

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONALD C. MEAD

Appeal No. 2000-1501
Application No. 08/745,587

ON BRIEF

Before KRASS, FLEMING and LALL, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-13, all of the pending claims.

The invention is directed to the transmission of information with digital signal processing. Signals representing aural or visual communications are encoded and

decoded. In order to reduce bit rate, a desired result in information transmission, the invention compresses data by representing segments of the information by symbols corresponding to generic objects that may be recognized from content in the aural or video information. To the extent that portions of the content can be identified as corresponding to generic objects housed in libraries containing generic object sets in the encoder and decoder, only the symbol for the generic content, and the unrecognized material need be encoded for transmission and decoded after transmission and thereby substantially reduce the amount of information that must actually be conveyed in the digital data stream.

Representative independent claim 1 is reproduced as follows:

1 . A system for transferring a data signal including a transmitter having an encoder and a receiver having a decoder, comprising:

said encoder including a object selector for identifying a signal segment from the group of speech, audio, video and graphic signals, each selected segment comprising a representation of an information quantity;

wherein said encoder includes a plurality of encoder libraries, one of said libraries containing a generic feature representation of an information quantity and a symbolic code corresponding to said generic feature representation of said information quantity; and

said decoder having a second plurality of libraries corresponding to said plurality of encoder libraries, and one of said decoder libraries containing said generic feature representation of said information quantity and said symbolic code corresponding to said generic feature information quantity.

The examiner relies on the following references:

Crayson	4,783,841	Nov. 08, 1988
Toyokawa	4,901,363	Feb. 13, 1990
Endoh et al. (Endoh)	4,922,545	May 01, 1990
Feng	5,592,227	Jan. 07, 1997 (filed Sep. 15, 1994)
Dachiku et al. (Dachiku)	5,592,228	Jan. 07, 1997 (filed Mar. 02, 1994)

Claims 1-13 stand rejected under 35 U.S.C. § 103 . As evidence of obviousness, the examiner cites either Toyokawa or Feng with regard to claim 1, and cites Endoh and Crayson with regard to claims 2-9 and 11, adding Dachiku to this combination with regard to claims 9 (again), 10, 12 and 13.

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

OPINION

We will not sustain the rejection of claim 1 under 35 U.S.C. § 103 based on Toyokawa because Toyokawa neither discloses nor suggests the claimed decoder library that contains the generic feature representation and the symbol that identifies the generic feature in the encoder library.

The examiner points to column 6, lines 45-68 of Toyokawa for a teaching of encoder libraries containing a generic feature representation of an information quantity and a corresponding symbolic code. The examiner relies on the tables of Toyokawa as

“libraries” and points out that they “both provide for symbolic codes.” We agree with appellant’s assessment that this portion of Toyokawa teaches a comparison of tech/graphic dominant states and dither states from bit patterns, not generic features being recognized or compared, as claimed. Further, we find no corresponding decoding libraries, as claimed. While the examiner relies on column 1, lines 53-56, and the first full paragraph of column 8, in Toyokawa, for this teaching, our review of the cited portions indicates only a “reverse” sequence from the coding steps, i.e., decoding, but this is a far cry from suggesting that any decoding sections in Toyokawa would have a “second plurality of libraries corresponding to said plurality of encoder libraries...,” as claimed.

With regard to Feng, we agree with the examiner that Feng suggests libraries at the encoder and the decoder, but these “libraries,” or tables, include entries corresponding to information patterns. While appellant argues that there is no suggestion therein that these patterns represent generic objects, as intended in the instant application, because “generic objects” in the library means that the library sets may be unrelated to the information stream to be transmitted in a compressed form through the system, we note that instant claim 1 does not require library sets which “may be unrelated to the information stream to be transmitted in a compressed form.”

The examiner points out that the encoder and decoder libraries of Feng obviously contain a generic feature representation of an information quantity and a corresponding symbolic code as provided by the tables in at least Figure 5, “since the information therein is at least generic to at least the different image features of low and sharp variations common or ‘generic’ to all images” [answer-page 6]. Thus, the examiner has given a broad, yet apparently reasonable, interpretation to the term “generic”

While appellant argues that Feng does not disclose “generic objects” in the libraries, appellant has not presented any convincing argument or evidence as to why the objects in Feng’s table may not be considered to be “generic” even though the examiner has reasonably explained why the objects are considered to be “generic,” i.e., because information is common to all images.

Appellant also argues that Feng does not disclose that the claimed library sets *may* be unrelated to the information stream. First, claim 1 requires no such limitation. But, in any event, the fact that appellant is arguing that a claimed distinction is that library sets *may* be unrelated to the information stream, means that even in appellant’s view, the library sets *may* also be related to the information stream. Therefore, by the language of the very argument employed by appellant, it would appear that the library

Appeal No. 2000-1501
Application No. 08/745,587

sets of the instant invention may be related or unrelated to the information stream, which means that either way would meet the limitation argued (but not claimed) by appellant.

