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Datasheet for the decision of 27 April 2015

Case Number: T 0698/10 - 3.5.04

Application Number: 08011603.1

Publication Number: 2015579

IPC: H04N7/24

Language of the proceedings: EN

Title of invention:
Method and apparatus for signaling and decoding AVS1-P2 bitstreams of different versions

Applicant:
Broadcom Corporation

Headword:

Relevant legal provisions:
EPC Art. 56, 113(1)
EPC R. 103(1)(a), 106

Keyword:
Inventive step - closest prior art
Inventive step - ex post facto analysis (no)
Right to be heard - opportunity to comment (yes)

Decisions cited:
R 0001/08, R 0002/08, R 0012/09, T 0388/89, T 0686/91, T 1019/99, T 0835/00, T 1557/07, T 1898/07

Catchword:
see section 3

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Case Number: T 0698/10 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 27 April 2015

Appellant: (Applicant)	Broadcom Corporation 5300 California Avenue Irvine, CA 92617 (US)
Representative:	Jehle, Volker Armin Bosch Jehle Patentanwaltsgesellschaft mbH Flüggenstraße 13 80639 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 10 November 2009 refusing European patent application No. 08011603.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. Paci
Members:	R. Gerdes
	T. Karamanli

Summary of Facts and Submissions

I. The appeal is directed against the decision to refuse European patent application No. 08 011 603.1, published as European application EP 2 015 579 A1.

II. The patent application was refused by the examining division on the grounds that the subject-matter of claim 1 of the main request and the first auxiliary request then on file did not involve an inventive step in view of D1 and common general knowledge, evidence of which could be found in D3, and that claim 1 of the second auxiliary request then on file did not comply with Article 123(2) EPC. Documents D1 and D3 are the following:

D1: Gao, W., et al.: "AVS - The Chinese Next-Generation Video Coding Standard", National association of broadcasters, Las Vegas (2004), XP002505793 and

D3: Dutta, S., et al.: "Smart video streams: 101 Uses of the User Data Field in MPEG", Signals, Systems and Computers, Vol. 2, IEEE Computer Society Press, 1995, XP002123091.

III. The examining division stated in the decision under appeal that D1 represented the closest prior art with respect to the subject-matter then claimed. D1 gave an overview of the Audio and Video Coding Standard of China (AVS) and disclosed that the standard was built on a layered structure, the first layer being the "Sequence" layer. The sequence layer provided the structure to download mandatory and optional parameters to the decoder. It was implicit or at least obvious from D1 to include decoding version information in the parameters. Claim 1 of the main request therefore

differed from D1 only in that it specified that the decoding version information was located in the sequence user data, and in the mapping of the sequence user data to a decoding version ID, which was obvious per se.

In the field of video transmission it was a typical approach to foresee fields for all kinds of relevant information in the bitstream which served to avoid limiting further development and to provide a certain flexibility. This typical approach had, for example, been applied in D3 to signal additional information to smart decoders. It would have been obvious to use the respective fields provided by the AVS for transmitting decoder version information. Regular improvements and modifications could be expected in the early stage of the specification of the standard as well as compatibility and legacy issues arising if new features needed to be integrated.

The examining division argued with respect to the then first auxiliary request that the feature of merely using a default decoding scheme if no information regarding the decoding version could be found would be obvious for the skilled person, who would normally choose the most probable decoding algorithm to be expected.

IV. The applicant appealed against this decision and submitted with the statement of grounds of appeal three sets of amended claims according to a main request, an auxiliary request 1 and an auxiliary request 2. The appellant also requested reimbursement of the appeal fee under Rule 103(1)(a) EPC because of an alleged procedural violation committed by the examining division.

V. The board sent a communication under Article 15(1) RPBA annexed to the summons to oral proceedings.

In that communication, the board expressed doubts that the subject-matter of claim 1 according to any of the appellant's requests involved an inventive step in view of document D1 and common general knowledge. Regarding the appellant's argument that D1 could not serve as a starting point for the formulation of a technical problem which might have led to the invention (see statement of grounds, points III.1.A.2 and III.1.A.3), point 3.6 of the communication reads as follows: "*In the board's view it is not essential that the technical problem is explicitly mentioned in the closest prior art. Instead, the technical problem should be chosen based on the technical effect of those features distinguishing the claim from the prior art. What matters is what the skilled person would have objectively recognised as the problem when comparing the closest prior art with the invention (see Case Law of the Boards of Appeal of the European Patent Office, 7th edition, 2013, section I.D.4.3.1).*"

The board further expressed the provisional opinion that claims 1 and 6 of auxiliary request 2 were not clear and did not comply with Article 123(2) EPC.

Regarding the appellant's request for reimbursement of the appeal fee, the board also explained why it was not convinced that the proceedings before the examining division had been flawed.

VI. In its reply dated 19 March 2015, the appellant argued that the board's preliminary view in the communication annexed to the summons was not correct.

