BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Publication in the Official Journal ~~Yes~~ / No

File Number: T 454/91 - 3.5.1

Application No.: 87 100 986.5

Publication No.: 0 255 152

Title of invention:

Classification: H04N 7/133

D E C I S I O N
of 18 December 1991

Proprietor of the patent: N.V. Philips' Gloeilampenfabrieken

Headword:

EPC Articles 123(2), 84, 111(1)

Keyword: "Added subject-matter (no)" - "Remittal to Examining Division upon request"

Headnote

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number : T 454/91 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 18 December 1991

Appellant : N.V. Philips' Gloeilampenfabrieken
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Decision under appeal : **Decision of Examining Division of the European Patent Office dated 17 April 1991 refusing European patent application No. 87 200 986.5 pursuant to Article 97(1) EPC.**

Composition of the Board :

Chairman : P.K.J. van den Berg
Members : R. Randes
F. Benussi

Summary of Facts and Submissions

I. European patent application No. 87 200 986.5 (publication No. 0 255 152) was refused by a decision of the Examining Division dated 17 April 1991. That decision was taken on the basis of Claims 1 to 22 as filed on 17 September 1990 and comprised the amendments suggested in Applicant's letters of 7 December 1990 and 30 January 1991.

II. It is understood from the decision that the reason for the refusal was that the independent Claims 1 and 18 as well as the dependent Claim 7 contained subject-matter that extended beyond the content of the application as filed (Article 123(2) EPC). Moreover Claims 1 and 18 were considered to be obscure.

Refused Claim 1 reads as follows:

"A method of recording video information in a record carrier with the record carrier having a nominal speed, and of reproducing said video information from the record carrier, wherein during recording each picture (1) to be recorded of a sequence of pictures comprising NxM picture elements is divided into subpictures (2) of nxm picture elements, the video information of each subpicture being encoded in accordance with a transform coding (T_1, T_2, ...) in such a way that the video information of corresponding subpictures of a specific picture and of a next picture are compared with each other, a subpicture (11.1) of a specific picture (B_1) is encoded in accordance with a first transform coding (T_1) and the corresponding subpicture (11.2) of the next picture (B2) is encoded in accordance with the same transform coding (T_1) if the difference between the video information of the two subpictures exceeds a specific first value and in that the corresponding subpicture (11.2) of the next picture is

encoded in accordance with a second transform coding (T_2) if the difference between the video information of the two subpictures is smaller than or equal to the first value, so that utilizing the results of the first transform coding (T_1) applied to the first-mentioned subpicture (11.1), the second transform coding (T_2) provides a more accurate coding of the video information of the subpicture (11.2) of the next picture, the encoded information of each subpicture being recorded on the record carrier (10), together with transform coding information about the kind of transform coding applied to the video information of the subpicture (fig. 4a), wherein during reproduction with the record carrier (10) having a nominal speed, the encoded information of each subpicture together with the corresponding transform coding information is read from the record carrier, and the encoded information of each subpicture is decoded in accordance with a specific transform decoding in relation to the transform coding information corresponding to the relevant subpicture, such that if the relevant subpicture (12.1) of the picture read at the relevant instant has been coded in accordance with the first transform coding (T_1) during recording, the information of the relevant subpicture thus read is subjected to a coding which is the inverse of said first transform coding (T_1^{-1}) and, if the relevant subpicture (12.2) of the picture read at the relevant instant has been encoded in accordance with the second transform coding (T_2) during recording, the information of the relevant subpicture thus read is subjected to a coding which is the inverse of said transform coding (T_2^{-1}) so as to obtain a more accurate subpicture at said instant (fig. 5a) and the video information for consecutive pictures of NxM picture elements is derived from the video information of consecutive subpictures of nxm picture elements, characterized in that during recording a first motion code (mc_1) is assigned to the subpicture (11.1) of

the first mentioned picture (B1) and, if the difference between the video information of the two subpictures is smaller than or equal to the first value the first motion code (mc_1) is assigned to the subpicture (11.2) of the next picture (B2), and that if the difference between the video information of the two subpictures (20.2, 20.3) exceeds the first value, a second motion code (mc_2) is assigned to the subpicture of the next picture, and in that the motion codes together with the encoded video information and the transform coding information of the associated subpictures are recorded on the record carrier, and in that during reproduction together with the encoded video information of and the transform coding information for each subpicture, the motion code associated with said subpicture is read from the record carrier, and if during reproduction with the record carrier having a speed other than the nominal speed (fig. 6), the transform coding information of a subpicture of a picture read at a specific instant relates to the second transform coding, and the transform coding information of a corresponding subpicture of a previously read picture relates to the first transform coding and if the motion codes of both subpictures are not the same, the information of the subpicture read from the record carrier at said specific instant is not subject to the coding which is the inverse of the second transform coding so as to provide a more accurate subpicture at said instant."

Claims 7 and 18 also included the phrase "the record carrier having a speed other than the nominal speed" in accordance with Claim 1.

The Examining Division pointed out that the said phrase "during reproduction the record carrier has a speed other than the nominal speed" also "comprises speeds which are lower than the nominal". However, such lower speeds were

said not to be disclosed in the original description and therefore it was concluded that the subject-matters of said claims were not supported by the original disclosure.

Moreover the Examining division stated:

"In the last three lines of present Claim 1, there is indicated that "... the information of the subpicture read from the record carrier at said specific instant is not subjected to the coding which is the inverse of the second transform coding so as to provide a more accurate subpicture at said instant". This statement, however, leaves it open as to what information is in fact used to obtain the subpicture of the picture read at said specific instant. Original Claim 15 and original descriptive page 28, lines 23-28 and present sub-claim 2 as well clearly indicate in this context that the corresponding subpicture of the picture previously read is repeated. However, such a feature is not claimed in Claim 1 so that this claim appears to be incomplete since it does not contain any information as to in what manner the information read from the record carrier at said specific instant is to be decoded."

