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Datasheet for the decision of 20 July 2022

Case Number: T 2386/17 - 3.5.04

Application Number: 11174621.0

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Language of the proceedings: EN

Title of invention:
Apparatus and method for recording content

Applicant:
Comcast Cable Communications, LLC

Headword:

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 13(1)

Keyword:
Inventive step - main request and first to third auxiliary requests (no)
Amendment to appeal case - fourth and fifth auxiliary requests - amendment overcomes issues raised (no)

Decisions cited:
G 0001/19, G 0003/08, T 0641/00, T 0154/04, T 0478/06, T 0972/07

Catchword:

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Case Number: T 2386/17 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 20 July 2022

Appellant: (Applicant)	Comcast Cable Communications, LLC 1701 JFK Boulevard Philadelphia, PA 19103 (US)
Representative:	V.O. P.O. Box 87930 2508 DH Den Haag (NL)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 30 May 2017 refusing European patent application No. 11174621.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairwoman	B. Willems
Members:	M. Paci
	B. Müller

Summary of Facts and Submissions

I. The appeal is against the examining division's decision refusing European patent application No. 11 174 621.0, published as European patent application EP 2 410 736 A2.

II. In the decision under appeal, the examining division referred to the following prior-art documents:

D1: US 2003/0018980 A1
D2: US 2008/0026790 A1
D3: US 2002/0120925 A1

III. The decision under appeal was based on the grounds that the subject-matter of claim 1 of the main request and the auxiliary request did not involve an inventive step in view of the disclosure of documents D1 and D2 (Articles 52(1) and 56 EPC).

IV. The applicant (appellant) filed notice of appeal. With the statement of grounds of appeal, the appellant filed claims according to a main request and first and second auxiliary requests. As a precaution, the appellant requested oral proceedings.

V. The board issued summons to oral proceedings and a communication under Article 15(1) RPBA 2020. In this communication, the board introduced document

D4: WO 03/093965 A1

into the appeal proceedings and gave the following preliminary opinion.

- The omission of a buffer in the last step of claims 1 of the main request and the first auxiliary request extended the claimed subject-matter beyond the content of the application as filed (Article 123(2) EPC).
- Document D4 was the closest prior art for the subject-matter of claim 1 of the main request. The subject-matter of all claims of the main request and claim 1 of the first auxiliary request lacked inventive step over the disclosure of document D4 combined with the common general knowledge of the person skilled in the art (Articles 52(1) and 56 EPC).
- The board was inclined to exercise its discretion under Article 12(4) RPBA 2007 in not admitting the second auxiliary request because the inclusion of additional dependent claims did not address the issues which led to the decision under appeal and the additional dependent claims should have been filed before the department of first instance.

The board also observed that the objection under Article 123(2) EPC raised against claim 1 of the main request appeared to apply to claim 1 of the second auxiliary request as well and that the subject-matter of claim 1 of the second auxiliary request did not involve an inventive step for essentially the same reasons as those for claim 1 of the main request.

VI. With its letter of reply dated 7 June 2022, the appellant filed amended claims according to a main request and first to fifth auxiliary requests, indicated a basis in the application as filed for the amendments, and submitted reasons why the second auxiliary request should be admitted into the appeal

proceedings and why the subject-matter of claim 1 of all requests met the requirements of Article 56 EPC.

VII. On 4 July 2022, on the eve of the scheduled date of oral proceedings, the appellant informed the board of the professional representative's sudden illness and requested the postponement of the oral proceedings.

VIII. The board rescheduled the oral proceeding to 20 July 2022.

IX. The board held oral proceedings on 20 July 2022.

The appellant's final requests were that the decision under appeal be set aside and a European patent be granted on the basis of the claims of the main request or, alternatively, on the basis of the claims of one of the first to fifth auxiliary requests, all requests filed by a letter dated 7 June 2022.

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

X. Claim 1 of the appellant's **main request** reads as follows.

"*A method, comprising:*

detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a start time for programming content, wherein the programming content comprises a live transmission and the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches;

in response to detecting one of the plurality of start triggers on the first stream, switching, by the

device, to a second stream comprising the programming content;

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content;

recording, based on a first user preference indicating a type of live segment to be recorded, a particular segment from the one or more segments; and

in response to a determination to record the particular segment, recording, based on a second user preference indicating a type of preceding live segment to be recorded with the type of live segment to be recorded, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory."