It submitted that the board's communication lacked an adequate discussion of the appellant's main argument in the statement of grounds of appeal, namely that the reasoning on inventive step in the decision under appeal was based on an inadmissible ex post facto analysis. Moreover, the board's communication too was based on such an analysis. The appellant further submitted that, in view of the board's inadequate reply to its main argument and in the absence of any counter-argument from the board, the appellant was incapable of providing a further substantiated reply to the objection of lack of inventive step, which might constitute a severe violation of the right to be heard under Article 113(1) EPC.

VII. Oral proceedings were held before the board on 27 April 2015.

Initially the issue of inventive step of the subject-matter of claim 1 of the main request was discussed.

Regarding this issue, the first point was whether document D1 was the closest prior art.

Referring to its statement of grounds of appeal and its reply of 19 March 2015 to the board's communication under Article 15(1) RPBA, the appellant argued that it was essential that the technical problem be at least suggested in the closest prior art to avoid an inadmissible ex post facto analysis, as held in several decisions summarised in Case Law of the Boards of Appeal of the EPO, 7th edition, 2013, I.D.3.3 and I.D.6, 2nd paragraph on page 184. The appellant reiterated its opinion that the board's communication was an inadequate reply to its main argument in the

statement of grounds and that in view of this and in the absence of any counter-argument from the board, the appellant was incapable of providing a further substantiated reply to the objection of lack of inventive step.

The chairman explained that the board did not share the appellant's interpretation of the jurisprudence. He also informed the appellant about the board's considerations regarding the step of determining the closest prior art (for further details, see pages 3 and 4 of the minutes of the oral proceedings).

After deliberation, the chairman informed the appellant of the board's view that document D1 was the closest prior art. Then the chairman moved the discussion on to the further steps of the problem and solution approach.

Before the board deliberated on the further issues of inventive step, the appellant again objected that the board had not given any counter-argument and that therefore its right to be heard under Article 113(1) EPC had been violated. The chairman asked the party to formulate any objection in writing during the next break in the oral proceedings. The oral proceedings were then adjourned for the board to deliberate on inventive step and for the appellant to formulate its objection in writing. After resuming the oral proceedings, the chairman informed the appellant of the board's view regarding the subject-matter of claim 1 of the main request. The appellant then submitted a written objection, under Rule 106 EPC, which reads as follows:

"The representative claimed that his right to be heard (Art 113(1) EPC) was violated. Although the

representative presented a lot of arguments that it was a fatal defect in the application of the problem solution approach that - with D1 - a prior art disclosure was chosen as the starting point for the application of the problem solution approach from which no relevant technical problem can be formulated without inappropriate hindsight (T 686/91) the board has given no comprehensible reason to the representative why it is not applying hindsight by starting from D1.
Since this aspect is relevant for the decision, without any comprehensible reason for the view that also deviates from set case law of the boards of appeal, the representative was incapable to provide a further substantiated reply to said decisive aspect which caused a severe violation of the right to be heard - Art 113(1) EPC.
Following Art 20(1) of the Rules of Procedure of the Boards of Appeal this view deviating from a earlier decision of the boards of appeal has to be reasoned in the decision."

After deliberation the chairman informed the appellant that the objection under Rule 106 EPC was dismissed.

Then the chairman moved the discussion on to the allowability of Auxiliary Requests 1 and 2, both filed with the statement of grounds of appeal. The chairman observed that the board had raised objections against these requests in its communication under Article 15(1) RPBA and invited the appellant's representative to present his arguments. The appellant's representative submitted that he had no further comments on these auxiliary requests.

Concerning the appellant's request for reimbursement of the appeal fee, the legally qualified member pointed

out that Rule 103(1)(a) EPC stipulated as a precondition that the appeal had to be allowable and that, in view of the course of the oral proceedings, this seemed not to be the case since none of the present requests had been considered allowable. The appellant's representative was asked whether he had any comments on this issue. He replied in the negative.

The appellant's representative stated that his final requests were 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 auxiliary requests 1 or 2, all filed with the statement of the grounds of appeal. Further, the appellant's representative requested reimbursement of the appeal fee under Rule 103(1)(a) EPC.

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

"A method for video processing, the method comprising:
decoding an AVS bitstream based on decoding version information within said AVS bitstream, wherein said decoding version information was inserted in said AVS bitstream into a sequence user data (206) after a sequence header (204) of the AVS bitstream during coding of said AVS bitstream,
wherein decoding comprises mapping of the sequence user data (206) to a decoding version ID via a AVS decoding list."

IX. Claim 1 of auxiliary request 1 comprises the following additional feature appended to claim 1 of the main request:

"..., wherein mapping comprises mapping invalid sequence user data information to a default decoding version ID."

