

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EMMANUEL D.L.M. FRIMOUT, STEPHANUS J.J. NIJSSEN
and JOHAN P.M.G. LINNARTZ

Appeal No. 2002-2327
Application No. 09/142,549

ON BRIEF

Before JERRY SMITH, RUGGIERO, and BLANKENSHIP, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-11, which are all of the claims pending in the present application.

The claimed invention relates to the embedding of supplemental data, such as a watermark, in a digital signal to identify the digital signal as being authentic. In contrast to

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conventional MPEG encoding in which a copy protection bit is used for authentication purposes, Appellants' invention involves the purposeful generation of a sequence of intraframe (I), predictively (P), and bidirectionally (B) coded pictures in a group of pictures (GOP). For example, a BPP pattern, rarely used in a GOP structure, is used to represent watermark data in a digital signal encoded in MPEG format.

Claim 1 is illustrative of the invention and reads as follows:

1. A method of embedding supplemental data in a video signal comprising the step:

encoding the video signal in groups of pictures comprising an intraframe (I) coded picture and a series of predictively (P) and bidirectionally predictively (B) coded pictures, characterized in that said method further comprises the step:

further encoding the video signal in such a manner that the pattern of picture coding types (I, P, B) in a group of pictures represents a supplemental data value.

The Examiner relies on the following prior art:

Iu	5,293,229	Mar. 08, 1994
Girod et al. (Girod)	5,809,139	Sep. 15, 1998
		(filed Sep. 13, 1996)

Claim 1-11, all of the appealed claims, stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Iu in view of Girod.

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Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief (Paper No. 13) and the Answer (Paper No. 14) for the respective details.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner 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 Brief along with the Examiner's rationale in support of the rejection 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 as recited in claims 1-11.¹ Accordingly, we reverse.

¹ We make the observation that claims 9 and 10 are directed to an "encoded video signal" per se. It is not readily apparent as to which of the four classes of statutory subject matter enumerated in 35 U.S.C. § 101 such subject matter would fall. The "signal" of claims 9 and 10 is clearly not a "process" since no series of steps are recited. Such a "signal" would also not seem to fall within any of the three product classes, i.e., machine, manufacture, or composition of matter, since each of these traditionally requires physical structure or matter. Further a signal per se, as an abstract arrangement of information, does not produce a useful, concrete and

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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, 1073-74, 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 Hospital 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

tangible result until it is coupled with physical structure. Although the format of claims 9 and 10 would seem to raise a question as to whether such claims set forth statutory subject matter under 35 U.S.C. § 101, we have no such rejection before us, and we therefore decline to rule on the merits of any such rejection.

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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 the Examiner's 35 U.S.C. § 103(a) rejection of appealed independent claims 1, 3, 5, 7, and 9, 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. In particular, Appellants contend (Brief, page 7) that the applied Iu and Girod references, taken individually or collectively, do not teach or suggest the embedding of a supplemental data signal in a video signal by altering the sequence pattern of a series of picture coding types in which a particular pattern sequence represents the supplemental data as claimed.

After reviewing the arguments of record from Appellants and the Examiner, we are in general agreement with Appellants' interpretation of the disclosures of Iu and Girod as stated in the Brief. As asserted by Appellants, Iu discloses the altering of a pattern sequence of coded picture types of a video signal to improve the coding process by reducing prediction time intervals and refresh time (Iu, column 8, lines 46-51), but has no

disclosure of embedding supplemental data, such as watermark data, in the video signal. Similarly, we agree with Appellants that the Girod reference, while disclosing the insertion of watermark data in the bit stream of a video signal, has no teaching or suggestion of doing so by altering the pattern sequence of a particular series of coded picture types.

We note that the Examiner asserts (Answer, page 6) that ". . . modifying the sequence to represent the BPP as the supplemental value can be achieved easily by any skilled artisan." We find this assertion of the Examiner to be misplaced with respect to the issue of obviousness of the claimed invention. Simply because one of ordinary skill may be able to alter a pattern sequence of a video signal so as to embed supplemental data in the video signal does not address the question of whether it would be obvious to do so. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992). In our view, given the disparity of problems addressed by the applied prior art references, and the differing solutions proposed by them, any attempt to combine them in the

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manner proposed by the Examiner could only come from Appellants' own disclosure and not from any teaching or suggestion in the references themselves.

We are further of the opinion that even assuming, arguendo, that proper motivation were established for the Examiner's proposed combination of references, we fail to see how and in what manner the references could be combined to arrive at the specific combination set forth in the appealed independent claims. As asserted by Appellants (Brief, page 7), the combination of Iu and Girod would, at best, suggest the insertion of watermark data into a video signal bit stream that has been coded to maximize compression, a result which falls far short of the claimed requirement of embedding supplemental data in a video signal by using a particular coded picture pattern sequence to represent the supplemental data.

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In summary, since we are of the opinion that the prior art applied by the Examiner does not support the obviousness rejection, we do not sustain the rejection of independent claims 1, 3, 5, 7, and 9, nor of claims 2, 4, 6, 8, 10, and 11 dependent thereon. Therefore, the decision of the Examiner rejecting claims 1-11 under 35 U.S.C. § 103(a) is reversed.

REVERSED

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JERRY SMITH)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	
Administrative Patent Judge)	APPEALS AND
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HOWARD B. BLANKENSHIP)	
Administrative Patent Judge)	

JFR:hh

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