Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EIJI OGURA

Appeal No. 1999-1520
Application No. 08/634,203

ON BRIEF[1]

Before HAIRSTON, GROSS, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-36, which are all the claims in the application.

We reverse.

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[1] Appellant waived an oral hearing by facsimile communication submitted April 18, 2001 (Paper No. 19).

BACKGROUND

The invention relates to motion vector detecting in an MPEG (Motion Picture Experts Group) system. Claim 1 is reproduced below.

> 1. An adaptive motion vector detecting apparatus for adaptively selecting pixels employed to detect motion vectors between a first video frame and a second video frame, said first video frame including a reference block of pixels comprised of all of the pixels in an M x N block of said first video frame and said second video frame including a check block of pixels, comprising:
>
> analyzing means for adaptively determining positions of a first subset of pixels in said reference block from a variable feature of said reference block; and
>
> selecting means for sampling said first subset of pixels in said reference block and a second subset of pixels in said check block at said positions determined by said analyzing means.

The examiner relies on the following references:

Yamada et al. (Yamada)	5,475,446	Dec. 12, 1995
Kondo	5,612,751	Mar. 18, 1997 (filed Jan. 30, 1995)

Claims 1-3, 8, 19-21, and 26 stand rejected under 35 U.S.C. § 102 as being anticipated by Yamada.

Claims 4-7, 9-18, 22-25, and 27-36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Yamada and Kondo.

We refer to the Final Rejection (Paper No. 8) and the Examiner's Answer (Paper No. 14) for a statement of the examiner's position and to the Brief (Paper No. 13) and the

Reply Brief (Paper No. 15) for appellant's position with respect to the claims which stand rejected.

OPINION

The section 102 rejection of independent claims 1 and 19 in view of Yamada is set forth on pages 3 and 4 of the Answer. For the "analyzing means and method step for adaptively determining positions of a first subset of pixels in said reference block from a variable feature of said reference block," the rejection refers first to column 1, lines 61-62 and column 5, lines 20-21. In particular, the reference is submitted to disclose "a decimation information setting unit (4) for variably setting interval information for pixels to be decimated in the reference block." The rejection also points out reference position setter (9), and text at column 5, lines 58-63 and column 6, lines 1-17.

However, the noted text at columns 1, 5, and 6 of Yamada discloses that the decimation interval information for decimating pixels located within the blocks is set in advance. While we might agree that the pre-setting of the decimation interval information could be considered "variable," the claims require more. Claim 1 requires "analyzing means for adaptively determining positions of a first subset of pixels in said reference block from a variable feature of said reference block," and further that pixels in the reference block and the check block are sampled at positions determined by the analyzing

means. Neither decimation information setting unit 4 nor reference position setter 9, working alone or in combination, performs the functions recited in instant claim 1.

We also note that on page 5 of the Answer, the disclosure of Kondo is added in the section 103 rejection to show, inter alia, obviousness of particular "variable features" specific to dependent claims. However, there is no associated discussion of where the more general (claim 1) "variable feature" teaching may be found in Yamada.

We consider instant claim 1 to set forth at least one feature that is missing from Yamada; the reference thus cannot support a finding of anticipation. As shown in appellant's Figure 1, and principally described at pages 8 and 9 of the specification, reference block analyzing circuit 3 determines which pixels are to be selected from the reference block (register 4) and the check block (register 5). The selection is based on a "particular feature" of the reference block data. Two examples of "particular features" are maximum and minimum values of the pixels, and maximum and minimum deviations from the mean value in the reference block.

Consistent with this disclosure, instant claim 1 calls for adaptive determination of pixels in the reference block based on a variable feature of the reference block. The requirement is different from the disclosure of Yamada, whereby the pixels to be sampled are set in advance of processing, rather than adaptively determined. Column 5, lines 20-21, upon which the rejection relies, refers to the embodiment of Figure 5(a). As clearly shown in the figure, decimation information setting unit 4 receives no data from the

reference block (picture information storage unit 2). Compare instant Figure 1, with reference block analyzer 3 controlling selection of pixels based on reference block data input to terminal 1.

The examiner has not pointed out where Yamada contains the above-noted requirements of instant claim 1, and we are unable to find the relevant features disclosed in the reference. We therefore do not sustain the rejection of claim 1, nor of the claims dependent therefrom.

The requirements of method claim 19, in the adaptive determination of pixels in the reference block and check block, are similar to those of apparatus claim 1. For substantially the reasons previously noted, we do not sustain the rejection of claim 19, nor its dependent claims. We therefore do not sustain the section 102 rejection of claims 1-3, 8, 19-21, and 26.

The examiner adds the teachings of Kondo to those of Yamada for several features of independent and dependent claims which are deemed to be absent from Yamada. According to the Answer at page 6, in regard to claims 13-18 and 31-36 (claims 13 and 31 independent), Kondo is relied upon for a showing of dividing reference and check blocks into sub-block levels.

Independent claims 13 and 31, as the rejection appears to acknowledge, require basic features which are recited in broader claims 1 and 19. Claim 13 sets forth analyzing means for adaptive determination of pixels from reference block data, and selecting

means for sampling pixels in accordance with the analyzing means. Method claim 31 sets forth adaptive determination of pixels based on reference block data, and sampling pixels in accordance with the adaptive determination step.

Kondo as applied therefore fails to remedy the deficiencies we find in Yamada. Further, we do not find any teachings in Kondo which disclose or suggest the basic requirements of independent claims 13 and 31. We therefore do not sustain the section 103 rejection of claims 4-7, 9-18, 22-25, and 27-36 as being unpatentable over the combined teachings of Yamada and Kondo.

CONCLUSION

The rejections of claims 1-36 are reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)
ANITA PELLMAN GROSS Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
HOWARD B. BLANKENSHIP Administrative Patent Judge	)

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