X. Claim 1 of auxiliary request 2 reads as follows (amendments with respect to claim 1 of the main request being underlined):

"A method for video processing, the method comprising:
decoding an AVS bitstream based on decoding version information within said AVS bitstream, wherein said decoding version information was inserted in said AVS bitstream into a sequence user data (206) after a sequence header (204) of the AVS bitstream during coding of said AVS bitstream,
wherein inserting said decoding version information comprises:
detecting a state corresponding to a sequence header by a state machine;
setting a counter to a predetermined number of bytes of a portion of the sequence header; and
using the state machine and the counter to insert a specific sequence user data comprising said decoding version information at a predetermined position of the sequence header corresponding to the predetermined number of bytes of said portion of the sequence header, in particular at the end of the sequence header;
wherein decoding comprises mapping of the sequence user data (206) to a decoding version ID via a AVS decoding list."

XI. The appellant's arguments with respect to inventive step of the subject-matter of claim 1 of the main request may be summarised as follows:

The reasoning in the decision under appeal and in the preliminary view expressed in the communication of the board annexed to the summons to oral proceedings was not based on a correct application of the problem and solution approach. D1 could not be considered as the closest prior art, because it did not mention or suggest the problematic aspects of signalling and interpreting decoding syntax information such as current or future AVS versions. D1 did not even mention that different decoding syntax might be used. In the decision under appeal the examining division needed to allege that it was implicit that decoding version information was part of the mandatory parameters disclosed in D1. However, an only implicit disclosure of a core element related to the problem of the invention showed the hindsight of the inventive step approach. It was decisive for obviousness in the sense of Article 56 EPC that the prior art contained an incentive to make the modification which distinguished the invention from the prior art. It was essential that the technical problem be at least suggested in the closest prior art to avoid an inadmissible ex post facto analysis, see Case Law of the Boards of Appeal of the European Patent Office, 7th edition, 2013, (henceforth abbreviated to CLBoA), sections I.D.3.3 (in particular regarding T 686/91) and I.D.6.

D1 did not disclose inserting decoding version information in the sequence user data of an AVS bitstream. It also did not disclose the step of mapping of the sequence user data to a decoding version ID via an AVS decoding list. If the board considered D1 as the closest prior art, the technical problem should be formulated as how to provide more flexibility and extendability in signalling and decoding syntax information. There was no comprehensible reason why the

technical problem as formulated in section 3.2 of the communication annexed to the summons was derivable from D1.

Furthermore, it was not probable that the skilled person would have combined D1 with D3, because D3 related neither to the AVS standard nor to different decoding versions. Avoiding hindsight was particularly difficult if common general knowledge was put forward to prove obviousness. It was necessary to show that there had been a recognisable pointer in the state of the art to combine the known means and technical teaching of a prior-art document for achieving the intended technical aim (see CLBoA, section I.D.5).

The cited documents also did not disclose the second distinguishing feature of mapping of the sequence user data to a decoding version ID via an AVS decoding list. A straightforward signalling process would have most likely directly signalled the AVS decoding version ID. Introducing a further mapping process to determine the decoding syntax at the receiver side seemed at first sight to be an unnecessary effort. Nevertheless, it solved a further technical problem in that it allowed for reconfigurability of the decoding syntax at the decoder/receiver side to the best matching decoding syntax if the actual decoding syntax used by the coder/ transmitter was not yet supported by the decoder/ receiver.

XII. With respect to inventive step of the subject-matter of claim 1 of auxiliary request 1, the appellant provided the following arguments (see section IV of the statement of grounds of appeal):

The additional feature of claim 1 specified mapping invalid sequence user data information to a default decoding version ID. This feature provided the effect of securing acceptable decoding in cases where the received encoded AVS bitstream might comprise invalid sequence user data, e.g. due to transmission errors. It would be far more obvious to passively ignore invalid sequence user data and simply use the standard decoding settings instead of creating another degree of reconfigurability by actively setting a default decoding version ID.

XIII. Concerning its request for reimbursement of the appeal fee, the appellant argued essentially that a substantial procedural violation had occurred in the proceedings before the department of first instance. The examining division had stated in its communication dated 3 July 2009 that the second distinguishing feature relating to the mapping of the sequence user data to a decoding version ID via an AVS decoding list was considered to be obvious when carrying out decoding on a receiver. This statement was a mere assertion and a serious breach of Article 113(1) EPC due to a lack of well-founded reasons which would have enabled the applicant to reply. The decision of the examining division did not specify why this feature was obvious. The arguments of the examining division in the decision under appeal were also not responsive to the applicant's argument that it would be far more straightforward to simply directly signal an AVS decoding version ID code as the sequence user data. Consequently, the decision under appeal was based on evidence that was not provided in such a way that the conclusions of the examining division could be checked without difficulty. Basing a decision in a decisive aspect on mere assertion amounted to a substantial

procedural violation (see statement of grounds of appeal, section III.1.B).

