

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. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** SHANE CHING-FENG HU

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Appeal No. 2002-1133  
Application No. 09/186,754

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ON BRIEF

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Before JERRY SMITH, RUGGIERO, and DIXON, **Administrative Patent Judges**.  
DIXON, **Administrative Patent Judge**.

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 1-3, 5, 6, and 8. Claims 4 and 7 are indicated by the examiner as allowable over the prior art if rewritten in independent form.

We REVERSE.

## BACKGROUND

Appellant's invention relates to a motion compensation performance improvement by removing redundant edge information. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A preprocessor for improving motion compensation performance in a compression encoder comprising:

means for determining a spatial shift between a current image from an input video signal and a reference image from the input video signal, the spatial shift having an integer value and a high precision fractional value;

means for calculating from the high precision fractional value and specified constants a fractional shift value; and

means for resampling the current image according to the fractional shift value so that the current image aligns with a quantizer motion vector grid for the compression encoder, the resampled current image being input to the compression encoder.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Odaka et al. (Odaka)	5,317,397	May 31, 1994
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Girod, Bernd, "Motion-Compensating Prediction with Fractional-Pel Accuracy," 41 IEEE Transactions on Communications no. 4, 604-612 (April 1993).

Claims 1, 2, 5 and 8 stand rejected under 35 U.S.C. § 102 as being anticipated by Girod. Claims 3 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Girod in view of Odaka.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 9, mailed Aug. 28, 2001) for the examiner's reasoning in support of the rejections, and to appellant's brief (Paper No. 8, filed Aug. 3, 2001) for appellant's arguments thereagainst.

### **OPINION**

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

### **35 U.S.C. § 102**

Appellant argues that the claimed invention is directed to a "preprocessor for a compression encoder, i.e., manipulation of the input video signal before being input to the compression encoder." (See brief at page 4.) Appellant argues that the spatial shift of the present invention has both an integer value and a high precision fractional value wherein only the high precision fractional value is used in the preprocessing of the shift. (See brief at page 4.) Appellant argues that this use of the high precision fractional value only distinguishes the preprocessing of the claimed invention from the compression encoder of Girod, which uses both the integer value and the high precision fractional value. (See brief at page 4.)

The examiner maintains that the “displacement estimator and motion compensating predictor of Girod provides and performs the same functions as the preprocessor as claimed, and as such anticipates the claimed limitations.” (See answer at page 7.) With respect to the high precision fractional value and specified constants, the examiner maintains the fraction shift value calculation is being met by the further vector refinement of Girod. (See answer at page 7.) From our review of the disclosure of Girod, we do not find any discussion of high precision fractional values and constants which would provide the recited functional limitations as recited in independent claim 1. Additionally, we find no discussion of a preprocessor structure for processing of an image for input to a compression encoder. Here, the examiner has relied upon the structure disclosed in Girod as the compression encoder to teach the recited functionalities of the preprocessor structure as recited in the language of independent claim 1. While the examiner indicates that the fractional pel-accuracy is the corresponding structure to the claimed “means for determining a spatial shift between a current image from an input video signal and a reference image from the input video signal, the spatial shift having an integer value and a high precision fractional value” and the “means for calculating from the high precision fractional value and specified constants a fractional shift value,” we find no express disclosure of structure to carry out the recited functions, and we do not find that these functions would necessarily be inherent in the disclosure of Girod. Therefore, we disagree with the examiner’s finding that the “displacement estimator and motion compensating predictor of Girod provides

and performs the same functions as the preprocessor as claimed, and as such anticipates the claimed limitations.” (See answer at page 7.) We do not find that the examiner has shown that the functions are carried out in the same manner as recited in the language of independent claim 1. Moreover, in light of appellant’s use of “means plus function” limitations, the examiner has not performed the required analysis for these limitations using the **In re Donaldson**, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994) analysis of the claims under 35 U.S.C. § 112, sixth paragraph. (**See** MPEP § 2181.)

Therefore, we find that the examiner has not established a **prima facie** case of anticipation, and we cannot sustain the rejection of independent claim 1 and dependent claim 5. With respect to independent claim 2, as discussed above, we find no express disclosure of structure or steps to carry out the recited functions, and we do not find that these functions would necessarily be inherent in the disclosure of Girod. Therefore, we find that the examiner has not established a **prima facie** case of anticipation, and we cannot sustain the rejection of independent claim 2 and dependent claim 8.

**35 U.S.C. § 103**

With respect to dependent claims 3 and 6, the examiner merely relies upon the teachings of Odaka to teach the storage of data and we do not find that the teachings of Odaka remedy the deficiencies noted above with the teachings of Girod. Therefore, we find that the examiner has not established a *prima facie* case of obviousness, and we cannot sustain the rejection of dependent claims 3 and 6.

**CONCLUSION**

To summarize, the decision of the examiner to reject claims 1, 2, 5, and 8 under 35 U.S.C. § 102 is reversed, and the decision of the examiner to reject claims 3 and 6 under 35 U.S.C. § 103 is reversed.

**REVERSED**

JERRY SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JOSEPH F. RUGGIERO	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
JOSEPH L. DIXON	)	
Administrative Patent Judge	)	

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