**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,

Petitioner,

v.

NOKIA TECHNOLOGIES OY,

Patent Owner.

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IPR2024-00627
U.S. Patent No. 11,805,267

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# PETITIONER'S PRELIMINARY REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE

Petitioner's art and arguments are materially different from those considered during prosecution. *Becton* Factors (a) and (b) strongly weigh against denial because Walker and Karczewicz-I ("K1") were not cited and there are material differences between the Petition's art and the art cited in IDS forms. Factor (d) strongly weighs against denial because the prosecution arguments do not overlap with the manner in which the Petition presents the prior art.

The '267 patent was allowed in error because the Office was not presented an opportunity to consider Walker or the combination of K1 and Karczewicz-II ("K2"). Factor (c) weighs strongly against denial because none of the references—including those cited by PO—were used in any Office Action for the '267 patent. Factor (e) weighs strongly against denial because the Examiner failed to consider Walker and overlooked combinations using K2. Factor (f) strongly weighs against denial because the Petition presents new evidence, including Walker and Dr. Freedman's explanations of how K2's calculations can be used for bi-prediction.

**Ground 1.** According to PO, Walker resembles an unrelated reference Ye that the Examiner cited in Office Actions for a parent of the '267 patent. PO distorts the file history to connect these references and attempts to mislead the Board into thinking that the Applicant somehow distinguished weighted predictions during prosecution—it did not.

During the Office Actions, the then-pending claims referred to "precision"

but did not specify that precision of predictions referred to the number of bits needed. Ex-1007, 000036-41, 000182-86. Accordingly, the Examiner cited Ye's teachings of fractional pixel precision, which increased *spatial* precision within a frame by pointing to locations in-between whole (integer) pixels. Ex-1007, 000146-148, 000203-204, 000207-208. The Applicant did not dispute that Ye's teachings, which used weighted predictions (e.g., "w·P0(x,y)"), satisfied the claimed first or second predictions. Instead, the Applicant amended the claims to require increased bitwise precision, rather than spatial precision, by reciting the first and second precisions "indicate[] the number of bits" needed to represent their respective values. Ex-1007, 000236, 000243. The claims were allowed because Ye does not explicitly disclose "the number of bits needed[.]" Ex-1007, 000252, 000280-81, 000308-09; Ex-1003, ¶¶29-30.

In contrast, Walker explicitly teaches the number of bits needed—exactly what the Examiner found to be lacking from Ye. Pet., 11, 13-14; Ex-1003, ¶56. Walker teaches that its weighted prediction has 17 bits, which is higher than 8 bits used for pixel values. Pet., 23. PO did not contend that Ye, Panchal, or Karczewicz-057 include this teaching, even though the Petition identified it as the key difference between Walker and Ye. Pet., 13-14. Thus, Walker is not duplicative.

**Ground 2**. Much of PO's briefing is a smokescreen that attempts to distract

the Board with irrelevant details. For example, PO offers 7 pages with voluminous charts comparing K2 with Ye ’503 and VCEG-AI33, as if the similarity was important. It is not, for the simple fact that K2 was already cited in an IDS. At best, PO demonstrates that one cited reference (K2) is similar to 2 of the 76 other cited references.

The Examiner never considered K1 or K2 in any Office Actions. Moreover, the Examiner did not consider combination of K1 and K2, which does not simply combine K2’s quarter- and half-pixel interpolation with K1. Instead, the Petition applies K2’s underlying *calculations* to K1’s bi-prediction scenarios because interpolation and motion prediction use many of the same calculations. Pet., 41-53. For example, K1’s bi-prediction and K2’s quarter-pixel interpolation both interpolate pixel values and then average them. K2 optimizes this by using more bits for intermediate calculations. Pet. 41. The Petition uses K2’s calculations—not the actual quarter-pixel interpolation but rather the calculations used to derive them—to perform the bi-prediction scenarios in K1. *Id*.; Ex-1003, ¶141.

These teachings would have been overlooked by the Examiner because K2’s optimizations were provided in the context of pixel interpolation while the Examiner focused on bi-prediction. For example, the Notice of Allowance for the parent application states that “[t]he claimed invention is a method/an apparatus for bi-directional prediction using rounding with the distinct limitation.” Ex-1007,

000308. K2 is not directed to bi-prediction, and there is no evidence the Examiner considered K2 in any detail, much less the application of K2's calculations to K1's bi-prediction. By not discussing K2—or any of the references that PO alleges to be similar to K2—in Office Actions, the Examiner overlooked the fact that K2's optimized calculation is precisely what the Applicant was attempting to claim, when used for bi-prediction.

PO does not contend that the Examiner considered any combinations based on K2 or any of the references alleged to be similar to K2. The Board has found error when the Examiner "overlooked, or did not appreciate, the materiality of [prior-art] references" and "a reasonable basis" for "combin[ing] the teachings in the manner recited in the claims." *Snap, Inc. v. Playvuu, Inc*., IPR2023-00848, Paper 12, 12-16 (PTAB December 6, 2023). The Examiner erred by overlooking *combinations* based on K1 and K2. This error is critical especially because there is express motivation to combine K1 with K2, as PO admits that K1 incorporates by reference VCEG-AI33, which PO alleges to be duplicative of K2 (POPR, 57-58).

PO argues some cited references are similar when viewed in isolation. But this tactic would allow applicants to insulate patents from review by dumping voluminous art in IDS forms and then, years later, cherry-picking cited art that is allegedly similar to whatever is presented in an IPR. It is improper for failing to consider the Petition's particular combination and arguments.

Respectfully submitted,

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## CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing Petitioner's Preliminary Reply to Patent Owner's Preliminary Response complies with 37 CFR § 42.6 and the four-page limit specified by the Board. The page count does not include those portions excepted by 37 C.F.R. § 42.24(a)(1).

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## CERTIFICATE OF SERVICE

The undersigned hereby certifies that on August 12, 2024, a true and correct copy of the Petitioner's Preliminary Reply to Patent Owner's Preliminary Response was served in entirety via email to all parties to this proceeding at the addresses indicated:

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