XIV. The appellant's arguments with respect to the alleged violation of its right to be heard in the appeal proceedings are essentially summarised in the written objection under Rule 106 EPC that was handed over to the board during the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

The present application

2. The present application relates to the Audio Video Coding Standard of China (AVS), which is a digital video coding standard with potential applications ranging from low bit-rate internet streaming to HDTV broadcast. Similarly to the MPEG standards, the AVS1-P2 (Video for HD) specification defines the AVS-P2 bitstream syntax and a corresponding decoder.

As described in the present application, the AVS working group provides two reference models of the AVS1-P2 bitstream in the AVS specification versions "AVS1-P2 Rm52j_r1" and "AVS1-P2", respectively. The "AVS1-P2 Rm52j_r1" reference model is not fully compliant with that defined in the "AVS1-P2" specification.

The present application proposes a system and method for video processing which is able to signal and decode bitstreams of different versions. For this purpose, at the encoder, decoding version information such as a

string "AVS1P2RM52JR1" or "AVS1P2SPEC" is inserted in the "sequence user data". The sequence user data is a field in the bitstream located after the sequence header and which may be used to signal vendor-specific information.

The decoder extracts the decoding version information contained in the sequence user data and maps this information to a decoding version ID using a decoding list. It then decodes the AVS bitstream accordingly, based on the decoding version information (see application as originally filed, paragraphs [0003] to [0008], [0014], [0022], [0023], [0026], [0029] to [0031] and figures 2 and 3).

Main request, inventive step (Article 56 EPC)
Determining the closest prior art

3. The **first step** of the problem and solution approach is to determine **the closest prior art**, i.e. the most promising starting point – or the most promising springboard to the invention - for the assessment of inventive step. The jurisprudence of the boards of appeal has established criteria for identifying the closest prior art, see CLBoA, section I.D.3, with an emphasis on the following two:

(a) As a **first criterion**, the closest prior art should be related to the claimed invention, in the sense that it should disclose subject-matter conceived for the same purpose or aiming at the same objective, corresponding to a similar use, or relating to the same or a similar technical problem or, at least to the same or a closely related technical field.

(b) As a **second criterion**, the closest prior art should disclose subject-matter having the greatest number of relevant technical features in common with the claimed invention, i.e. requiring the minimum of structural and functional modifications.

3.1 In the present case, the subject-matter of claim 1 of the main request concerns a video processing method for decoding a bitstream according to the AVS standard. The claimed method provides an improvement over a conventional AVS decoding in that it allows the decoding of bitstreams coded according to different versions of the AVS standard (see section 2 above).

3.2 D1 is an article describing the main technical features of the AVS standard for coding and decoding video signals. The AVS standard is described in the present application as the starting point for the invention (see paragraphs [0002] to [0006] of the application as filed). D1 thus belongs to the same technical field as the claimed invention, i.e. the coding and decoding of video signals according to the AVS standard. It also serves a similar purpose and implicitly or explicitly addresses similar or the same technical problems as the claimed invention, i.e. those solved by the use of the AVS standard, such as a highly efficient video coding/ decoding and an optimisation between absolute coding performance and complexity of implementation (see the INTRODUCTION section on the first page of D1). Moreover, the video processing method disclosed in D1 has several technical features in common with the method of claim 1, these features being essentially implied by the reference to the AVS standard in claim 1.

3.3 The appellant disputed that D1 could be regarded as the closest prior art, because it did not disclose the problem arising from the existence of different versions of the AVS standard (see paragraph [0006] of the application as filed).

3.4 The board concurs with the appellant that D1 does not disclose this further problem, but disagrees that it should disqualify D1 as starting point for the assessment of inventive step. Indeed, the closest prior art need not disclose **all** the problems solved by the claimed invention, in particular it need not disclose the **objective** technical problem, which is only determined in the second step of the problem and solution approach based on the technical effect(s) provided by those features distinguishing the invention as claimed from the closest prior art.

3.5 In the present case, there is no other prior art on file which discloses the objective technical problem or which would qualify better than D1 as the closest prior art. During the oral proceedings, when asked by the board which prior art was the closest prior art if not D1, the appellant replied that there was none. The board cannot agree with this view. According to Article 56 EPC an invention is to be considered to involve an inventive step if, "having regard to the state of the art", it is not obvious to the skilled person. Hence, the assessment of inventive step has to be based on an evaluation of the invention in view of the prior art. The expression "closest prior art" also does not mean that it must be sufficiently close to the claimed invention on an absolute basis, but only that it must be relatively closer to the claimed invention than the other prior-art disclosures, i.e. it is

selected as the most promising starting point – or the most promising springboard towards the invention.

3.6 The appellant further argued that, according to the established jurisprudence of the boards of appeal, it was essential that the (objective) technical problem be at least suggested in the closest prior art, in order to avoid an inadmissible ex post facto analysis. It referred to CLBoA, section I.D.6 and several decisions cited therein.

3.7 The board disagrees with the appellant's interpretation of the jurisprudence in section I.D.6 of the CLBoA. This section does not refer specifically to determining the closest prior art (dealt with in CLBoA, I.D.3), but generally to the interpretation of prior-art documents, which should not be influenced by the problem solved by the invention, where the problem is neither mentioned nor suggested in these documents.

