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**Datasheet for the decision
of 10 December 2013**

Case Number: T 2323/12 - 3.5.04

Application Number: 05023548.0

Publication Number: 1705659

IPC: G11B27/00, G11B27/30,
G11B27/32, G11B20/00

Language of the proceedings: EN

Title of invention:

System, method, and apparatus for embedding personal video recording functions at picture level

Applicant:

Broadcom Corporation

Headword:

Relevant legal provisions:

EPC 1973 Art. 84

Keyword:

Claims - clarity (no)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 2323/12 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 10 December 2013

Appellant: Broadcom Corporation
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Representative: Jehle, Volker Armin
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 2 July 2012
refusing European patent application
No. 05023548.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: F. Edlinger
Members: R. Gerdes
B. Müller

Summary of Facts and Submissions

- I. The appeal is directed against the decision to refuse European patent application No. 05 023 548.0, published as European application EP 1 705 659 A2.
- II. The patent application was refused by the examining division on the grounds that claims 1 and 3 of the sole request did not comply with Article 84 EPC.
- III. The applicant appealed against this decision and with the statement of grounds maintained the claims underlying the decision under appeal.
- IV. The board indicated in an annex to the summons to oral proceedings that it tended to share the examining division's opinion that claims 1 and 3 were not clear. It appeared *inter alia* that the claims lacked essential features, for instance as to the characteristics of a discernible command following the header in the data structure which was stored on a computer readable medium.
- V. With its letter of reply of 2 December 2013 the appellant submitted new claims 1 to 5 of a main request and claims 1 to 3 of an auxiliary request.
- VI. Oral proceedings were held before the board on 10 December 2013. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or the auxiliary request, both filed with letter of 2 December 2013, or on the basis of the claims of auxiliary request 2 submitted in the oral proceedings before the board.

VII. Claim 3 of the main request and claim 1 of the auxiliary request (henceforth the first auxiliary request) are identical and read as follows:

"A decoder system for decoding video data (101), said decoder system comprising:
a controller (216) for writing commands into a picture data structure, said picture data structure representing a picture (103),
characterized in that
one of said commands is adapted to effectuate a fast forward operation and/or a rewind operation."

VIII. Claim 3 of the second auxiliary request is only distinguished from claim 1 of the first auxiliary request in that the expression "said picture data structure representing **a** picture (103)" was modified to read "said picture data structure representing **an MPEG decoded** picture (103)" (emphasis added by the board).

IX. In the decision under appeal the examining division objected that claim 1 of the then sole request was not clear. With respect to the structure of the command the examining division argued *inter alia* that "the claimed command does not contain any particular information that can help the decoder during a fast forward or rewind reproduction and it is a mere execution command". The examining division also stated that it was not clear how the command could be used by the decoder "to solve the dependencies between pictures in a video during fast forward/rewind reproduction operations" (see Reasons of the decision under appeal, point 1).

X. With respect to the main and first auxiliary requests the appellant argued essentially that the examining

division did not interpret Article 84 EPC properly. In particular, the division was wrong in its statement that it was not clear how the fast forward and/or the rewind commands could be used in the decoder to solve dependencies between pictures in a video during fast forward/rewind reproduction operations. The implementation of the commands depended completely on the particular code used for encoding the picture data. It could not be expected from the applicant to file a separate application for each and every possible implementation of said commands. The gist of the invention was to offload the tasks of implementing fast forward and rewind commands to the process of decoding the picture data structure and to include the respective commands in the data structure themselves.

With reference to paragraphs [0003] and [0027] of the published application, the appellant argued that the commands were implemented such that the rewind and fast forward functions were effected. These functionalities were well known to the skilled person. The claims were clear because a person skilled in the art could unambiguously determine from the effects produced by these commands whether a decoder system fell within the scope of the claim or not. It followed from paragraph [0031] that the decoder was only offered a subset of the complete set of pictures. Figure 4 and paragraphs [0038] and [0039] referred to the timing of the decoding.

The appellant also argued that the board wrongly identified features which were essential for the present invention and disputed that all the features for solving the problem of the invention had to be contained in the claims, in particular in the independent claims. Rule 29(3) EPC [1973] did not

introduce such an additional requirement. If certain features were described in the application as essential, but not contained in the claims, then this matter did not concern clarity but support by the description. It was not necessary to include features in an independent claim which were not disclosed in the application as essential for the solution of the technical problem (see letter of 2 December 2013, pages 3 to 5).

The claims of the second auxiliary request restricted the claimed subject-matter to decoder systems operating on MPEG encoded pictures. The structure of the pictures and the dependencies between those pictures were therefore well defined (see paragraphs [0017] and [0018]). The data dependencies in the video stream imposed a decoding sequence. It was implicit that a command had to take account of these dependencies and therefore the structure of the commands was implicitly specified.

Reasons for the Decision

1. The appeal is admissible.
2. The invention relates to a decoding system for decoding video data, the system comprising a controller for writing commands into a picture data structure, and to a computer readable medium for storing a picture data structure comprising at least one (such) command following a picture header. The video data are encoded according to digital video compression standards such as MPEG-2. The fact that these standards introduce dependencies between successively transmitted pictures entails the need to decode the pictures in a certain

order. Personal video recording functions (also called trick play functions), such as fast forward and rewind, rely on access to non-sequential pictures and on skipping intermediate pictures. Therefore, the dependencies between successively transmitted pictures render the implementation of personal video recording functions more difficult.

