

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(2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT N. HURST, JR.,
SCOTT D. CASAVANT and
PAUL H. MEEHAN

Appeal No. 1997-0900
Application 08/371,039¹

ON BRIEF

Before URYNOWICZ, THOMAS, and KRASS, Administrative Patent
Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed January 10, 1995. According to applicants, this application is a continuation of Application 08/136,387, filed October 13, 1993.

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Appellants have appealed to the Board from the examiner's final rejection of claims 1 through 3 and 5 through 12, which constitute all the claims remaining in the application.

Representative claim 7 is reproduced below:

7. Apparatus for compressing video signal in an MPEG like format using both intraframe coding and interframe coding, comprising:

a signal input terminal for applying said video signal;

a subtractor having a first input terminal coupled to said signal input terminal, a second input terminal and an output terminal for providing residues having a range of amplitude values between relatively larger amplitude values and relatively smaller amplitude values;

compression means including transform means, for compressing signal applied thereto, to generate compressed video signal using said both intraframe coding and interframe coding, wherein said residues are included in intraframe coded and interframe coded compressed output data by said compression means;

an image signal prediction means, including inverse transform means, responsive to said compressed video signal for generating intraframe and interframe predictive signals representing predictions of video signal being encoded, said predictive signals being coupled to the second input terminal of said subtractor; and

a nonlinear element, coupled between the output terminal of said subtractor and said compression means, for attenuating residues having said relatively larger amplitudes less than residues having said relatively smaller amplitudes.

The following references are relied on by the examiner:

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Ishiguro et al. (Ishiguro), "Composite Interframe Coding of NTSC Color Television Signals," IEEE National Telecommunications Conference, Vol. 1, pp. 6.4-1 - 6.4-5 (Nov. 1976).

Grotz et al. (Grotz) EPA 0 346 636 Dec. 20, 1989

Claims 1 through 3 and 5 through 12 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Grotz in view of Ishiguro.

Rather than repeat the positions of the appellants and the examiner, reference is made to the brief and the answer for the respective details thereof.

OPINION

For the reasons set forth by the examiner in the answer, we sustain the rejection of claims 5, 7 and 11, but reverse the rejection of the remaining claims on appeal, claims 1 to 3, 6, 8, 9, 10 and 12.

Turning first to the rejection of claim 12 on appeal we reverse this rejection for the reasons set forth by appellants at pages 7 and 8 of the brief, as well as the reasoning set

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forth at pages 9 and 10 of the brief. Like appellants, we do not agree with the examiner's view that the last recited means of claim 12 relating to the first and second compression modes would have been reasonably taught or suggested to the artisan within

35 U.S.C. § 103 among the collective teachings and suggestions of Grotz and Ishiguro. This feature relates to the embodiment shown

in Figure 4 with the adder 52 and switch 2 in part as explained at page 7 of the brief. The language of this portion of claim 12 requires some kind of switching element inherently to switch between compression modes to apply only residues processed by

the nonlinear element in one mode and apply a combination of residues and predictive signals from the motion compensated compression means to the same motion compensation compression means in a second compression mode, where neither the structure of Ishiguro's Figure 3 nor the structure of Grotz's Figure 5 would have taught or suggested to the artisan this kind of approach.

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Additionally, we reverse the rejection of claim 12 for the reasons set forth by appellants at pages 9 and 10 of the brief relating to the language of claim 12 requiring that the residues in multiple modes are formed into compressed output data by the claimed motion compensated compression means. As well explained by appellants in these pages of the brief, Grotz does not teach or suggest that residues be formed in output data in more than one mode. Similarly, Ishiguro, by its title alone, only relates to interframe coding of video signals.

For reasons similar to the last noted language of claim 12, the rejection of claims 1 and 3 must also be reversed. It is noted that claim 3 is identical to the subject matter of claim 1 with additional recitations as well. Claim 1 is slightly more specific than the noted recitation in claim 12 since claim 1 recites that both the intraframe and interframe coding residues are included in compressed output data by the compression means.

Because claim 2 depends from reversed claim 3, the rejection of claim 2 must also be reversed.

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On the other hand, we sustain the rejection of claim 7 on appeal. Despite the language at the beginning of the claim reciting a multiple mode motion compensated compression apparatus, there is only one recited mode in the body of the claim, where it is recited at the end of claim 7 that the transfer function of the nonlinear processing means is responsive only to "a mode" of the compression apparatus. Because appellants' arguments at pages 9 and 10 of the brief relating to claim 12 admit that in Grotz's circuit that residues are formed into compressed output data in only one mode, the subject matter of claim 7 otherwise obviously would have been met. There are also no arguments presented in the brief directed to claim 7 anyway.

We also sustain the rejection of claim 5 for similar reasons. Claim 5 is not separately argued as well in the brief. In contrast to the subject matter of independent claims 1 and 3 on appeal, there is no recitation in this claim of intraframe and interframe coding. Similarly, the language at the end of claim 5 relating to "different modes" is not distinguished since the meaning or context of the different

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modes is not defined in the claim. Furthermore, the signal processing at the end of the claim is said to occur "differently for different modes" where the word "differently" is broadly recited but not explained as well. The examiner's view as to the operation of the system of Grotz as modified by Ishiguro in the examiner's answer is sufficient in our view to have rendered obvious this broadly defined subject matter in claim 5 on appeal. Again, since the subject matter of claim 11 has not been separately argued by appellants, the rejection of this claim is also sustained.

We also reverse the rejection of dependent claims 6, 8, 9 and 10, all of which depend directly from claim 5, for the reasons set forth at pages 8 and 9 of the brief. The feature of requiring different transfer functions for different compression processes of dependent claim 6 and different transfer functions for different images blocks of claim 8 is not taught or suggested among the collective teachings of Grotz and Ishiguro for the nonlinear elements shown in respective Figures 5 and 3. Again, for reasons related to the initial reason we set forth

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earlier for reversing the rejection of claim 12 on appeal, the bypassing feature of claim 9 is not taught or suggested among the collective teachings of the references relied upon. The feature of dependent claim 10 of conditioning a nonlinear element to provide a linear transfer function in response to a compression mode of a video signal prediction means is not taught or suggested by either reference relied upon by the examiner.

In view of the foregoing, inasmuch as we have sustained only the rejection of claims 5, 7, and 11 within the rejection of claims 1-3 and 5-12 of the claims on appeal, the decision of the examiner rejecting these claims is affirmed-in-part.

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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-IN-PART

	Stanley M. Urynowicz, Jr.)	
	Administrative Patent Judge)	
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	James D. Thomas)	BOARD OF
PATENT)	
	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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