When applied to D1, this jurisprudence means that the interpretation of D1 should not be influenced by a problem solved by the invention, but neither disclosed nor suggested by D1, which in the present case is a problem arising from the existence of different versions of the AVS standard (see point 3.3 *supra*). However, it does not mean, as argued by the appellant, that this problem should at least be suggested in D1 in order to avoid an inadmissible ex post facto analysis (see point 3.6 *supra*). The board's interpretation of D1 under point 3.2 *supra* is based on the disclosure of D1, without any reference to or influence by the above problem relating to different versions of the AVS standard.

Hence, the appellant's arguments under point 3.6 *supra* are not persuasive and the board's interpretation of D1 complies with the jurisprudence in CLBoA, section I.D.6.

3.8 The appellant further submitted that the established jurisprudence of the boards of appeal required that the objective technical problem be related to the actual disclosure of the closest prior art. The appellant referred to CLBoA, I.D.3.3 and specifically to decisions T 835/00, T 686/91 and T 1898/07 cited therein.

3.9 The board is not convinced by these arguments for the following reasons.

According to the above three decisions, a prior-art disclosure not mentioning a technical problem which is at least related to that derivable from the patent specification under examination does not normally qualify as the closest prior art, however many technical features it may have in common with the claimed subject-matter (see T 686/91, point 4 of the Reasons, T 835/00, point 4.2 of the Reasons, and T 1898/07, point 45 of the Reasons).

In each of decisions T 686/91 (see point 4 of the Reasons), T 835/00 (see section 4.4 of the Reasons) and T 1898/07 (see points 46 to 48 of the Reasons), the board considered that the prior-art document which had the greatest number of features in common with the claimed subject-matter solved a technical problem **unrelated** to the problem solved by the claimed invention. For this reason, the board concluded in each of these decisions that the closest prior art, i.e. the most promising springboard towards the invention, was

another prior-art document which had fewer features in common with the claimed subject-matter but solved a problem more closely related to that of the claimed invention.

In other words, in each of these three decisions the board considered that in those particular cases, although the afore-mentioned **second criterion** (greatest number of features in common) was met, the afore-mentioned **first criterion** was clearly not met, because the solved problem was **unrelated** to that of the invention. Hence, the board considered that, overall, that prior art was less suitable as closest prior art for assessing inventive step than other available prior art.

3.10 In the present appeal case, the situation is different from that of decisions T 835/00, T 686/91 and T 1898/07 in several aspects:

(a) D1 does not solve an unrelated problem. As explained above, it relates to the same technical field as the present application, which implies that it addresses problems related to video encoding using the AVS standard. Hence, there is no problem solved by D1 which is **unrelated** to a problem solved by the claimed invention.

(b) The application as filed describes the AVS standard as the starting point of the invention. D1 is essentially a prior-art document providing an overview of the AVS standard. D1 is thus essentially the same prior art as the one used by the appellant (and presumably also by the inventors) as the starting point for the claimed invention. It is thus surprising that the appellant argued that document D1 was not a

suitable starting point for the assessment of inventive step.

(c) The reasoning in decisions T 835/00, T 686/91 and T 1898/07 is based on the underlying principle that the closest prior art should be the most promising springboard towards the invention (see T 835/00, point 4.1 of the Reasons). This is clearly the case for D1. Moreover, the appellant could not point to more suitable prior art; instead, it merely stated that in the present case there was no closest prior art.

Hence, the board is not convinced by the appellant's arguments that only with hindsight can D1 be regarded as the closest prior art.

3.11 In view of the above, the board considers that D1 meets the requirements established by the jurisprudence for being regarded as the closest prior art.

Distinguishing features and objective technical problem

4. As **a second step** in the problem and solution approach **the objective technical problem** has to be formulated based on the technical effect of those features distinguishing the claim from the prior art that is as specific as possible without containing elements of or pointers to the solution (see CLBoA, section I.D.4.3.1).

4.1 The board agrees with the appellant that the following features of the subject-matter of claim 1 are not disclosed in document D1:

(a) the insertion of decoding version information into the sequence user data,

(b) the mapping of the sequence user data to a decoding version ID via an AVS decoding list and
(c) use of decoding version information for decoding.

Due to the insertion of decoding version information at an appropriate position in the AVS bitstream, different decoder versions can be signalled to the decoder (feature (a)). The decoder can then extract that information and decode the bitstream based on this information in an appropriate manner (feature (c)). As a consequence, these features provide the technical effect of allowing operation of a codec which may employ different versions of the AVS video transmission standard. Feature (b) is regarded as an implementation detail without a specific technical effect (see also point 4.4 below).

