom report [to include the second power headroom value] is triggered based on whether the pathloss change is more than a threshold.” and Ericsson does not teach these limitations, Petitioner cannot establish a reasonable likelihood of establishing that any challenged independent claim (and thus any claim dependent therefrom) is unpatentable. Thus, grounds 1-7 (which each rely on Ericsson) fail.

C. Grounds 8 and 11: Huawei In View of TS38.213 and Sorrentino Does Not Disclose Or Suggest The Independent Claims

For ground 8, Petitioner relies on Huawei for the limitations “derives a first pathloss value from a first pathloss reference of a serving cell” and “derives a second pathloss value from a second pathloss reference.” Pet., 54-55, 57-58.

Huawei does not disclose these limitations.

Petitioner argues that “PL1” and “PL2” in Huawei Fig. 2 (below) constitute the first pathloss reference value and second pathloss reference value, respectively.

Id.

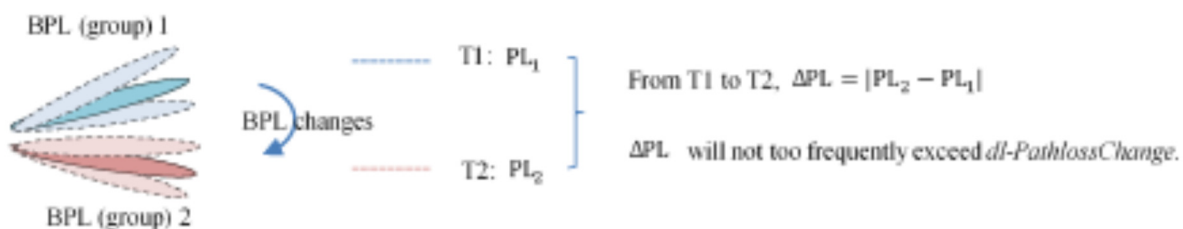


Figure 2. Illustration of BPL group based PHR

EX1018 [Huawei], 2.

PL1 and PL2 are not first and second pathloss reference values. A “pathloss reference” according to Petitioner is “a signal of known transmission power.” Pet., 2 (“Downlink pathloss is determined based on a known *pathloss reference (a signal of known transmission power)*.”) (emphasis added). *See, e.g.*, EX1001 [’585 Patent] 27:50-52 (“When there are multiple pathloss references configured for a UE, so that there would be multiple pathloss values available (for a given time or for a given slot).”).

Even assuming that each beam is a separate pathloss reference, Huawei does not teach these limitations because Huawei determines pathloss values based on an average of pathloss values from a group of beams. Huawei clearly explains this:

Also, PL can be measured on a BPL group level. Thus PL can be averaged from multiple BPLs within one group. Change of PL for PHR triggering is also be based on a BPL group level. It would be simpler but suffer minor accuracy loss, due to one PH for a group of BPLs.

EX1018 [Huawei], 2. *See also* Pet., 4 (“Another solution, proposed by Huawei, was to average the pathloss over a first group of beams, and, upon beam switch, average the pathloss over a second group of beams.”). That is, BPL (group) 1 and BPL (group) 2 constitute different group of beams and the PL1 and PL2 are

average values that are “averaged from multiple BPLs within one group.” *Id.*

Indeed, Huawei concedes that there are tradeoffs using its averaging method compared to methods (like the ’585 Patent) that provide power headroom reports for individual signals. *Id.* (“It would be simpler but suffer minor PH accuracy loss, due to one PH for a group of BPLs.”).

The averaging method taught by Huawei is therefore fundamentally different than the claimed method which uses pathloss values from a single pathloss reference. The challenged claims require “a first pathloss value from a first pathloss reference” and “a second pathloss value from a second pathloss reference,” not a first average of pathloss values among a first group of beams and a second average of pathloss values among a second group of beams as taught by Huawei. Accordingly, Huawei does not disclose these limitations.

For ground 11, Petitioner introduces Sorrentino for the hardware limitations. Pet., 72-76. However, Petitioner relies on its analysis of Huawei and TS38.213 in ground 8 claim 1 for the claimed functionality of claim 17. Pet., 76. Accordingly, ground 11 fails for the same reason as ground 8.

