

Internal distribution code:

- (A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [X] To Chairmen
(D) [-] No distribution

**Datasheet for the decision
of 19 December 2012**

Case Number: T 1847/08 - 3.5.04

Application Number: 00941109.1

Publication Number: 1169864

IPC: H04N7/26

Language of the proceedings: EN

Title of invention:

METHOD FOR GENERATING AND PROCESSING TRANSITION STREAMS

Applicant:

Right Chance Inc.

Headword:

Relevant legal provisions:

EPC 1973 Art. 54(1), 84
EPC Art. 123(2)
RPBA Art. 12(4), Art. 13(1)

Keyword:

Main request - not admitted
Novelty - (no)

Decisions cited:

G 0010/93

Catchword:

See section 1.



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1847/08 - 3.5.04

D E C I S I O N
of the Technical Board of Appeal 3.5.04
of 19 December 2012

Appellant: Right Chance Inc.
(Applicant) P.O. Box 3340
Road Town, Tortola (VG)

Representative: Meldrum, David James
D Young & Co LLP
120 Holborn
London EC1N 2DY (GB)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 7 July 2008 refusing European patent application No. 00941109.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: F. Edlinger
Members: C. Kunzelmann
C. Vallet

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division to refuse European patent application No. 00 941 109.1 under Article 97(2) of the European Patent Convention (EPC).
- II. The decision under appeal was based on the grounds that claim 1 contained subject-matter which extended beyond the content of the application as filed (Article 123(2) EPC), that claims 1 and 3 were not clear (Article 84 EPC 1973), and that the subject-matter of claim 1 did not involve an inventive step (Article 56 EPC 1973) over document
- D3: WO 97/08898 A1.
- III. The applicant appealed. With the statement of grounds of appeal the appellant filed new claims 1 to 11.

Claim 1 reads as follows:

"A method for generating a transition stream (230) in a system for processing transport streams including image frames, the transition stream being for frame accurate transitioning from a first transport stream (210) to a second transport stream (220) in a substantially seamless manner, said method comprising:
decoding (1220) a portion of said first transport stream ending at a predetermined out-frame representing a last display order image of said first transport stream to be presented, to create a first stream of decoded frames ending at, when considered in display order, the predetermined out-frame;
decoding (1230) a portion of said second transport stream starting at a predetermined in-frame

representing a first display order image frame of said second transport stream to be presented, said decoding comprising decoding of frames back to the preceding I-frame if the predetermined in-frame is not an I-frame, to create a second stream of decoded frames starting at, when considered in display order, the predetermined in-frame;
processing (1240), using a pixel domain process (1245), at least one of said decoded image frames in the first and second streams of frames;
encoding (1250) the first and second streams of decoded frames, including said predetermined out-frame and said predetermined in-frame, to produce said transition stream."

IV. The board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to a summons to oral proceedings. *Inter alia*, the board raised doubts as to whether the removal of an unclear feature (non-video data) from independent claim 1 to dependent claim 3 could be considered as an appropriate reaction and thus as an admissible amendment of the claims upon appeal (Article 12(4) RPBA).

V. With a letter dated 15 November 2012 the appellant filed claims 1 to 8 according to a main request and claims 1 to 7 according to a first auxiliary request.

VI. Claim 1 of the main request reads as follows:

"A method for generating a transition stream (230) in a system for processing transport streams including image frames, the transition stream being for frame accurate transitioning from a first transport stream (210) to a

second transport stream (220) in a substantially seamless manner, said method comprising:

decoding (1220, 1310) a portion of said first transport stream ending at a predetermined out-frame representing a last display order image of said first transport stream to be presented, to create a first stream of decoded frames ending at, when considered in display order, the predetermined out-frame;

decoding (1230, 1330) a portion of said second transport stream starting at a predetermined in-frame representing a first display order image frame of said second transport stream to be presented, said decoding comprising decoding of frames back to the preceding I-frame if the predetermined in-frame is not an I-frame, to create a second stream of decoded frames starting at, when considered in display order, the predetermined in-frame;