4.2 The board agrees with the finding of the examination division in the decision under appeal, see point 2.1.4, that it was to be expected that new codecs would be developed to improve the AVS standard. At the same time it would be required to provide compatibility with previous versions of the standard. Hence, the board regards the objective technical problem as how to allow operation of a codec which is based on the AVS video transmission standard that has been developed further and at the same time to provide compatibility with the standard.

4.3 The appellant disputed that D1 could serve as a starting point for the formulation of the objective technical problem. According to the appellant the objective technical problem had to be related to the actual disclosure of the closest prior art (see point XI above and statement of grounds of appeal,

points III.1.A.2 and III.1.A.3, and letter of 19 March 2015, section 3).

In the board's view, it is not essential that the technical problem be explicitly mentioned in the closest prior art. Instead, according to established case law, "the correct procedure for formulating the problem is to choose a problem based on the technical effect of exactly those features distinguishing the claim from the prior art that is as specific as possible without containing elements or pointers to the solution" (T 1019/99, point 3.3 of the Reasons). What matters is what the skilled person would have objectively recognised as the problem when comparing the closest prior art with the claimed invention (see CLBoA, section I.D.4.3.1). In particular, some technical problems are so ubiquitous that the skilled person is always aware of these problems. For example, the skilled person needs no special indication in the closest prior art or any other document that would incite him to consider the automation of activities that are carried out manually (see CLBoA, section I.D.9.18.4). Similarly, in the area of digital communication including multimedia applications, further development of a standard as well as compatibility with established versions of the standard are addressed as a matter of routine.

4.4 According to the appellant, distinguishing feature (b) solved a further technical problem, namely to reconfigure "the decoding syntax at the decoder/ receiver side to the best matching decoding syntax if the actual decoding syntax used by the coder/ transmitter is not yet supported by the decoder/ receiver" (see statement of grounds of appeal, III.1.B.3). The appellant explained with reference to

figure 3 and a block diagram sketched during the oral proceedings that the decoding version ID was obtained in an intermediate step before decoder actions corresponding to a particular ID were carried out.

The board could not find support for the effect of an increase in reconfigurability in the application documents. It is also not seen why reconfigurability should be improved due to the mapping of the sequence user data to a decoding version ID. Like any other piece of information in the AVS bitstream, the information in the sequence user data has to be interpreted to determine corresponding decoder actions. Such a determination inevitably implies a selection of corresponding decoder actions in reaction to specific data extracted from the bitstream. This selection can be reconfigured in a similar way as a mapping to a decoding version ID via a decoding list. Hence, reconfigurability is at least not necessarily improved by providing a mapping to a decoding version ID prior to the selection of the corresponding decoder action. It is also noted that the use of a list for transforming data from one representation (coded bitstream) to another (ID or entry point to a decoder) is well known in the art.

Hence, the board holds that feature (b) only relates to an implementation detail which does not cooperate with the distinguishing features (a) and (c) to provide any further technical effect.

4.5 The appellant argued that the technical problem should be formulated as how to provide more flexibility and extendability in signalling and decoding syntax information. The board agrees that the incorporation of a sequence user data field in the bitstream provides

increased flexibility and extendability in signalling information that may be useful to the decoder. However, the sequence user data field was known from D1. The contribution of the present application relates to the use of this field for signalling specific information, and therefore does not increase flexibility. Hence, the objective technical problem proposed by the appellant is not based on technical effects provided by those features distinguishing the subject-matter of claim 1 from the closest prior art.

4.6 It follows from the above that the appellant's arguments do not lead the board to modify the objective technical problem as formulated by the board (see point 4.2 above).

Obviousness

5. As **a third step** in the problem and solution approach it has to be considered whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been **obvious** to the skilled person (see CLBoA, I.D.2).

5.1 A straightforward solution to the objective technical problem was to foresee different decoder versions at the receiver side. With respect to the selection of the appropriate decoder version, the board essentially agrees with the reasoning in the decision under appeal. D1 discloses the use of "system parameters" as a means to initialise decoder systems (see chapter entitled "sequence"). Hence, it would have been straightforward to signal decoding version information to the receiver in the same way as other parameters, i.e. by transmitting corresponding information via the bitstream and by using it accordingly at the decoder

(see also the situation described in the application, section "background of the invention", paragraph [0006]). The examining division stated correctly that it would also have been obvious to employ those data fields of the bitstream (i.e. the sequence user data field) that are foreseen in the pertinent standard for adding all kinds of relevant information a decoder may use when receiving the bitstream (see decision under appeal, point 2.1.4 of the Reasons). Moreover, the board agrees with the examining division's finding in the decision under appeal that the mapping of the sequence user data to a decoding version ID via an AVS decoding list is obvious per se, because matching a code to a list containing the meaning of each code is the most straightforward way of decoding that code.

5.2 The appellant argued with reference to decision T 388/89, point 6.5 of the Reasons, that avoiding hindsight was particularly difficult if common general knowledge was put forward to prove the obviousness. It was necessary to show that there had been a recognisable pointer in the state of the art to combine the known means and technical teaching of a prior art document for achieving the intended technical aim (see section 4 of the letter dated 19 March 2015 referring to CLBoA, section I.D.5, last paragraph).