Because grounds 8 and 11 (which address independent claims 1, 10 and 17) rely on Huawei for the first and second “pathloss reference” limitations and Huawei does not teach the claimed first and second pathloss reference, Petitioner

cannot establish a reasonable likelihood of establishing that any challenged independent claim (and thus any claim dependent therefrom) is unpatentable. Thus, grounds 8-12 fail.

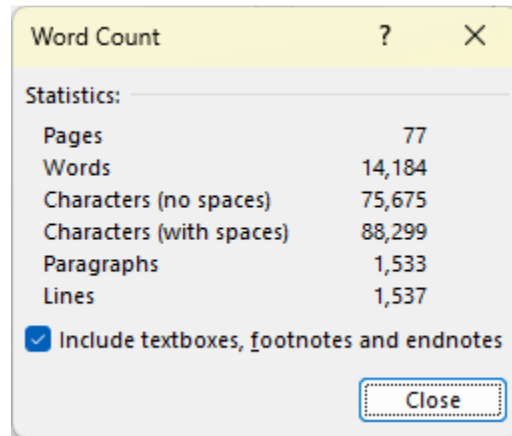
D. Institution Should Be Denied Because The Petition Exceeds The Permitted Word Count And Provided An Incorrect Certification

Petitions requesting inter partes review are limited to 14,000 words, not including the table of contents, table of authorities, mandatory notices, certificate of service, certificate of word count, or appendix of exhibits or claim listing. 37 C.F.R. §42.24(a)(1)(i). Petitioners must also include a certification stating the number of words in the Petition. 37 C.F.R. §42.24(d).

Petitioner certified that the Petition “this Petition contains less than 14,000 words, excluding the parts of the petition exempted by 37 C.F.R. §42.24(a), as determined using the word count provided by Microsoft Word, which was used to prepare this Petition.” Pet., A-1. Petitioner’s certification does not comply with 37 C.F.R. §42.24(d) because it does not state the number of words in the Petition.

Moreover, Petitioner has not only exceeded the word count permitted in the Petition, it has incorrectly certified that the Petition contains less than 14,000 words. Patent Owner converted the relevant portions of the Petition in a word document and independently verified that the Petition contains 14,184 words, as determined using the word count provided by Microsoft Word, not counting the

parts of the petition exempted by 37 C.F.R. §42.24(a), the images in the Petition, or the annotations Petitioner made to the images in the Petition:



Because Petitioner has not complied with the regulations for filing a Petition under 37 C.F.R. §42.24, the Board should not institute.

V. CONCLUSION

Based on the foregoing, the Board should deny institution because there is no reasonable likelihood that the petitioner would prevail with respect to any challenged claim.

Dated: November 19, 2024

Respectfully submitted,

/ Stephen McBride /

Stephen McBride (Reg. No. 78,396)

CARMICHAEL IP, PLLC

8607 Westwood Center Drive

Suite 270

Tysons, VA 22182

Tel: (703) 646-9247

stevemcbride@carmichaelip.com

Counsel for Patent Owner

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Preliminary Response consists of 5,376 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The Response complies with the type-volume limitation of 14,000 words as set forth in 37 C.F.R. §42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Dated: November 19, 2024

/ Stephen McBride /
Stephen McBride (Reg. No. 78,396)
CARMICHAEL IP, PLLC
8607 Westwood Center Drive
Suite 270
Tysons, VA 22182
Tel: (703) 646-9247
stevemcbride@carmichaelip.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6, the undersigned certifies that on November 19, 2024, a copy of the foregoing documents **PATENT OWNER PRELIMINARY RESPONSE AND EXHIBIT** were served by electronic mail, as consented to by Petitioner, upon the following:

Greenberg Traurig, LLP

Andrew R. Sommer
SommerA@gtlaw.com

Trenton Ward
Trenton.ward@gtlaw.com

Heath J. Briggs
BriggsH@gtlaw.com

Stephen M. Ullmer
UllmerS@gtlaw.com

Kathryn E. Albanese
Katie.Albanese@gtlaw.com

Jared K. Lee
Jared.Lee@gtlaw.com

Samsung-ASUS-IPRs@gtlaw.com

By: /s/Stephen McBride