processing (1240, 1350), using a pixel domain process (1245, 1352), at least one of said decoded image frames in the first and second streams of frames;

encoding (1250, 1360) the first and second streams of decoded frames, including said predetermined out-frame and said predetermined in-frame, to produce said transition stream, said encoding comprising reserving (1315) a plurality of transport packets within said transition stream, said reserved packets not being utilized [to] store encoded image information;

wherein the decoded streams each include non-video data associated with at least one decoded image frame of each of the first and second decoded streams, and where the non-video data is not necessarily frame-aligned to an image frame to which it relates, said non-video data comprising at least one of audio data, meta-data, ancillary data and auxiliary data, the method further comprising:

extracting (1320, 1340), from said first and second transport streams, non-video data associated with said image frames used to form said transition stream, the extracting comprising:

extracting (1320) from the first transport stream non-video data associated with the first stream of decoded frames from, in display order, a frame (410-TRAN) corresponding to the first frame of the transition stream up to an extent boundary (410-EXT) of the non-video data associated with the frames of the first stream of decoded frames;

extracting (1340) from the second transport stream non-video data associated with the second stream of decoded frames from, in display order, an extent boundary (420-EXT) of the non-video data associated with the frames of the second stream of decoded frames up to the predetermined up to a frame (420-TRAN) corresponding to the final frame of the transition stream;

and

inserting (1360), into said transition stream, said extracted non-video data, the inserting comprising inserting the non-video data associated with the frames of the first and second streams of decoded frames as non-video data associated with the frames of the transition stream, said inserting comprising utilizing (1365) at least a portion of said reserved plurality of transport packets to store said extracted non-video data."

Claim 1 of the first auxiliary request has the same wording as claim 1 filed with the statement of grounds of appeal.

VII. Oral proceedings before the board were held on 19 December 2012. In the oral proceedings the

appellant's final request was that the decision under appeal be set aside and that a patent be granted on the basis of the claims of either the main request or the auxiliary request, both filed with the letter dated 15 November 2012. In case the board did not admit either of these requests, the board was requested to take a decision on the basis of the claims filed with the statement of grounds of appeal as a second auxiliary request.

At the end of the oral proceedings the chairman announced the board's decision.

VIII. The reasons for the decision under appeal may be summarised as follows:

The feature of the out-frame and the in-frame being "predetermined" was not disclosed in the application as filed (Article 123(2) EPC). The original application instead disclosed the out-frame and the in-frame as "desired". Moreover, it was not clear how the determination for the out-frame and in-frame was made and which frames were actually decoded and displayed when the transmission and display order were not identical, as in MPEG streams (Article 84 EPC 1973).

Furthermore, the decoding step of the second transport stream was unclear because the decoding was specified as starting at the predetermined in-frame but in most cases would start earlier since the in-frame would not be an I-frame. Moreover, the nature and the role of the non-video data were not clear (Article 84 EPC 1973).

The claimed method differed from that disclosed in D3 only if one assumed that the non-video data were e.g. audio data or meta data. However, it would have been

obvious to a person skilled in the art to include audio data in the transition stream to avoid sudden muting (Article 56 EPC 1973).

IX. The appellant's arguments may be summarised as follows:

The claims of both the main request and the first auxiliary request were a reaction to the board's communication. The claims of the main request had been amended to clarify the nature and the role of the non-video data. The claims of the first auxiliary request avoided any clarity issues relating to the non-video data by removing any reference to these data from the claims. Claim 3 (and all claims requiring claim 3 in their dependency) had been deleted in reaction to the board's observations in the communication. They had been submitted in case that the board declined to admit the claims of the main request. An appellant could challenge a finding in the decision under appeal either by way of arguments or by way of amendments. In the first case, it was appropriate to file amendments only if the arguments were not found to be convincing by the board of appeal. An appeal would be pointless if the appellant was forced to file amendments already before the first instance. The claims of the second auxiliary request had been filed with the statement of grounds of appeal as a reaction to the fact that the examining division had not objected to features relating to non-video data in dependent claims in the first communication. Thus all three requests should be admitted into the appeal proceedings.