5.3 These arguments did not convince the board to change its view for the following reasons.

In the above decision several prior-art documents disclosed solutions to a technical problem that differed from the one that was considered to be obvious by the department of first instance. The board held in decision T 388/89 (see point 6.5 of the Reasons) that

every indication that the skilled person in a similar situation, using the same common general knowledge, would have arrived at a different solution than the one the obviousness of which had to be examined, had a particular importance. In the present case there are no hints to alternative measures or solutions which might have been taken into account by the skilled person to solve the technical problem.

Moreover, the existence of different versions of the AVS standard and the provision in that standard of "system parameters" as a means to initialise decoder systems (see point 5.1 *supra*) provided a recognisable pointer in D1 towards the subject-matter of claim 1.

5.4 Hence, the subject-matter of claim 1 according to the main request lacks an inventive step.

Auxiliary request 1, inventive step (Article 56 EPC)

6. Claim 1 of auxiliary request 1 comprises the additional feature that "mapping comprises mapping invalid sequence user data information to a default decoding version ID."

6.1 The appellant argued that the additional feature provides the effect of securing acceptable decoding in cases where the received encoded AVS bitstream may comprise invalid sequence user data, e.g. due to transmission errors (see statement of grounds of appeal, IV.2).

In the board's view, performing a best-effort decoding if partially invalid information is received is a common measure in the field. Where several decoder versions are available for decoding at the receiver

side and no or only invalid decoding version information can be detected at the receiver/decoder, it is obvious that the most probable decoding algorithm should be employed for decoding, this decoding algorithm being the "default decoder" (see also decision under appeal, point 2.2 of the Reasons). The skilled person would therefore have implemented the decoder such that a default decoder was used in case of transmission errors.

6.2 The appellant argued that "it would be far more obvious to passively simply ignore invalid sequence user data and simply use the standard decoding settings instead of creating another degree of reconfigurability by actively setting a default decoding version ID", (see statement of grounds of appeal, IV.2.4).

The alleged effect of improved reconfigurability was already addressed in the context of distinguishing feature (b) of claim 1 according to the main request (see points 4.1 and 4.4 above).

In addition, the appellant's reasoning differentiates between standard (default) decoder settings and a default decoding version ID. It therefore refers to a mapping which is analogous to the one provided by distinguishing feature (b). Such a mapping is considered obvious for the same reasons as for any other decoder version information (see point 4.4 above).

6.3 Hence, the subject-matter of claim 1 of auxiliary request 1 lacks an inventive step.

Auxiliary request 2, clarity, Article 84 EPC

7. According to Article 84 EPC, the claims shall define the matter for which protection is sought. They shall be clear and concise and be supported by the description.

Claim 1 according to auxiliary request 2 specifies that the decoding version information is inserted "at a predetermined position of the sequence header" (see lines 14 and 15). The same claim (see lines 6 and 7) specifies that decoding version information was inserted into a sequence user data **after** a sequence header. This inconsistency renders the claim unclear (Article 84 EPC).

Hence, auxiliary request 2 is not allowable due to a lack of clarity of claim 1 of that request.

Request for reimbursement of the appeal fee, Rule 103(1)(a) EPC

8. The appellant requested reimbursement of the appeal fee according to Rule 103(1)(a) EPC, arguing that the first-instance communication of 3 July 2009 and the decision under appeal was not sufficiently reasoned in the sense of Rule 111(2) EPC (see statement of grounds of appeal, section II.2 and III.1.B).

8.1 According to Rule 103(1)(a) EPC, the appeal fee shall be reimbursed where the board deems an appeal to be allowable, if such reimbursement is equitable by reason of a substantial procedural violation.

The present appeal not being allowable, there is no basis for the reimbursement of the appeal fee pursuant

to Rule 103(1)(a) EPC. Hence, the appellant's request must fail already for that reason.

8.2 Nevertheless, the board wishes to address the question of whether a procedural violation occurred in the course of the first-instance proceedings.

The appellant disputed that the examining division provided a comprehensible rationale to show why the feature relating to the mapping of sequence user data to a decoding version ID via an AVS decoding list was obvious.

The examining division addressed the obviousness of this feature in the decision under appeal (see point 2.1.3 of the Reasons). Even if the examining division's reasoning were not convincing, it would only be an error of judgement which, according to established jurisprudence, would not constitute a procedural violation (see CLBoA, IV.E.8.3.5). Moreover, the examining division was under no obligation to explicitly address every argument presented by the applicant as long as the reasoning given in the decision under appeal enabled the appellant and the board to examine whether the decision was justified or not (see T 1557/07, point 2.6 of the Reasons; see also CLBoA, III.K.4.2.1, III.K.4.2.3 and IV.B.2.7.2).

