

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 10

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** KIRAN S. CHALLAPALI  
and  
WEIDONG MAO

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Appeal No. 1996-4091  
Application 08/167,394<sup>1</sup>

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ON BRIEF

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Before KRASS, FLEMING and RUGGIERO, **Administrative Patent Judges**.  
FLEMING, **Administrative Patent Judge**.

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<sup>1</sup> Application for patent filed December 15, 1993.

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**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1 through 4, all of the claims present in the application.

The invention is directed to a method and apparatus for converting a digital high definition television signal which is digitally compressed and contains coded data into a standard television signal which is compressed and has coded data in another format.

Independent claim 1 is reproduced as follows:

1. A method for transcoding a first group of macroblocks of a first digital television signal, to a co-sited macroblock of second digital television signal, said method comprising the steps of:

a) deriving from each of said first group of macroblocks, corresponding HD macroblock information; and

b) deriving SD macroblock information for said co-sited macroblock directly from said HD macroblock information so as to form said second digital television signal.

The reference relied on by the Examiner is:

Ng

5,262,854

Nov. 16, 1993

The Examiner objected to Appellants' specification under 35 U.S.C. § 112, first paragraph, for failing to provide an enabling disclosure. Claims 1 through 4 stand rejected under

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35 U.S.C. § 112, first paragraph, for being based upon the reasons set forth in the objection to the specification. Claims 1 through 4 stand rejected under 35 U.S.C. § 102 as being anticipated by Ng.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the brief and the answer for details thereof.

#### **OPINION**

After a careful review of the evidence before us, we agree with the Examiner that claims 1 through 4 are anticipated under 35 U.S.C. § 102 by Ng. However, we do not agree with the Examiner that claims 1 through 4 are properly rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth ***infra***.

In regard to the rejection of Appellants' claims 1 through 4 under 35 U.S.C. § 112, first paragraph, we note that the Examiner argues on pages 3 and 4 of the answer that Appellants have failed to provide an enabling disclosure for the process and apparatus for converting the HD macroblock information to SD macroblock information. The Examiner further

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points out that the PARTIAL SD ENCODER 40 of Figure 1 simply shows a "black box," but Appellants do not provide any further circuitry as to how the encoder 40 is able to convert the HD macroblocks into the SD macroblocks.

In order to comply with the enablement provision of 35 U.S.C. § 112, first paragraph, the disclosure must adequately describe the claimed invention so that the artisan could practice it without undue experimentation. *In re Scarbrough*, 500 F.2d 560, 566, 182 USPQ 298, 303 (CCPA 1974); *In re Brandstadter*, 484 F.2d 1395, 1404, 179 USPQ 286, 293 (CCPA 1973); and *In re Gay*, 309 F.2d 769, 774, 135 USPQ 311, 316 (CCPA 1962). If the Examiner had a reasonable basis for questioning the sufficiency of the disclosure, the burden shifted to the Appellants to come forward with evidence to rebut this challenge. *In re Doyle*, 482 F.2d 1385, 1392, 179 USPQ 227, 232 (CCPA 1973), *cert. denied*, 416 U.S. 935 (1974); *In re Brown*, 477 F.2d 946, 950, 177 USPQ 1691, 694 (CCPA 1973); and *In re Ghiron*, 442 F.2d 985, 992, 169 USPQ 723, 728 (CCPA 1971). However, the burden was initially upon the Examiner to establish a reasonable basis for questioning the adequacy of the disclosure. *In re Strahilevitz*, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982); *In re Angstadt*, 537 F.2d 498, 504, 190 USPQ 214, 219 (CCPA 1976); and *In re Armbruster*, 512 F.2d 676, 677, 185 USPQ 152, 153 (CCPA 1975).

Appellants argue on page 5 of the brief that the invention as disclosed in the specification beginning on page 9 comprises specific operations to manipulate HD macroblock information to directly derive SD macroblock information. Appellants further argue that Figure 2 shows that the information contained in each group of the HD macroblocks is used to derive an SD macroblock located spatially and temporally coincident with the HD group. Appellants further argue that the process of determining the mode of the SD macroblock is represented by the block labelled "Mode Selection Processor 50" and described beginning on page 9, line 6, of the specification and continuing to page 10, line 17, in conjunction with Table I on page 8a. On page 6 of the brief, Appellants further argue that the process performed in the partial SD encoder 40 relates to the use of motion vector information from an HD macroblock to derive motion vectors for the derived co-sited SD macroblock. Appellants point to the specification beginning on page 10, line 18, for the disclosed operations which are represented by the block 40. Appellants argue that the implementation of converting HD macroblock information to SD macroblock information directly would have been readily accessible to one of skill in the art without undue experimentation from Appellants' disclosure.

Upon our review of the specification, we note that beginning on page 7 Appellants disclose that the HD macroblock information comprises mode information for each group of four "co-sited" HD macroblocks and provides the mode information to the mode selection processor 50. The mode information includes the type of prediction, quantizer scale information, residual coefficient data, and motion information. Appellants further disclose that the relationship between the co-sited HD macroblocks and the SD macroblock is shown in Figure 2. The relationship between each SD macroblock located at the position (x,y) within the SD picture, corresponds to the portion of the HD picture (of size  $S_x$ ,  $S_y$ ) located at position (X,Y) within the HD picture and can be expressed by the equation  $X = R * x$ ,  $Y = R * y$ , and  $S_x = S_y = 16 * 4$ , where R equals a scale factor for each dimension (x and y).