Concerning the issue of Article 123(2) EPC, the decision under appeal was incorrect because it applied a test for a literal, word-for-word basis. The correct

test was whether the amendment was directly and unambiguously derivable from the application as filed. In the present application, where a particular out-frame and in-frame were explicitly disclosed as "desired" frames, they must have been selected in advance and denoted as desired. Hence both were predetermined.

Concerning the corresponding clarity issues, the specific manner in which a human operator selected the predetermined out-frame and in-frame was irrelevant for the invention, and it was clear for a person skilled in the art that the last frame to be decoded was not always the last frame to be transmitted when transport streams were transmitted in a conventional manner. Concerning the clarity issue relating to the frames of the second transport stream which were decoded, claim 1 had been amended to clarify which frames were decoded.

Concerning the issue of inventive step, the decision under appeal was incorrect because it was based on the understanding that the method of generating a transition stream described in D3 allowed frame-accurate transitioning from a first transport stream to a second transport stream. However, D3 only mentioned the objective of frame-accurate transitioning but did not disclose how it was achieved. D3 described a way of synchronising two bitstreams so that switching between the two bitstreams was possible at frame boundaries, but did not disclose how to predetermine the frames at whose boundaries the switching occurred.

Reasons for the Decision

1. *Admission of the claims of the main request
(Articles 13(1), (3) RPBA)*

1.1 According to Article 13(1) RPBA, "[a]ny amendment to a party's case after it has filed its grounds of appeal ... may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter, the current state of the proceedings and the need for procedural economy."

According to Article 13(3) RPBA, "[a]mendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the Board ... cannot reasonably be expected to deal with without adjournment of the oral proceedings."

1.2 In the present case the claims of the main request were filed with a letter dated 15 November 2012, after the oral proceedings before the board had been arranged. Hence, they constitute amendments to the appellant's case within the meaning of Article 13(1) RPBA and consequently may be admitted and considered at the board's discretion. Furthermore, the board's discretion is limited pursuant to Article 13(3) RPBA.

1.3 Compared with claim 1 filed with the statement of grounds of appeal, claim 1 of the main request comprises numerous features concerning the extraction of non-video data from the transport streams and their insertion into the transition stream. Only some of these features were present in dependent claims 3, 4 and 6 of the claims filed with the statement of grounds of appeal. The features specifying that the non-video

data is not necessarily frame-aligned to an image to which it relates and that the non-video data are extracted up to an extent boundary of the non-video data (from the first transport stream) and from an extent boundary of the non-video data (from the second transport stream) are taken only from the description. They are not identified as essential features of the invention in the application, in the applicant's submissions in the first-instance proceedings or in the appellant's statement of grounds of appeal. There is no evidence on file that these features were considered in the first-instance proceedings.

1.4 Hence, the appellant's main request presents a fresh case to the board. Consideration of the main request would require further investigation possibly including an additional search. Furthermore, since the underlying issue of the role of the non-video data in the generation of the transition stream was raised in the summons to oral proceedings before the examining division, the present main request could have been presented in the first-instance proceedings, at least as an auxiliary request.

1.4.1 The appellant's argument that the main request was a reaction to the board's communication did not convince the board that the claims of the main request should be admitted into the appeal proceedings. The reason is that the appellant's main request not only reintroduces a feature removed from claim 1 filed with the statement of grounds of appeal, but in addition introduces numerous additional features, thereby creating a fresh case.

1.4.2 The appellant also argued that it was appropriate to react with either arguments or amendments to an

objection raised. However, it is the practice of the European Patent Office that the applicant may submit a main request followed by one or more auxiliary requests (see the Guidelines for Examination in the EPO, June 2012, H-III,3). Thus it is procedurally possible for an applicant to submit also those application documents to the examining division which are intended to be ultimately submitted as a last resort to the board of appeal if the application is refused. This is also in the interest of procedural economy. Moreover, the appellant's argument, taken to its logical conclusion, would mean that, in appeal proceedings following the refusal of an application, the appellant had a right to have amendments admitted and considered by the board of appeal. This would be contrary to the established jurisprudence regarding the main purpose of *ex parte* appeal proceedings. Namely, "[p]roceedings before the boards of appeal in *ex parte* cases are primarily concerned with examining the contested decision" (see point 4 of the reasons for the decision of the Enlarged Board of Appeal G 10/93, OJ EPO 1995, 172).