Therefore Claim 1 was also considered to be "obscure and incomplete with respect to the wording in the three last lines of this claim". Also Claim 18 contained a corresponding obscurity.

III. The Appellant lodged an Appeal against the decision on 5 June 1991. In the Statement of Grounds he contested the findings of the decision of the Examining Division and requested a cancellation of the said decision.

IV. In a communication pursuant to Article 11(2) of the RPBA the Board expressed its provisional view that the Claims 1, 7 and 18 contained features which violated Article 123(2) EPC and that Claims 1 and 18 did not appear to contain all essential features (Article 84 EPC).

V. With a letter filed before the oral proceedings the Appellant filed a set of claims of a main request and moreover four sets of claims according to four auxiliary requests. However, in the course of the oral proceedings the Appellant withdrew his previous requests and requested only that the decision under Appeal be set aside and that the case be remitted to the first instance for further prosecution.

The Appellant argued that the original application documents in fact did disclose that during reproduction the record carrier according to the invention could have a speed lower than the nominal speed. He stated that it would be implicitly clear to a skilled man that the method disclosed in connection with Figure 6 in the application would be applicable also to lower speeds than the nominal speed. From the said Figure and the corresponding text it was self-evident to a skilled man that the motion codes according to the invention had to be used when some of the subpictures were skipped (i.e. when they were not read). It was therefore self-evident to a skilled man that this method also should be used when having a lower speed, since in that case it was also necessary to skip intermediate subpictures before a decodable subpicture (a sub-picture that was "in-phase" with the one previously read) could be found.

Having regard to the second objection made by the Examining Division as well as the Board, the Appellant argued that it was implicitly disclosed in the application

that it was not necessary to repeat the corresponding subpicture of the picture previously read according to the invention. It was up to the skilled man to choose whether he wanted to repeat one of the subpictures previously read or not. Also other solutions were possible, e.g. not to decode at all (a mute subpicture). Thus there were different possibilities to get a simplified reproduction. In order to avoid misunderstandings the Appellant had according to all of the said withdrawn requests in Claim 1 deleted the last phrase of the refused Claim 1 "so as to provide a more accurate subpicture at said instant".

Reasons for the Decision

1. The appeal complies with Articles 106-108 and Rule 64 EPC and is, therefore, admissible.

2. The Board notices that according to the original introductory part of the description (the bridging paragraph between pages 2 and 3) the object of the invention is:

"to provide steps which enable trick modes to be used, whilst maintaining the advantage of interframe coding, i.e. the very efficient data reduction (far more efficient than in intrafield/frame coding). This means that reproduction is possible at different speeds in the forward or reverse direction, at normal speed or, conversely, reduced speed."

The Board also notices that the introductory part of the description following that citation identifies the invention (e.g. the method and apparatus which at the time for filing of the application were considered as the invention) and its embodiments. Nowhere in the said following part of the introductory part of the description

there are conditions mentioned regarding the speed to be used for the different embodiments. In fact nowhere in that part a reference has been made to the speed of the record carrier. Also the original claims are silent on this point. Nowhere in the claims there is an indication that they identify a subject-matter that only corresponds to a certain speed range. Therefore it appears to the Board that the original introductory part of the description and the original claims propose that the present invention is intended to be used for different speeds as said in the cited part of the description above. Thus also lower speeds appear to be included ("trick modes" include lower speeds). In fact the impression is given that the pure introduction of the motion codes makes it possible to perform the invention.

It is true that Figure 6 and the corresponding text relates to a higher speed than the nominal speed. However, the Board feels that - when having regard to the whole description - this part of the description in no way contradicts the introductory part of the description, but only gives one example of using the motion codes - i.e. at a higher speed. This example according to Figure 6 was apparently considered by the inventor to be sufficient to show the principle of the invention, i.e. to show that motion codes have to be used when intermediate subpictures are skipped in order to obtain an acceptable picture. To a skilled man it is, however, self-evident to skip intermediate subpictures as well when the speed is lower than the nominal speed (see above under V).

The Board has therefore arrived at the opinion that the invention according to the original documents also covers the case when the record carrier has a speed which is lower than the nominal speed.

3. The Board has also arrived at the opinion that the last part of Claim 1, as proposed by the Appellant in the oral proceedings, that

"the information of the subpicture read from the record carrier at said specific instant is not subjected to a coding which is the inverse of the second transform coding",

is acceptable and in conformity with Article 84 and 123(2) EPC (thus the very last phrase of refused Claim 1 "so as to provide a more accurate subpicture at said instant" has been deleted).

Thus the Board fully agrees with the arguments put forward by the Appellant in the oral proceedings (see under V above) regarding this matter. Moreover the following additional observations are made:

1. Original Claim 14 states that in the said situation (when the motion codes of two subsequent subpictures read are not the same) the information of the two subpictures read is not combined. It appears that the skilled man from this original dependent claim immediately would draw the conclusion that it is possible to introduce a mute subpicture, although this possibility is not explicitly mentioned in the original application documents.

2. According to original Claim 15 (the very last part) the corresponding subpicture of a (not "the") picture previously read is repeated. Thus it is clearly expressed in this original Claim 15 that different subpictures can be repeated.

Thus the amended last part of refused Claim 1 appears to give an appropriate definition of the method step concerned and includes the essential features necessary in respect to that step.

Order

For these reasons, it is decided that:

1. The contested decision is set aside.

2. The application is remitted to the examining Division for further prosecution.

The Registrar: The Chairman:

M. Kiehl P.K.J. van den Berg

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