

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD, AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioner,

v.

APEX BEAM TECHNOLOGIES LLC,

Patent Owner.

Case No. IPR2023-00747
U.S. Patent No. 10,951,271

**PETITIONER'S NOTICE RANKING PETITIONS
FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,951,271**

I. INTRODUCTION

Petitioner is filing two concurrent Petitions (IPR2023-00571 and IPR2023-00747) challenging the validity of claims 1-20 of U.S. Patent No. 10,951,271 (“the ’271 patent”). Pursuant to the Board’s November 2019 Consolidated Trial Practice Guide (“TPG”), Petitioner submits this paper to “identify: (1) a ranking of the Petitions in the order in which it wishes the Board to consider the merits ..., and (2) a succinct explanation of the differences between the Petitions, why the issues addressed by the differences are material, and why the Board should exercise its discretion to institute additional petitions” TPG, 60.

II. RANKING OF THE PETITIONS

Although Petitioner believes that both Petitions are meritorious and justified, Petitioner requests that the Board consider the Petitions in the following order:

Rank	Petition	Primary References
1	IPR2023-00571	<i>Liu and Park</i>
2	IPR2023-00747	<i>Kim and Chen</i>

III. MATERIAL DIFFERENCES BETWEEN THE PETITIONS

The two petitions are materially different. For example, the petitions rely on distinct prior art references with different priority dates, which may result in a dispute regarding whether at least one reference qualifies as prior art. The ’271 patent claims priority to a Chinese Application filed December 28, 2016. *Park* was

filed as International Application No. PCT/KR2016/001177 on February 3, 2016.

To the extent Patent Owner challenges the priority of *Park* and/or contends that a prior art exception under 35 U.S.C. § 102(b) applies in an attempt to remove *Park* as prior art, Petitioner presents the *Kim* petition.

The obviousness grounds also contain material differences. Although each combination of references discloses every claim element, they do not present the same theories of obviousness or use identical language. In particular, for the combination of *Liu* and *Park*, *Park* is used to teach calculating a proportional sequence of RSRP ratios and the RSRP-to-max(RSRP) calculation of elements [1d5] and [1d9]. The combination of *Liu* and *Park* also addresses, as an alternative, Patent Owner's interpretation that a decibel (dB) subtraction is the equivalent of the claimed ratio, which is expressly taught by *Park*. In contrast, for the combination of *Kim* and *Chen*, *Kim* teaches every element of the independent claims, including the RSRP proportional sequence, but does not expressly disclose that the K antenna port groups are transmitted from one base station or that the first signaling is used to determine the target threshold for the RSRP-to-max(RSRP) calculation of elements [1d1] and [1d7], which are taught by *Chen*. Moreover, given the early stages of the parallel district court litigation, it is unclear how Patent Owner may dispute the obviousness combinations or attempt to interpret the claims to avoid such well-established teachings.

Accordingly, the petitions have different starting points and rationales for why the challenged claims are obvious, making them materially different.

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION TO INSTITUTE BOTH PETITIONS

The Board has recognized “that there may be circumstances in which more than one petition may be necessary.” TPG, 59. One of the examples provided by the Board for justifying the institution of multiple petitions is a “dispute about priority date.” *Id.* Here, Petitioner contends that *Park* qualifies as prior art due to its international filing date of February 3, 2016. But if Patent Owner attempts to challenge the priority date of *Park* and/or contends that a prior art exception under 35 U.S.C. § 102(b) applies to remove *Park* as prior art, the *Kim* petition provides arguments based on *Kim* and *Chen*, each of which was published more than a year before the earliest claims priority date of the ’271 patent. Because no tribunal has decided the prior art status of *Park*, both petitions are necessary to address the possible outcomes. Furthermore, because of the material differences described above, the Board should exercise its discretion to institute both Petitions. For example, no tribunal has determined whether Patent Owner’s interpretation that a decibel (dB) subtraction satisfies the “ratio” limitations is appropriate or proper, which is taught by *Park* and raised as an alternative basis in the *Liu* petition, but not raised in the combination of *Kim* and *Chen*. Instituting both petitions allows for

the Board to address Patent Owner's construction, if found to be a valid interpretation. Both Petitions are necessary to show the breadth of prior art that reads on the overly broad claims.

The Petitions are not redundant, duplicative, or substantially similar, and this is not a situation in which it would be reasonable to include all challenges in a single petition, because both petitions challenge all twenty claims (1-20) of the '271 patent. Instituting on only one petition would give Patent Owner an unfair advantage, allowing Patent Owner to strategically not address the prior art status of *Park* before institution, but then address it once the combination of *Kim* and *Chen* is no longer available to Petitioner (as a result of the *Kim* petition being denied) despite *Kim* and *Chen* being earlier prior art references.

Each Petition also provides a strong showing of unpatentability, addressing in different ways the alleged point of novelty identified in the '271 patent and argued during prosecution—calculating an RSRP ratio. Both petitions show what was well known to POSITAs, but *none* of the references were before the Examiner during prosecution. Thus, the strength of the petitions also counsels in favor of instituting both. This is not a situation where Petitioner has filed many IPR petitions against one patent or is asserting numerous independent grounds. Rather, Petitioner has filed only two petitions, each based on a combination of references with materially different teachings. Moreover, the claims' length makes it

impossible to address both grounds in a single petition. Merely reciting the language of claims 1-5 (¼ of the claim challenged claims) requires nearly 750 words of each petition's permitted word count.

The potential dispute about the priority date and prior art status of *Park*, together with the different disclosures and earlier priority dates of *Kim* and *Chen*, is sufficient to justify institution of two petitions against the '271 patent. *See Hanwha Sols. Corp. v. REC Solar Pte. Ltd.*, IPR2021-00989, Paper 12 at 10-12 (Dec. 13, 2021) (instituting two petitions where the petitions presented only five total combinations and relied on different references in the two petitions).

V. CONCLUSION

This case satisfies the Board's example justification for filing two petitions. The petitions depend on the Board's ultimate findings on the priority date of at least one reference in the combination, *Park*, and its prior art status relative to the '271 patent. Even with the two petitions, Petitioner has raised only two grounds of unpatentability. These two grounds will not unduly burden the Board or the parties. The Board should institute trial for both IPR2023-00571 and IPR2023-00747.

Date: March 29, 2023

Respectfully submitted,

/Joshua L. Goldberg/
Joshua L. Goldberg
Lead Counsel
Reg. No. 59,369

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(a), the undersigned certifies that on March 29, 2023, a copy of the foregoing Petitioner's Notice Ranking Petitions for *Inter Partes* Review of U.S. Patent No. 10,951,271 was served by FedEx Priority Overnight on the correspondence address of record indicated in the Patent Office's Patent Center website for U.S. Patent No. 10,951,271:

Jialin Zhong
Zhong Law, LLC
51 JFK Parkway
1st Floor West
Short Hills, NJ 07078

A courtesy copy of the foregoing was also served by FedEx Priority Overnight on the address listed on the same law firm's website (<https://zhong-law.com/>):

Jialin Zhong
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100 Connell Drive
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Berkeley Heights, NJ 07922

Date: March 29, 2023

By: /William Esper/
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