1.5 In view of the above the board decided to exercise its discretion in not admitting the main request into the appeal proceedings (Article 13(1) RPBA).

2. *Admission of the claims of the first and second auxiliary requests (Articles 12(4) and 13(1) RPBA)*

2.1 The independent claims of the first and second auxiliary requests are based on the claims underlying the decision under appeal and deal with clarity objections raised in the decision under appeal. They include a few additional features which in the board's view are intended to clarify the decoding and display

order. Moreover, the feature relating to non-video data (which was considered to be unclear in the decision under appeal) is no longer present in the independent claims of the auxiliary requests. In the first auxiliary request, this feature has also been removed from dependent claims. Since claim 1 is identical in wording to claim 1 of the second auxiliary request, which was already filed with the statement of grounds of appeal, the claims of the auxiliary requests reduce the complexity of the case as far as the substantive issues are concerned because they allow the debate to be focused on the substantive ground for refusing the application as given in the decision under appeal (Article 13(1) RPBA).

2.2 Moreover, it is clear from the appellant's submissions that the appellant considers the finding of lack of inventive step in the decision under appeal to be incorrect for reasons which apply to the claims of all three requests and are not dependent on the presence or absence of non-video data in the transport streams. Thus, in the present case, the board considers the appellant's reaction of again removing this feature, which had not been present in independent claim 1 as filed, as an admissible reaction to the decision under appeal and not in conflict with the main purpose of *ex parte* appeal proceedings or the provisions of Article 12(4) RPBA. In contrast to the amendments of the main request, which created a fresh case, the amendments made to claim 1 with the statement of grounds of appeal challenge the decision on its merits (Article 56 EPC 1973) and allow the board to examine the contested decision.

2.3 In view of the above the board decided to exercise its discretion in admitting the first and second auxiliary

requests into the appeal proceedings (Articles 12(4) and 13(1) RPBA).

3. *Claim 1 of the first and second auxiliary requests*

Since in the present case claim 1 of the first and second auxiliary requests are the same and the dependent claims need not be considered in order to reach a final decision (see section 5 below), it is sufficient to deal with claim 1 of the first auxiliary request.

4. *Amendments and clarity of claim 1 (Article 123(2) EPC, Article 84 EPC 1973)*

4.1 In the decision under appeal the expressions "desired" and "predetermined" are considered to have different technical meanings in the context of the present application. In this respect, the appellant's argument that a "desired" out-frame (the "target" out-frame in claim 1 as originally filed) must have been selected in advance and denoted as desired and consequently is also a "predetermined" out-frame is convincing. For a person skilled in the art the technical disclosure of these expressions in the context of the present application is the same. The same applies to the in-frame. No further objections under Article 123(2) EPC have been raised in the decision under appeal, and the board does not see any reason for doing so.

4.2 Concerning the clarity objections (Article 84 EPC 1973) in the decision under appeal, the board finds that the expression "predetermined" is broad but nevertheless clear. What is essential in the context of the present application is that the out-frame of the first transport stream and the in-frame of the second

transport stream are determined in advance of generating the transition stream according to the method of claim 1. There may be different ways of performing this determination but it is irrelevant for the generation of the transition stream which of these ways was used. Moreover, the amendments made to claim 1 now clearly refer to the display order of the frames, clarify the decoding of frames in the transport streams and no longer refer to the non-video data, which was considered as unclear. Therefore the board is satisfied that the matter for which protection is sought is clear.

5. *Novelty (Article 54 EPC 1973)*

5.1 In the decision under appeal the only potential difference between the method of claim 1 then on file and the method of D3 was considered to be the presence of non-video data, assuming that non-video data were audio data, for instance. Since present claim 1 no longer comprises any features specifying non-video data, there arises the question whether the claimed method is new within the meaning of Article 54(1) EPC 1973.