Appellants further disclose on page 8 of the specification that the HD decoder 10 provides a number of bits used to code each respective macroblock, the quantizer information for each macroblock, and the motion vector information for each macroblock. Also, the decoder 10 provides

information about the type of picture each HD macroblock is a part of. Appellants disclose on page 9 of the specification that the macroblock type of each SD macroblock is determined in the mode selection processor 50 based upon mode information from the co-sited HD macroblocks. The SD macroblock mode is determined by the most often used mode in the group of HD macroblocks and then assigning it to the SD macroblock, or it is determined by a priority list in Table I in the case of a tie.

On page 10 of the specification, Appellants disclose that after the SD macroblock mode is selected, the motion vectors of the SD block can be determined. Appellants then disclose on pages 10 and 11 how the motion vectors are determined.

The Examiner has not given us any analysis as to why these portions of the specification, along with the Table and Figures, do not provide an enabling disclosure. Since the burden is initially upon the Examiner to establish a reasonable basis for questioning the adequacy of the disclosure, we find that the Examiner's failure to consider these portions of the specification in his determination of why the Appellants' disclosure is not enabling is flawed. Therefore, we find that the Examiner has not established the reasonable basis for questioning the adequacy of the disclosure and thereby will not

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sustain the rejection of Appellants' claims 1 through 4 under 35 U.S.C. § 112, first paragraph.

Claims 1 through 4 stand rejected under 35 U.S.C. § 102 as being anticipated by Ng. We note on page 2 of Appellants' brief that Appellants have stated that claims 1 through 4 stand or fall together. We note that Appellants argue all of the claims as a single group in the brief. 37 CFR § 1.192(c)(7) (July 1, 1995) **as amended at** 60 Fed. Reg. 14518 (March 17, 1995), which was controlling at the time of Appellants filing the brief, states:

For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

Appellants have provided a statement that the claims stand or fall together. We will, thereby, consider the Appellants' claims as standing or falling together and we will treat claim 1 as a representative claim of that group.

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It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See *In re King***, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and ***Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.***, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). "Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention." ***RCA Corp. v. Applied Digital Data Systems, Inc.***, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984), ***cert. dismissed***, 468 U.S. 1228 (1994), ***citing Kalman v. Kimberly-Clark Corp.***, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983). The prior art disclosure need not be expressed in order to anticipate. ***Standard Havens Prods., Inc. v. Gencor Indus., Inc.***, 953 F.2d 1360, 1369, 21 USPQ2d 1321, 1328 (Fed. Cir.), ***cert. denied***, 506 U.S. 817 (1992).

Appellants argue that Ng does not transcode the HD macroblock information into lower resolution SD macroblock information. Appellants state on page 4 of the brief that the instant invention focusses on a method and apparatus which enables an HD image sequence to be transcoded into an SD image sequence by focussing on direct conversion of corresponding HD macroblock information (e.g., HD type, motion vector and

quantizer information) into SD macroblock information (e.g., SD type, motion vector and quantizer information). Appellants argue that Ng's Figure 4 does not transcode HD macroblock information directly into SD macroblock information.

On page 4 of the answer, the Examiner argues that Ng discloses all the claimed subject matter of claim 1. In particular, the Examiner argues that Figure 4 discloses the method for deriving SD macroblock information for said co-sited macroblocks directly from said HD macroblock information so as to form said second digital television signal as recited in Appellants' claim 1. In particular, the Examiner directs us to column 5, line 30, through column 6, line 45, of Ng for support that Ng discloses the direct conversion of the HD macroblock information into the SD macroblock information.

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." ***In re Hiniker Co.***, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998).

We note that Appellants' claim 1 recites the step of deriving from each of the first group of macroblocks, corresponding HD macroblock information. We further note

from the specification and Appellants' arguments that HD macroblock information comprises motion vectors. See page 4 of Appellants' brief and page 3 of the specification.

Turning to Ng, we find that Ng discloses a system shown in Figure 4 which converts directly HDTV compressed digital video signals into a second digital television signal. In particular, in column 5, lines 38 through 59, Ng discloses that motion vectors are directly converted to the second macroblock information, SD macroblock information. Thus, Ng teaches deriving SD macroblock information for said co-sited macroblock directly from said HD macroblock information so as to form a second digital television signal as claimed by Appellants. Therefore, we find that Ng does teach a method which enables direct conversion of HD macroblock information into SD macroblock information.

We answered all of Appellants' arguments. Appellants have chosen not to argue any of the other specific limitations of claim 1 as a basis for patentability. We are not required to raise and/or consider such issues. As stated by our reviewing court in *In re Baxter Travenol Labs.*, 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), "[i]t is not the function of this court to examine the claims in greater detail than argued

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by an appellant, looking for nonobvious distinctions over the prior art." 37 CFR § 1.192(a)(July 1, 1995) **as amended at** 60 Fed. Reg. 14518 (March 17, 1995), which was controlling at the time of Appellants filing the brief, states as follows:

The brief . . . must set forth the authorities and arguments on which appellant will rely to maintain the appeal. Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences.

Also, 37 CFR § 1.192(c)(8)(iii) states:

For each rejection under 35 U.S.C. 102, the argument shall specify the errors in the rejection and why the rejected claims are patentable under 35 U.S.C. 102, including any specific limitations in the rejected claims which are not described in the prior art relied upon in the rejection.

Thus, 37 CFR § 1.192 provides that this board is not under any greater burden than the court to raise and/or consider such issues.

In view of the foregoing, the decision of the Examiner rejecting claims 1 through 4 under 35 U.S.C. § 102 is affirmed, and the decision of the Examiner rejecting claims 1 through 4 under 35 U.S.C. § 112, first paragraph, is reversed.

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

**AFFIRMED**

ERROL A. KRASS	)	
Administrative Patent Judge	)	
	)	
	)	
MICHAEL R. FLEMING	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
JOSEPH F. RUGGIERO	)	
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MRF:psb

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