Accordingly, while we have not sustained the rejection of claim 1 under 35 U.S.C. § 103 over Toyokawa, we do sustain the rejection of claim 1 under 35 U.S.C. § 103 over Feng.

We now turn to the rejection of claims 2-9 and 11 under 35 U.S.C. § 103 over Endoh in view of Crayson.

The examiner clearly sets forth the application of Endoh to claims 2-9 and 11, at pages 6-8 of the answer, adding Crayson for a showing of a bit stream consisting of an unrecognized signal and a symbolic code. The examiner contends that it would have been obvious to provide for an unrecognized signal in Endoh since “this can provide for using fewer groups of data, as well as fewer libraries, thus providing for less data to transmit and for a simpler system” [answer-page 7]. The examiner appears to have set forth a reasonable case for obviousness, shifting the burden of proof to appellant.

For his part, appellant argues that Endoh fails to provide for generic objects in a library as defined in the claims. However, “generic objects” is not defined or given any special meaning in the claims and the examiner has held that Endoh discloses “generic

objects” since a signal which is encoded is representative of an “object.” Moreover, the examiner points to blocks 4, 6 and 7 in Figure 1 of Endoh for a showing of an “object encoder with an object library assigning a symbolic code to the generic object identifying a generic object from a set” [answer-page 6].

Without a specific argument as to why Endoh is not suggesting “generic objects,” as claimed, we are unconvinced of non-obviousness by appellant. Moreover, appellant argues that Endoh does not teach or suggest “the use of generic object libraries in order to improve compression without any correlation between the patterns and the image information input into the system” [principal brief-page 5]. This argument is not persuasive as it is based on limitations not appearing in the claims, i.e., that there is no correlation between patterns, or objects, and the image information input into the system.

In arguing claim 11, at page 6 of the principal brief, appellant again argues that the objects in the instant claims have no predetermined relationship to the information to be conveyed. Again, appellant has pointed to no specific claim language which sets forth this argued limitation.

In the reply brief, e.g., page 5, appellant argues that the recitation of a “generic” object inherently refers to objects that are generic, and therefore composed without

regard to the particular information sequences being sent or the changes inherent in those sequences. However, this appears to be a much narrower definition than the language of the claims would appear to require. There is no claim requirement that “generic” objects must be unrelated to the information sequences. Appellant’s argument is unconvincing in this regard.

Accordingly, we will sustain the rejection of claims 2-9 and 11 under 35 U.S.C. § 103.

Finally, we turn to the rejection of claims 9, 10, 12 and 13 under 35 U.S.C. § 103 over Endoh and Crayson, in view of Dachiku.

The examiner relies on Dachiku to provide the teaching of motion estimation of a first and second video frame to a multiplexer and for variable length coding, pointing to block 5 of Figure 1. The examiner concludes that it would have been obvious to use the motion estimation of Dachiku since this provides for efficient motion compensation around the contours and for estimating fine motions of human objects as provided by Dachiku at column 4, lines 50-57.

Appellant’s arguments, at page 7 of the principal brief, relate to Dachiku failing to provide for the generic object libraries deficiencies of the primary references. However, for the reasons, supra, we do not regard the primary references as having such deficiencies. Accordingly, this argument is unconvincing.

Appeal No. 2000-1501
Application No. 08/745,587

In arguing claims 12 and 13, appellant urges that “[d]espite the reliance on patterns unrelated to the information content, the system generates the corresponding generic object that was transmitted as a symbol, and generates an information sequence combining the generic feature with the unrecognized information portion” [principal brief-page 7].

Once again, we point out that the instant claims are not so narrow as to limit the “generic object” to patterns or objects “unrelated to the information content.” In accordance with the broad claim language, a generic object may or may not be related to the information content of a signal. Therefore, this argument is unpersuasive of nonobviousness.

While we recognize that there may, in fact, be unobvious and patentable differences between the instant disclosed invention and that taught by the applied references, we are unconvinced of nonobviousness of the instant *claimed* subject matter based on the arguments presented by appellant.

We have not sustained the rejection of claim 1 under 35 U.S.C. § 103 as unpatentable over Toyokawa but we have sustained the rejection of claim 1 under 35 U.S.C. § 103 as unpatentable over Feng and we have sustained the rejections of claims 2-13 under 35 U.S.C. § 103.

Appeal No. 2000-1501
Application No. 08/745,587

Accordingly, the examiner's decision is affirmed.

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)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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PARSHOTAM S. LALL)	
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Appeal No. 2000-1501
Application No. 08/745,587

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