5.2 As set out in the decision under appeal, D3 (see in particular figure 4 and the corresponding description) discloses a system for processing first and second transport streams (bitstream A and bitstream B, see also the references to broadcast networks and to the MPEG-2 standard on page 2, line 16 to page 3, line 13). The transport streams include image frames and the processing comprises switching between the two transport streams at frame boundaries (see, for instance, page 1, lines 1 to 27, in conjunction with page 3, lines 26 to 29). The stream comprising

bitstream A up to the out-frame (at which the switching to bitstream B occurs) and bitstream B from the in-frame (at which the switching from bitstream A occurs) is a generated transition stream and provides frame-accurate transitioning from bitstream A to bitstream B in a substantially seamless manner (see, for instance, page 18, lines 22 to 26).

- 5.2.1 The method of generating this transition stream comprises decoding a portion of bitstream A ending at an out-frame representing a last display order image of bitstream A, to create a first stream of decoded frames ending at, when considered in display order, the out-frame, and also comprises decoding a portion of bitstream B starting at an in-frame representing a first display order image frame of said second transport stream to be presented (see stages 1 to 4 on page 15). The decoding of bitstream B comprises decoding of frames back to the preceding I-frame if the in-frame is not an I-frame, to create a second stream of decoded frames starting at, when considered in display order, the in-frame. The reason for this is that decoding can only be started at an I-frame.
- 5.2.2 The method of generating a transition stream also comprises processing, using a pixel domain process, at least one of said decoded image frames in the first and second streams of frames (see page 17, line 27 to page 18, line 8).
- 5.2.3 The method also comprises encoding the first and second streams of decoded frames, including the out-frame and the in-frame, to produce said transition stream (see the encoder 64 in figure 4 and page 15, line 12 to page 16, line 9).

5.3 In this respect the board notes that the appellant did not challenge the analysis in the decision under appeal that the individual features of claim 1 were present in document D3. The amendments made to claim 1 in appeal proceedings and reflected in the board's analysis in section 5.2 above are of a clarifying nature and do not cast doubt on the relevance of the analysis in the decision under appeal for the present claim 1.

5.3.1 However, the appellant argues that D3 is not an enabling disclosure because it does not enable a person skilled in the art to carry out frame-accurate transitioning from a first transport stream to a second transport stream. In particular, the appellant disputes that D3 disclosed the switching method in a manner sufficiently clear and complete for a person skilled in the art to be able to predetermine the out-frame of bitstream A and the in-frame of bitstream B with frame accuracy. D3 thus could not be considered as novelty-destroying state of the art for the method of claim 1.

5.3.2 The board accepts the basis of this argument, namely that the disclosure of D3 must be enabling for it to be considered as novelty-destroying for the subject-matter of present claim 1. This derives from the established jurisprudence on the need for an enabling disclosure (see Case Law of the Boards of Appeal of the European Patent Office, 6th edition 2010, section I.C.2.12). However, concerning the predetermination of the out-frame and the in-frame, the considerations in point 4.2 above in respect of the present application also apply to D3. There may be different ways of performing this predetermination but it is irrelevant for the generation of the transition stream which of these ways was used. According to D3, "[t]he bitstream switch selects between bitstreams at appropriate points

such as at frame synchronisation words" (see page 19, lines 22 to 25). Synchronisation information is comprised in the bitstreams (see page 16, line 24 to page 17, line 15). The bitstream processing causes delays which are adjusted by appropriately adding stuffing bytes (see page 15, line 21 to page 16, line 9). Thus by extraction and use of the synchronisation information a person skilled in the art could predetermine the out-frame and the in-frame. The exact synchronisation of the bitstreams at the switch between the out-frame and the in-frame may then be achieved by appropriately adding stuffing bytes.

- 5.4 In view of the above, the appellant's arguments did not convince the board that the method of present claim 1 specifies a combination of features which does not form part of the disclosure in D3. Hence the board finds that the method of claim 1 is not new (Article 54(1) EPC 1973).

6. Thus the decision under appeal cannot be set aside and the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

F. Edlinger

Decision electronically authenticated