The application proposes embedding commands effecting the personal video recording functions "at the picture level". These commands may be "initiated" by a user via a remote control unit. A host application then transmits the commands to the video decoder. The commands are stored in the video data "following the picture header" and more specifically in the case of an MPEG-2 encoded data stream in the user data fields "at the picture level". Due to this measure "the commands are carried through the user data" and do not rely on any transport streams for transmission (see paragraphs [0003] to [0009], [0024], [0025], [0029] and [0042] to [0046]).

3. According to Article 84 EPC 1973, the claims shall define the matter for which protection is sought. They shall be clear and concise and be supported by the description.
- 3.1 Independent claim 3 according to the main request and identical claim 1 of the first auxiliary request specify "a controller (216) for writing commands into a picture data structure" and according to the characterising portion of the claims that "one of said commands is adapted to effectuate a fast forward operation and/or a rewind operation".

3.2 The characterising portion of these claims specifies the commands by reference to their function, which is to effect a fast forward and/or a rewind operation. It neither specifies the entity carrying out the function nor whether this entity constitutes a part of the decoder system or is external to it. Hence, the function of the command in the claimed decoder system is defined in very broad terms by reference to trick play operations effected by the command that is written by the controller of the claimed decoder system.

In addition, the claim provides no information with respect to the structure of the command or the picture data structure into which the commands are written. There is no information that would allow the skilled person to determine on the basis of the claim whether the command is essentially identical to the command entered via the remote control or whether it is adapted to allow an efficient processing of the video sequence, for example by taking into account the dependencies between pictures. Hence, it would be impossible for the skilled person to understand the limitations that are imposed on the decoder system by the functional definition of the command which is written into a picture data structure. The board notes in this context that the claims under consideration do not even specify that the command is written into a region of the picture data structure which follows the picture header (cf. claim 1 of the main request).

As to the lack of structural features concerning the command, the board also observes that the appellant himself argued that the implementation of the commands depended completely on the particular code used for encoding the picture data (see statement of grounds, II.4.d). It is evident that, similarly, the structure

of the commands may take any form depending, for example, on the level of adaptation to a particular video standard, the consideration of dependencies between pictures, etc.

In summary, the board notes that there is no specification of the entity on which the operation effected by the command is to be carried out, nor of the structure of the command, nor the picture data structure into which this and other commands are written. The definition of the invention lacks clear instructions in which manner and which commands a controller of the claimed decoder system has to write into a picture data structure in order to effectuate a fast forward and/or a rewind operation. Thus, the claims lack a clear definition of the claimed subject-matter.

- 3.3 It follows from the above that claim 3 according to the main request and claim 1 according to the first auxiliary request lack clarity within the meaning of Article 84 EPC 1973.
- 3.4 The appellant argued that the gist of the invention was to offload the tasks of implementing fast forward and rewind commands to the process of decoding the picture data structure and to include the respective commands in the data structure themselves. The board observes that there are no features in the claim which reflect such an invention because the claims do not refer to the decoding process at all. Instead the claims only relate to the insertion of the commands into the picture data structure and the intended functionality of the commands.

The appellant also disputed that all the features for solving the problem of the invention had to be contained in the claims, in particular in the independent claims.

The board disagrees and notes that it is constant jurisprudence of the boards of appeal that all the features which are necessary for solving the technical problem with which the application is concerned have to be regarded as essential features (see Rule 29(3) EPC 1973 and Case Law of the Boards of Appeal of the European Patent Office, 7th edition, 2013, section II.A.3.2). This requirement is particularly important to ensure that the scope of protection of a claim does not extend in an unfair way to subject-matter which is not commensurate with the technical contribution of the invention.

In the present case the description (which has to disclose the invention, as claimed, see Rule 27(1)(c) EPC 1973) refers to the data dependencies introduced by many video compression standards, in particular when the video data are encrypted (see the passages referred to in point 2 above). The embodiments describe decoding features during fast forward and rewind operations and the writing of commands into user data that immediately follows the picture header (see for instance paragraphs [0027] to [0031]). The appellant also argued that the invention was concerned with offloading the task of implementing fast forward and rewind commands to the process of decoding the picture data structure. However, according to the description (and as confirmed by the appellant) the application is concerned with solving the problem of data dependencies by writing specific commands into a particular region of the picture data structure. This would have required the

- independent claims to include features relating to the decoding which allow this problem to be solved.
- 3.5 As a result, the main and first auxiliary requests are not allowable.
4. Claim 3 of the second auxiliary request is distinguished from claim 1 of the first auxiliary request in that the expression "said picture data structure representing **a** picture (103)" was modified to read "said picture data structure representing **an MPEG decoded** picture (103)" (emphasis added by the board).
- 4.1 The board holds that this amendment does not clarify the claim. The appellant correctly argued that the limitation to a video standard imposes restrictions on a decoder suitable for decoding the video data. However, this does not necessarily imply similar restrictions on the structure of a command effectuating fast forward and/or rewind operations in the decoder.
- 4.2 Hence, claim 3 according to the second auxiliary request lacks clarity (Article 84 EPC 1973). It follows that the second auxiliary request is not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

F. Edlinger

Decision electronically authenticated