IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AMAZON.COM, INC., AMAZON.COM SERVICES LLC,
Petitioners,

v.

NOKIA TECHNOLOGIES OY,
Patent Owner.

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Case No. IPR2024-00921

U.S. Patent No. 8,077,991

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STATEMENT REGARDING MULTIPLE PETITIONS

Pursuant to the November 2019 Consolidated Trial Practice Guide, Petitioners provides this Paper to (1) rank their Petitions for Inter Partes Review of U.S. Patent No. 8,077,991 for the Board's consideration, and (2) identify the differences between the Petitions and the reasons justifying multiple petitions.

I. Ranking of Petitions

Petitioner requests consideration of the Petitions in the following order:

Rank	Petition	Prior Art	Claims Challenged
1	IPR2024-00920	U.S. Patent No. 4,723,161 ("Koga"), U.S. Patent App. Pub. No. 2006/0268990A1 ("Lin"), U.S. Patent App. Pub. No. 2011/0038410A1 ("Narroschke")	22-24, 26, 29-33, 35, 38
2	IPR2024-00921		1-3, 5-15, 17-21, 39

II. Material Differences and Additional Factors that Support Permitting Multiple Petitions

A. Two Petitions are Necessary Given the Large Number of Claims

The Consolidated Trial Practice Guide (page 59) recognizes petitioners may be justified in bringing multiple petitions against a single patent "when the patent owner has asserted a large number of claims." Here, two petitions are necessary because of the large number of challenged claims (36). Because Nokia has not yet identified the claims it intends to assert in district court, all of the challenged claims are material to the parties' dispute.

The Board has repeatedly found "that about twenty claims constitutes the 'large number' that the CTPG suggests may justify multiple petitions." *Platform Sci., Inc. v. Omnitracs, LLC*, IPR2020-01518, Paper 14 at 17-18 (Apr. 15, 2021). Multiple petitions have been considered reasonable when claims were numerous, lengthy, and complex in subject matter. *Samsung Elecs. Co. v. Hardin*, IPR2022-01335, Paper 13 at 22 (Feb. 8, 2023) (recognizing large number of claims and finding three petitions reasonable); *ASSA ABLOY AB v. CPC Patent Techs. Pty Ltd.*, IPR2022-01089, Paper 21 at 3-5 (Jan. 3, 2023) (recognizing voluminous claims and finding two petitions reasonable). Besides volume of the claims, the Board also considers factors such as "[the claims'] detail and specificity and the nature of the subject matter[.]" *3Shape A/S v. Align Tech., Inc.*, IPR 2020-01644, Paper 9 at 3-4 (May 11, 2021) (finding two petitions reasonable and noting that "[w]e agree with Petitioner that the number of claims, their detail and specificity and the nature of the subject matter support multiple petitions in this case."); *see also Dolby Labs., Inc., v. Intertrust Techs. Corp.*, IPR2020-01105, Paper 14 at 21 (Jan. 5, 2021) (finding two petitions reasonable "[g]iven the length of the remaining eighteen claims in the [challenged] patent, [and] the complexity of the involved subject matter[.]").

Similar considerations apply here. As explained below, multiple petitions are warranted because the '991 patent has 39 claims, reciting complex subject

matter. The first and second petition each respectively challenge 11 and 20 non-overlapping claims. Addressing all 31 challenged claims in one petition would materially reduce the petitions' thoroughness and unduly burden the Board with overly terse analysis that would be more difficult to analyze. Filing two petitions allows for clearer and more detailed analysis for this volume of claims.

Institution of both Petitions would not be an inefficient use of resources because the challenged claims share some common limitations and similar subject matter. Two petitions are necessary as discussed below to address non-overlapping limitations related to encoding/decoding with different disclosures from the same prior art.

B. Material Differences Between the Petitions and the Complex Subject Matter Involved Support Filing of Two Petitions

This is not a situation where multiple petitions attack the same claims, leveraging the extra space to assert additional prior art references or permutations of references. *See 3Shape A/S v. Align Technology, Inc.*, IPR 2020-01644, Paper 9 at 3 (finding two petitions reasonable where there was no overlap in the claims challenged by the petitions). *First*, substantive differences exist between the claims. The First Petition challenges claims 22-24, 26, 29-33, 35, 38 directed to *decoding* encoded prediction errors and combining decoded prediction errors with a motion predicted image to reconstruct the original image. In contrast, the Second Petition challenges claims 1-3, 5-15, 17-21, 39 directed to encoding prediction

errors. The two claim sets cover different features, reciting non-overlapping limitations that are fundamentally different due to the contrasting nature of encoding/decoding.

The dependent claims diverge even further. As to the Second Petition, encoder claims 2, 7, 14, and 19 further require substituting outlier values to generate and encode a modified prediction error. Claims 3 and 15 specify a specific order to apply transform coding and spatial coding to the prediction error and its residual, respectively. Claims 5-6 and 17-18 recite "at least one transform coefficient[/spatial sample] is set to zero." As to the First Petition, decoder claims 25 and 34 directed to dequantization, recite "wherein the dequantization of transformed coefficients and spatial samples are related to each other." Claims 29 and 38 recite "at least some of the plurality of spatial samples are decoded as a single unit." Thus, 10 claims are unique to the challenged encoder claims, and 4 claims are unique to the challenged decoder claims.

Second, the Second Petition challenges claims that suffer from several clear drafting mistakes, including missing antecedent basis. As a result, the Second Petition presents six additional claim constructions.

Third, although the two petitions are based on the same art, different disclosures from the prior art references are relied upon in the two petitions. For encoding, Lin (in Ground 2 of Petition 2) teaches median filtering for the encoding

limitations. Ex-1005, ¶0122. For the decoder claims, Lin (in Ground 2 of Petition 1) is relied upon for its entropy coding teachings, including arithmetic codes. Ex-1005, ¶0083. Two petitions are warranted given that they rely on substantially different portions of Lin for the separate analyses required for encoding and decoding claims. These differences underscore the necessity of a comprehensive explanation to unpack the the different figures, descriptions, and operations of the prior art.

Furthermore, and notably, multiple petitions are warranted due to the complex nature of the claims. The ’991 claims recite a full range of video compression techniques, from motion prediction to transform coding, to quantization, and entropy coding. Each of these techniques are complex enough to be dedicated to entire chapters, or even entire books. Two petitions are needed to thoroughly explain how the prior art teachings, including the different disclosures related to these techniques and the specific details of supportive techniques, meet the claim language.

Respectfully submitted,

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Date: July 2, 2024

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on July 2, 2024, a true and correct copy of the MULTIPLE PETITION STATEMENT was served on the Patent Owner at the following addresses of record as listed on Patent Center, via Priority Mail Express®, and was also sent via electronic mail to the attorneys of record for Plaintiff in the concurrent litigation matters as listed below:

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