With respect to the appellant's argument that the first-instance communication of 3 July 2009 did not provide sufficient reasons to enable the applicant to reply to that communication (see statement of grounds of appeal, point III.1.B.1.2 to III.1.B.1.3), the board notes that in general a communication is not a decision. Hence, Rule 111(2) EPC does not apply. Moreover, the applicant did avail itself of the

opportunity to provide counter-arguments to the disputed statement (see applicant's letter of 13 August 2009, section III.1.B). In addition, a communication should "give the reason for any objection where this is not immediately apparent" (see Guidelines for Examination of April 2009, C-VI 3.6). Whether or not a reason is immediately apparent is a matter of appreciation, which may be challenged by the applicant.

Hence, the board holds that the procedure before the department of first instance was not tainted by a procedural defect.

8.3 In view of the above, the request for reimbursement of the appeal fee must be refused.

Objection under Article 112a and Rule 106 EPC

9. The objection under Rule 106 EPC is based on an alleged violation of Article 113(1) EPC.

Article 113(1) EPC reads: "The decisions of the European Patent Office may only be based on grounds or evidence on which the **parties** concerned have had an opportunity to present their comments" (emphasis added by the board).

9.1 In the written objection under Rule 106 EPC it is stated: "The **representative** claimed that **his** right to be heard (Art 113(1) EPC) was violated" (emphasis added by the board).

A representative is not a party to the proceedings. However, although the full written objection names only the representative, the board understands the objection to allege a violation of the right to be heard of the

representative's client, i.e. the **appellant** who is party to the proceedings.

9.2 The appellant essentially argued that its right to be heard under Article 113(1) EPC 1973 had not been observed because the board has not given any comprehensible reason in its communication or in the course of the oral proceedings why it was not applying inappropriate hindsight when choosing D1 as closest prior art for assessing inventive step. The appellant had presented arguments that the problem and solution approach would be wrongly applied if document D1 were chosen as the starting point, since from this prior art no relevant technical problem could be formulated without inappropriate hindsight. The board had also not explained why it deviated from the case law of the boards of appeal, in particular decision T 686/91. Without receiving any reasons for the board's divergent view, the appellant's representative had not been in a position to provide a substantiated reply to the board on this decisive aspect.

9.3 In the written objection it was also submitted that, according to Article 20(1) RPBA, the board's view deviating from an earlier decision of the boards of appeal had to be reasoned in the decision. Since this submission concerns the reasoning of the decision and not the decision-making process in the present appeal proceedings, it was not considered as an objection under Rule 106 EPC when the board decided on the appellant's objection in the oral proceedings.

As far as the reasoning in this decision is concerned it follows from sections 3 to 5 above that the board did not deviate from the jurisprudence referred to by the appellant.

9.4 According to the established jurisprudence of the Enlarged Board of Appeal, Article 113(1) EPC is complied with if the party concerned has an adequate opportunity to present its point of view to the board before a decision is taken, if the board considers the arguments presented by the party, and if the decision is based on a line of reasoning that can be said to have been in the proceedings, either as a result of having been submitted by a party or raised by the board (see decisions R 1/08, points 3 and 3.1 of the Reasons, R 2/08, point 8.2 of the Reasons, and the summary of prior jurisprudence in R 12/09 of 15 January 2010, point 11 of the Reasons).

Before the board took its decision, the appellant had the opportunity to present its point of view to the board that the problem and solution approach would be wrongly applied if document D1 were chosen as the starting point, since from this prior art no relevant technical problem could be formulated without inappropriate hindsight.

9.5 In the present appeal proceedings and in particular during the oral proceedings, the board gave a detailed reasoning as to why it disagreed with the appellant on the determination of the closest prior art.

By its communication under Article 15(1) RPBA (see point V above) and in the oral proceedings of 27 April 2015 (see point VII above), the board clearly informed the appellant on the board's view on how to identify the closest prior art for the assessment of inventive step. The board explained that the closest prior art should be related to the claimed subject-matter, in the sense that it should disclose subject-

matter belonging to the same technical field and relating to the same or a similar technical problem. However, it was not essential that the objective technical problem be explicitly mentioned in the closest prior art or that the closest prior art solve all the problems solved by the claimed invention. The appellant was also informed that the board did not share the appellant's interpretation of the jurisprudence of the boards of appeal. Hence, by giving all this information to the appellant, the board indicated why it was not applying inappropriate hindsight when choosing D1 as closest prior art for assessing inventive step.

9.6 In the light of the above, the appellant's right to be heard under Article 113(1) EPC had been observed in the present case. Hence, the board dismissed the appellant's objection under Rule 106 EPC.

Order

For these reasons it is decided that:

1. The objection under Rule 106 EPC, filed in writing during the oral proceedings before the board, is dismissed.

2. The appeal is dismissed.

3. The request for reimbursement of the appeal fee is refused.

The Registrar: The Chairman:

K. Boelicke M. Paci

Decision electronically authenticated