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EXAMINER	
SHAHNAMI, AMIR	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ZHIJUN LEI and JASON TANNER

Appeal 2019-002534
Application 14/567,162
Technology Center 2400

Before JOHNNY A. KUMAR, CATHERINE SHIANG, and BETH Z. SHAW, *Administrative Patent Judges.*

SHAW, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–25. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Intel Corporation. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to a partition mode and transform size determination based on a flatness of video. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A computer–implemented method for video coding comprising:
>
> determining a first portion of a video frame is flat and a second portion of the video frame is not flat based on flatness checks of the first and second portions of the video frame;
>
> in response to the first portion of the video frame being flat:
>
> bypassing an inter–prediction partition check for the first portion of the video frame based on the first portion of the video frame being flat; and
>
> performing a final mode decision for the first portion of the video frame based at least in part on an inter–prediction mode coding cost for the first portion of the video frame associated with an initial motion vector and an initial inter–prediction partition choice for the first portion of the video frame; and
>
> in response to the second portion of the video frame being not flat:
>
> performing the inter–prediction partition check for the second portion of the video frame to generate a final motion vector and a final inter–prediction partition choice for the second portion of the video frame.

REFERENCE

The prior art relied upon by the Examiner is:

Name	Reference	Date
Zhang	US 2009/0262800 A1	Oct. 22, 2009
Kobayashi	US 2011/0002385 A1	Jan. 6, 2011
Jang	WO 2013/009029 A2	Jan. 17, 2013

REJECTION

Claims 1–5, 7–15, 17–22, 24, and 25 are rejected under 35 U.S.C. § 103 as being unpatentable over Kobayashi and Zhang. Final Act. 3.

Claims 6, 16, and 23 are rejected under 35 U.S.C. § 103 as being unpatentable over Kobayashi, Zhang, and Jang. Final Act. 25.

OPINION

Appellant argues the Examiner erred in rejecting the claims under § 103. We have considered and reviewed all arguments made in the Briefs, Final Office Action, and Answer, and we address each of Appellant's arguments. We are not persuaded the Examiner erred for the reasons stated below as well as for the reasons stated in the Final Office Action and Answer, which we agree with and adopt.

We note that regardless of the general contentions and imputed intended meanings articulated by Appellant in the Appeal Brief, "[i]t is the *claims* that measure the invention." *See SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc) (citations omitted).

Independent Claim 1

Appellant argues "Kobayashi merely describes adopting an inter-prediction mode preferentially with respect to an intra–prediction mode when a macroblock is in a flat aggregate area and applying no preference when a macroblock is not in a flat aggregate area." Appeal Br. 9. Appellant argues that "the teaching of Zhang that 4x4 DCT is selected for flat macroblocks has no weight in teaching a bypass of an inter–prediction partition check in response to a portion being flat (and performing final mode decision using an initial motion vector and inter–prediction partition choice) as claimed" *Id.* at 10.

> Therefore, the scope and content of Kobayashi and Zhang fails to disclose bypassing an inter–prediction partition check and performing a final mode decision for a first portion of a video frame in response to the first portion being flat and performing the inter–prediction partition check for a second portion of the video frame in response to the second portion being not flat as claimed.

Id. Appellant argues Zhang is concerned with transfer selection and is silent on bypass of an inter–prediction check. Reply Br. 8.

Yet, as the Examiner finds, and we agree, Kobayashi teaches the claimed bypassing of an inter–prediction partition check. Ans. 26 (citing Kobayashi, Fig. 5b, ¶ 36). The claims recite bypassing an inter–prediction partition check and performing a final mode decision for a first portion of a video frame in response to the first portion being flat. *Id.* at 27. The Examiner explains that Zhang, in Figure 2, contains a flatness check where tile analysis is split based on the flatness determination of a portion of frame. *Id.* The Examiner explains that the broadest reasonable interpretation of bypassing merely requires omission of an inter–prediction check. *Id.* With respect to the bypassing of an inter–prediction check for the portion of the video frame, Zhang teaches the bypassing by omitting an inter–prediction check and selecting a 4x4 DCT. *See id.* We agree with the Examiner because Appellant provides insufficient evidence to show that the Specification or claims limit "bypassing" in a way that, under a broad but reasonable interpretation, is not encompassed by Zhang's teachings in Figure 2.

