

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES E. BOICE, JOHN A. MURDOCK, and AGNES Y. NGAI

Appeal No. 2003-0023
Application No. 09/046,289

ON BRIEF

Before THOMAS, HAIRSTON, and RUGGIERO, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 26-45, which are all of the claims pending in the present application. Claims 1-25 have been canceled.

The disclosed invention relates to an apparatus for expanding the size of the search window used in the motion estimation function of a full function MPEG encoder. More particularly, multiple encoders are provided and the number of encoders is selected by a user dependent upon the desired expanded size of the search window.

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Claim 26 is illustrative of the invention and reads as follows:

26. Apparatus for expanding the size of a search window of a motion estimator when encoding a sequence of digitized video frames, comprising:

one or more chip encoders, wherein the number of encoders is selected and defined by a user based upon the expanded size of the search window;

wherein each encoder comprises,

a search unit to provide a coarse search to be used in the motion estimation process,

a search interface unit for comparing computed search results with search results from other encoders and selecting the best result,

an intra unit for providing a base encoder function,

a search refine unit to provide a refined search around the search results from the search unit, and

a clock unit;

wherein the intra unit and the search refine unit can be made inoperable by control logic in the clock unit.

The Examiner relies on the following prior art:

Tayama	5,680,181	Oct. 21, 1997
Jeng et al. (Jeng)	6,011,870	Jan. 04, 2000
		(filed Jul. 18, 1997)

Claims 26-45, all of the appealed claims, stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Tayama in view of Jeng.

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Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs¹ and Answer for the respective details.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner, the arguments in support of the rejection and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention set forth in claims 26-45. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to

¹ The Appeal Brief was filed February 26, 2002 (Paper No. 13). In response to the Examiner's Answer dated May 3, 2002 (Paper No. 14), a Reply Brief was filed July 8, 2002 (Paper No. 15), which was acknowledged and entered by the Examiner as indicated in the communication dated July 30, 2002 (Paper No. 16).

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support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073-74, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to independent claim 26, the sole independent claim on appeal, the Examiner, as the basis for the obviousness

rejection, proposes to modify the motion vector detection system disclosure of Tayama. According to the Examiner, Tayama discloses the claimed invention except for the failure to "particularly disclose an intra unit and a refine unit" (Answer, page 4). To address this deficiency, the Examiner turns to Jeng which describes an MPEG video signal processor which utilizes an intra unit and a refine unit for providing a base encoder and search refinement. In the Examiner's analysis, the skilled artisan would have been motivated and found it obvious to modify the system of Tayama by adding intra and refine units as taught by Jeng "for the same purpose of providing a refined search around the search results from the search unit. Doing so would allow the motion estimator to easily expand a motion vector search window that reduces hardware costs and complexities of video frames buffer access." (Id., at 5).

With respect to the Examiner's 35 U.S.C. § 103(a) rejection of appealed independent claim 26, Appellants assert that the Examiner has failed to establish a prima facie case of obviousness since all of the claimed limitations are not taught or suggested by any of the applied prior art references. After

careful review of the applied prior art references, in light of the arguments of record, we are in general agreement with Appellants' position as stated in the Briefs.

It is our view that even assuming, arguendo, that the Tayama and Jeng references could be combined as proposed by the Examiner, the resulting combination would not arrive at the invention set forth in independent claim 26. In particular, we agree with Appellants (Brief, page 17) that a key feature of the claimed invention, the comparing of search results in each encoder with search results of other encoders and selecting the best result, is not taught or suggested by Tayama, nor is such deficiency overcome by any disclosure in Jeng.

We do not dispute the Examiner's generalized assertion that Tayama utilizes plural encoders which act together to provide an expanded search window. We find nothing, however, in the disclosure of Tayama, either in the portion cited by the Examiner (column 4, lines 33-34) or elsewhere in the document, which teaches or suggest the comparing, in each encoder, the search results of that encoder with other encoders and to thereafter select the best result as claimed. Further, although the Examiner directs attention (Answer, page 8) to the passage at column 4, line 60 through column 5, line 3 of Jeng as suggesting

the comparing of search results of different encoders with differing addresses, we find no basis in the cited passage, or elsewhere in Jeng, that would support such an interpretation.

In view of the above discussion, since all of the claim limitations are not taught or suggested by the applied prior art, it is our opinion that the Examiner has not established a prima facie case of obviousness with respect to the claims on appeal. Accordingly, we do not sustain the Examiner's 35 U.S.C. § 103 rejection of independent claim 26, nor of claims 27-45 dependent thereon. Therefore, the Examiner's decision rejecting claims 26-45 is reversed.

REVERSED

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JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
KENNETH W. HAIRSTON)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
JOSEPH F. RUGGIERO)	
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JFR:hh

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