The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FERNANDO C. M. MARTINS and RAJEEB HAZRA,

Appeal No. 2004-0226
Application No. 09/216,184

ON BRIEF

Before KRASS, HAIRSTON and RUGGIERO, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 3-8, 14-17 and 19-29.

The invention is directed to a bit rate control system for a video encoder, best illustrated by reference to representative independent claim 1, reproduced as follows:

1. A system comprising:

a bit rate control system including a source model scaled by an interest structure to generate a quantization value for use in encoding a macroblock, the interest structure including an interest matrix having a plurality of entries, wherein each of the plurality of entries comprises a non-zero number corresponding to a macroblock, and none of the plurality of entries takes on a zero value.

The examiner relies on the following references:

Sun et al. (Sun)	5,790,196	Aug. 04, 1998
Azadegan et al. (Azadegan)	5,819,004	Oct. 06, 1998

Claims 1, 3-8, 14-17 and 19-29 stand rejected under 35 U.S.C. §103. As evidence of obviousness, the examiner offers Azadegan with regard to claims 1, 3, 4, 8, 14-17 and 19-29, adding Sun with regard to claims 5-7.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

In rejecting claims under 35 U.S.C. §103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 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, 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 teachings, suggestions or implications 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). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1040, 228 USPQ 685, 687 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 146-147 (CCPA 1976).

With regard to at least the independent claims, the examiner contends that Azadegan discloses the instant claimed subject matter but for the inclusion of only non-zero values in an interest matrix and that none of the plurality of entries takes on a zero

value. But, the examiner considers it to have been obvious "that if the user is only concerned with setting quality priorities with non-zero values in the interest matrix as shown in Figure 21 of Azadegan . . . then the zero priority value within the interest matrix of Azadegan . . . may certainly be taken out from the interest matrix entry" (answer-page 3). The examiner further contends that the removal of an entry within the interest matrix of Azadegan "is certainly well within one skilled in the art and doing so would seem to even result in a less beneficial system wherein a feature would be deleted from use" (answer-page 3). The examiner then concludes that it would have been obvious to the skilled artisan, "having the Azadegan . . . reference in front of him/her and the general knowledge of priority value selections for quality viewing purposes, would have had no difficulty in modifying the interest matrix system of Azadegan . . . by providing only the non-zero values to be selected by the user to mark the quality of regions within a frame if it is a requirement for the user to make quality changes to regions as claimed" (answer-pages 3-4).

For their part, appellants contend that Azadegan teaches away from the instant claimed invention because column 34, lines 43-46, of the reference states:

> If the user did not want the quality of regions of the frame to change, these regions would be marked by the user as having a priority of zero.

Thus, it is appellants' position that Azadegan accepts entries having a value of zero in the interest matrix while the instant claimed invention does not accept entries having a value of zero in the interest matrix. Appellants contend that the necessary modification to Azadegan, in order to meet the instant claimed subject matter, would be to exclude entries having a value of zero from the interest matrix, but to do so would contradict the express teachings of Azadegan.

We will sustain the rejection of claims 1 and 3-8 under 35 U.S.C. §103 but we will not sustain the rejection of claims 14-17 and 19-29 under 35 U.S.C. §103.

We agree with appellants that since Azadegan permits a zero entry in the interest matrix, it cannot teach or suggest "including only non-zero values in an interest matrix" as recited in independent claims 14 and 21. The examiner's position "that if the user is only concerned with setting quality priorities with non-zero values in the interest matrix as shown in Figure 21 of Azadegan . . . then the zero priority value within the interest matrix of Azadegan . . . may certainly be taken out from the interest matrix entry" (answer-page 3) is clearly an argument based on hindsight. One may say that zero entries **may** be taken out of the interest matrix **if** the user wished to do so, but the question is, rather, where is it suggested that a user may wish to do this, and the answer is, quite clearly, only in appellants' disclosure. It is the instant disclosure which

teaches that only non-zero entries be permitted in the interest matrix and, since Azadegan permits zero entries, it cannot be said to suggest using **only** non-zero entries.

We also note that it is more than a mere design choice as to the exclusion of zero entries from the interest matrix, as appellants explain, at page 5 of the specification, that an "important aspect of the interest matrix is that the elements should not assume a value of zero, to avoid persistent artifacts in the macroblocks."

Independent claims 14 and 21 are clear that **only** non-zero values may be included in the interest matrix. Therefore, we will not sustain the rejection of these claims, and the claims dependent thereon, under 35 U.S.C. §103.

We take a different approach with regard to independent claim 1. This claim recites an interest structure including an interest matrix having a plurality of entries and that each of the plurality of entries "comprises a non-zero number . . . and none of the plurality of entries takes on a zero value." The claim does not state that **only** non-zero values are permitted or that no zero entry can ever be permitted.

As the examiner points out, Figure 21 of Azadegan does show an example, or an embodiment, wherein no entry in the interest matrix is zero. Region 466 has a value of -5; region 469 has a value of +2; region 470 has a value of +4. Accordingly, at least

this one example shows an embodiment which meets the instant claim language because this video frame of Figure 21 of Azadegan shows an interest matrix having a plurality of entries, “wherein each of the plurality of entries comprises a non-zero number . . . , and none of the plurality of entries takes on a zero value,” as claimed. Unlike independent claims 14 and 21, independent claim 1 does not preclude an embodiment wherein, in some instances, the entries in the interest matrix are all non-zero, although, at other times, a zero entry may occur. Dependent claims 3, 4 and 8 will fall with independent claim 1, as they are not argued separately.

Regarding dependent claims 5-7, the rejection of which under 35 U.S.C. §103 relies on Azadegan in combination with Sun, we will also sustain the rejection of these claims because, while appellants make general allegations, at pages 5-6 of the principal brief, about no prima facie case and lack of motivation, no specific arguments going to the merits of the claim limitations and the applied references are made, the whole argument apparently relying on the argument re claim 1, relative to no showing of non-zero entries in the interest matrix. Since we find that Azadegan does suggest the limitations of independent claim 1 regarding the non-zero entries, for the reasons supra, the rejection of claims 5-7 under 35 U.S.C. §103 is sustained.

We have sustained the rejection of claims 1 and 3-8 under 35 U.S.C. §103 but we have not sustained the rejection of claims 14-17 and 19-29 under 35 U.S.C. §103. Accordingly, the examiner's decision is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

KENNETH W. HAIRSTON Administrative Patent Judge	)	
ERROL A. KRASS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOSEPH F. RUGGIERO Administrative Patent Judge	)	

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