Appellant also argues the Examiner provides insufficient rationale to combine Kobayashi and Zhang. Appeal Br. 11. Upon reviewing the record before us, we find that the Examiner's suggestion for the proposed modification in the prior art suffices as an articulated reason with some rational underpinning to establish a prima facie case of obviousness. *See*

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007). In summary, we find that an ordinarily skilled artisan at the time of the claimed invention would have combined Kobayashi's teachings of an inter-prediction partition check related to a macroblock with Zhang's teachings of determining if a current macroblock is flat macroblock, because both relate to the determination of the flatness of a video block, as explained by the Examiner in the Answer, because bypassing the inter-prediction check decreases the processing required. Ans. 27; Final Act. 5. Because Appellant has not demonstrated that the Examiner's proffered combination would have been "uniquely challenging or difficult for one of ordinary skill in the art," we agree with the Examiner that the proposed modification would have been within the purview of the ordinarily skilled artisan. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418).

Accordingly, we sustain the rejection of independent claim 1. For the same reasons, we sustain the rejection of claims 4–12, 14–19, and 21–25. Despite nominally arguing these claims separately, Appellant reiterates similar arguments made in connection with claim 1, and alleges that the additional cited prior art fails to cure those purported deficiencies. Appeal Br. 12–13. We are not persuaded by these arguments for the reasons previously discussed.

Dependent Claims 2, 3, 13, 20

Appellant also argues that "in contrast to teaching selection of a maximum transform size (i.e., as recited in claims 2, 13, and 20), Zhang selects at least the smaller of two available transform sizes as 4x4 DCT is selected over 8x8 DCT." Appeal Br. 11–12. Appellant argues "[t]herefore,

in contrast to selecting a maximum transform size in response to a portion being flat, Zhang teaches selection of a smaller transform size." *Id.*

The Examiner explains, however, that the claim merely recites a maximum transform size for when a portion is flat. Ans. 28; Reply Br. 9. As the Examiner explains, Appellant's argument is not commensurate in scope with the claims because:

> As cited in Zhang Fig. 2 and [0034], when a macroblock is deemed flat, a 4x4 OCT is selected. Appellant argues that since an 8x8 OCT is available, the 4x4 OCT is not the maximum size. Appellant seems to be arguing what is not claimed. Appellant is making the argument that the largest possible transform size under any circumstance is selected after the determination that the video frame is flat. This argument is flawed in the sense that, in Zhang Fig. 2, the 4x4 OCT is the maximum/largest transform size possible for when a portion of the flat. Since the 4x4 OCT is the largest OCT possible in Fig. 2 when the portion is flat, by Zhang selecting the 4x4 OCT when the portion of the video is flat, it also selects the maximum transform size for the first portion of the video frame when the portion is flat.

Ans. 28. We agree with the Examiner because Appellant provides insufficient evidence to show that the Specification or claims limit "maximum transform size" in a way that, under a broad but reasonable interpretation, is not encompassed by Zhang's teachings of selecting the 4x4 OCT as shown in Figure 2 and as described in paragraph 34. Accordingly, we sustain the rejection of dependent claims 2, 3, 13, and 20.

CONCLUSION

The Examiner's rejections are affirmed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–5, 7–15, 17–22, 24, 25	103	Kobayashi, Zhang	1–5, 7–15, 17–22, 24, 25	
6, 16, 23	103	Kobayashi, Zhang, Jang	6, 16, 23	
Overall Outcome:			1–25	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED