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**Datasheet for the decision
of 20 December 2011**

Case Number: T 1491/06 - 3.5.04

Application Number: 99113786.0

Publication Number: 0954182

IPC: H04N 7/30

Language of the proceedings: EN

Title of invention:

Apparatus for preventing rounding errors at inverse transforming of transform coefficients of a motion picture signal

Patentee:

Sony Corporation

Opponent:

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Headword:

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Relevant legal provisions:

EPC Art. 123(2)

Relevant legal provisions (EPC 1973):

EPC Art. 84

Keyword:

"General principles - double patenting (no - after amendment)"

Decisions cited:

G 0001/05, G 0001/06, T 1391/07

Catchword:

See point 3.2 of the reasons



Case Number: T 1491/06 - 3.5.04

D E C I S I O N
of the Technical Board of Appeal 3.5.04
of 20 December 2011

Appellant: Sony Corporation
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 30 March 2006
refusing European patent application
No. 99113786.0 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

Chairman: F. Edlinger
Members: A. Dumont
B. Müller
M. Paci
T. Karamanli

Summary of Facts and Submissions

- I. The appeal is directed against the decision to refuse European patent application No. 99 113 786.0, which is a divisional application of European patent application No. 98 119 828.6 (the "parent" application in the following), for which European patent No. 0 903 944 was granted (the "parent" patent in the following). The parent application is in turn a divisional application of European patent application No. 94 907 708.5 (the "grand parent" application in the following).

- II. The examining division refused the application on the grounds that the claims filed by the then applicant with the letter of 1 August 2003 were identical to the claims granted in the parent application, which was not allowable since double patenting was prohibited under Article 125 EPC 1973. The examining division further considered that the prohibition of double patenting could also be regarded as a specific case of the general concept of legitimate interest in the proceedings, which itself was a generally recognised principle of procedural law.

- III. Further European patent applications No. 10 011 642.5 and No. 10 011 843.9 were filed by the appellant as divisional applications of the present application.

- IV. With the statement of grounds of appeal the appellant filed sets of claims according to first to fourth auxiliary requests. The appellant requested that the appeal be suspended and that questions be referred to the Enlarged Board of Appeal in the event that none of

- the main or auxiliary requests were granted. He further requested oral proceedings.
- V. In an annex to the summons to oral proceedings, the board observed *inter alia* that claim 1 according to the first auxiliary request appeared either to only partially overlap (within the meaning of T 1391/07) with claim 1 in the parent patent or to further limit it, so that no problem of double patenting appeared to arise. However, the board raised the issue whether claim 1 infringed Article 123(2) EPC and Article 84 EPC 1973.
- VI. With a letter dated 4 February 2011 the appellant filed *inter alia* application documents of a new main request, consisting in page 13 of the description and page 47 containing (a single) claim 1 replacing pages 13 and 47 to 54 of the application then on file, claim 1 being based on claim 1 according to the previous first auxiliary request and containing amendments addressing the issues raised by the board.
- VII. On 3 March 2011 the board informed the appellant that the main request overcame the objection of double patenting which was the only reason for refusal in the decision under appeal. Therefore, the board intended to remit the case to the examining division for further prosecution on the basis of the main request and to issue a decision in writing. The appellant was invited to inform the board whether he maintained his request for oral proceedings under these circumstances.
- VIII. In a letter dated 7 March 2011 the appellant withdrew the request for oral proceedings conditional upon

remitting of the application to the examining division for further prosecution on the basis of the main request and issuance of a decision to the effect that the main request overcame the objection of double patenting.

IX. Claim 1 refused by the examining division is identical to claim 1 in the parent patent. It reads as follows:

"An apparatus (14) for pre-processing a set of transform coefficients, each of the transform coefficients having parity, to provide an error-immune set of transform coefficients for processing by an inverse orthogonal transform, the error-immune set of transform coefficients being immune to rounding errors when subject to the inverse orthogonal transform, the apparatus comprising:
an accumulator (23A), for receiving the sum of the transform coefficients in the set and providing a sum having parity;
parity judgement means (21), for receiving the sum from the accumulator and judging the parity of the sum;
parity inverting means (28), operating when the parity judgement means (21) judges that parity of the sum is even, for inverting the parity of one of the transform coefficients to provide a parity-inverted transform coefficient such that the parity of the sum would be odd; and
means for providing the transform coefficients including the parity-inverted transform coefficient as the error-immune set."

X. The single claim 1 according to the main request reads as follows:

"A sum oddifying circuit (14,35) for receiving a block of DCT coefficients and processing them to output a block of sum-oddified DCT coefficients thereby to prevent a mismatch error from occurring when the block of sum-oddified DCT coefficients is inversely orthogonally transformed by inverse discrete cosine transform processing, said circuit comprising: an accumulator (23A) for determining the sum of the DCT coefficients in the block of DCT coefficients; a parity judgment circuit (21) for judging whether the sum of DCT coefficients determined by the accumulator (23A) is an odd number or an even number; and a parity inverter (28) for changing the parity of at least one of the DCT coefficients in the block to make the parity of the sum of the DCT coefficients odd only when the parity judgment circuit judges that the parity of the sum of the DCT coefficients is even."

XI. The appellant's arguments may be summarised as follows, insofar as they are relevant for the present decision.

Defining the sum oddifying circuit such as "to output a block of sum-oddified DCT coefficients thereby to prevent a mismatch error from occurring when the block of sum-oddified DCT coefficients is inversely orthogonally transformed by inverse discrete cosine transform processing" overcomes the issues raised in the board's communication. Furthermore, since claim 1 is limited to the transform being a Discrete Cosine Transform, there is no problem of double patenting.

Reasons for the Decision

1. The appeal is admissible.
2. Article 123(2) EPC and Article 84 EPC 1973

Immunity against mismatch errors when processing the coefficients by the inverse transform is consistently described as being at the heart of the invention (see for instance paragraphs [0031], [0043], [0077], [0078] and [0183] of the present application as published). Defining in claim 1 according to the main request the sum oddifying circuit such as "to output a block of sum-oddified DCT coefficients thereby to prevent a mismatch error from occurring when the block of sum-oddified DCT coefficients is inversely orthogonally transformed by inverse discrete cosine transform processing" reflects this essential aspect of the invention and is disclosed in paragraph [0110] of the present application as published, corresponding to page 23, lines 13 to 22 of the description as originally filed.

As a result, the board sees no reason to maintain the objections which were raised in its communication against claim 1 according to the then first auxiliary request.

3. The prohibition of double patenting
 - 3.1 Prohibition of double patenting the subject-matter of the same claims as those of the parent patent was the

sole ground for refusing the present application (see point II above).

3.2 In its decisions in cases G 1/05 and G 1/06 handed down on 28 June 2007 (OJ EPO 2008, 271 and 307, respectively) the Enlarged Board of Appeal held *obiter* (see point 13.4 of the identical Reasons):

"The Board accepts that the principle of prohibition of double patenting exists on the basis that an applicant has no legitimate interest in proceedings leading to the grant of a second patent for the same subject-matter if he already possesses one granted patent therefor." The board in decision T 1391/07 (not published in OJ EPO, point 2.6 of the Reasons), referring to the above decisions of the Enlarged Board, saw no basis for extending the existing practice to "cover claims not defining the same subject-matter but conferring... a scope of protection overlapping with each other only partially in the sense that some, but not all of the embodiments notionally encompassed by one of the claims would also be encompassed by the other one of the claims." The present board agrees with this view.

3.3 Whether the subject-matter of the single claim (claim 1) of the main request, as amended during the appeal proceedings, is the same as subject-matter claimed in a patent already granted to the appellant is therefore decisive.

3.4 The subject-matter claimed in the parent patent

3.4.1 Claim 1 in the parent patent essentially relates to an apparatus for pre-processing a set of transform

coefficients, comprising an accumulator, parity judgement means, parity inverting means to provide a parity-inverted transform coefficient such that the parity of the sum would be odd, and means for providing the transform coefficients as a set of transform coefficients which is error-immune when subject to the inverse orthogonal transform.

Claim 1 according to the main request in the present case relates to a sum-oddifying circuit for processing a block of DCT coefficients comprising an accumulator, a parity judgment circuit and a parity inverter, in order to output a block of sum-oddified DCT coefficients to prevent a mismatch error when the block is inversely orthogonally transformed.

Thus these claims essentially differ in that transform coefficients in general are processed according to claim 1 of the parent patent, whereas DCT coefficients are processed according to claim 1 of the main request on file. The Discrete Cosine Transform (DCT) is a particular instance of an orthogonal transform. As a result, claim 1 according to the main request is at least in this respect distinct from claim 1 of the parent patent.

- 3.4.2 DCT coefficients are recited in dependent claim 2 of the parent patent, however with the additional limitation that the parity inverting means (corresponding to the parity inverter (28) in claim 1 according to the main request) is adapted to invert the parity of one of the transform coefficients other than the transform coefficient representing the DC component.

- 3.4.3 As a result, the subject-matter of present claim 1 is not the same as the subject-matter of either of claims 1 or 2 in the parent patent.
- 3.5 The subject-matter in other applications by the same appellant
 - 3.5.1 In the decision under appeal no objection of double patenting was raised with respect to the grand parent application No. 94 907 708.5, which matured into European patent No. 0 638 218. Dependent method claim 2 of this grand parent patent sets out DCT coefficients in a step having in substance the same further limitation as dependent apparatus claim 2 of the parent patent (see section 3.4.2 above). As a result, the subject-matter of present claim 1 is not the same as the subject-matter of claim 2 of the grand parent patent.
 - 3.5.2 Further European patent applications No. 10 011 642.5 and No. 10 011 843.9 have been filed by the appellant as divisional applications of the present application. However, no patent has been granted so far on the basis of these later-filed applications. Consequently, no issue of double patenting arises in the present case.
4. In conclusion, the subject-matter of claim 1 of the main request is different from subject-matter of a patent already granted to the appellant. Hence claim 1 overcomes the grounds for refusal and the decision under appeal is to be set aside.
5. The examining division raised other objections during the examination proceedings, for instance lack of

novelty and inventive step. These objections were not addressed in the decision under appeal. In view of these objections, of the amendments to claim 1, and of the pending further divisional applications, the board considers it appropriate to grant the appellant's request that the present application be remitted to the examining division for further prosecution on the basis of the main request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution.

The Registrar

The Chairman

K. Boelicke

F. Edlinger