XI. Claim 1 of the appellant's **first auxiliary request** reads as follows (additions to claim 1 of the **main request** are underlined and deletions are ~~struck-through~~).

"*A method, comprising:*

determining, based on a setting stored in memory, that at least one program recording is scheduled;

in response to the determining, detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a start time for programming content, wherein the programming content comprises a live transmission and the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches;

in response to detecting one of the plurality of start triggers on the first stream, switching, by the

device, to a second stream comprising the programming content;

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content;

recording, based on a first user preference indicating a type of live segment to be recorded, a particular segment from the one or more segments; and

in response to a determination to record the particular segment, recording, based on a second user preference indicating a type of preceding live segment to be recorded with the type of live segment to be recorded, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory."

XII. Claim 1 of the appellant's **second auxiliary request** reads as follows (additions to claim 1 of the **main request** are underlined and deletions are ~~struck-through~~).

"*A method, comprising:*

detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a start time for programming content, wherein the programming content comprises a live transmission of a sporting event and the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches;

in response to detecting one of the plurality of start triggers on the first stream, switching, by the device, to a second stream comprising the programming content;

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content;

~~recording, based on~~ storing a first user preference indicating a type of ~~live segment~~ play, in the sporting event, to be recorded and a second user preference indicating a predetermined number of plays preceding the type of play indicated by the first user preference, in the sporting event, to be recorded;

recording, based on the first user preference, a particular segment from the one or more segments; and

in response to a determination to record the particular segment, recording, based on ~~a~~ the second user preference ~~indicating a type of preceding live segment to be recorded with the type of live segment to be recorded~~, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory."

XIII. Claim 1 of the appellant's **third auxiliary request** reads as follows (additions to claim 1 of the **main request** are underlined and deletions are ~~struck-through~~).

"*A method, comprising:*

determining, based on a setting stored in memory, that at least one program recording is scheduled;

in response to the determining, detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a start time for programming content, wherein the programming content comprises a live transmission of a sporting event and the plurality of start triggers are

detected at decreasing intervals as a start time of the live transmission approaches;

in response to detecting one of the plurality of start triggers on the first stream, switching, by the device, to a second stream comprising the programming content;

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content;

~~recording, based on~~ storing a first user preference indicating a type of ~~live segment~~ play, in the sporting event, to be recorded and a second user preference indicating a predetermined number of plays preceding the type of play indicated by the first user preference, in the sporting event, to be recorded;

recording, based on the first user preference, a particular segment from the one or more segments; and

in response to a determination to record the particular segment, recording, based on ~~a~~ the second user preference ~~indicating a type of preceding live segment to be recorded with the type of live segment to be recorded~~, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory."

XIV. Claim 1 of the appellant's **fourth auxiliary request** reads as follows (additions to claim 1 of the **main request** are underlined and deletions are ~~struck-through~~).

"*A method, comprising:*

detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a start time for programming

content, wherein the programming content comprises a live transmission and the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches;

in response to detecting one of the plurality of start triggers on the first stream, switching, by the device, to a second stream comprising the programming content;

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content;

recording, based on a first user preference indicating a type of live segment to be recorded, a particular segment from the one or more segments; and

in response to a determination to record the particular segment, recording, based on a second user preference indicating a type of preceding live segment to be recorded with the type of live segment to be recorded and based on how much space is available in memory, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory."

XV. Claim 1 of the appellant's **fifth auxiliary request** reads as follows (additions to claim 1 of the **third auxiliary request** are underlined and deletions are ~~struck-through~~).

"*A method, comprising:*

determining, based on a setting stored in memory, that at least one program recording is scheduled;

in response to the determining, detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a

start time for programming content, wherein the programming content comprises a live transmission of a sporting event and the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches;

in response to detecting one of the plurality of start triggers on the first stream, switching, by the device, to a second stream comprising the programming content;

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content;

storing a first user preference indicating a type of play, in the sporting event, to be recorded and a second user preference indicating a predetermined number of plays preceding the type of play indicated by the first user preference, in the sporting event, to be recorded;

recording, based on the first user preference, a particular segment from the one or more segments; and in response to a determination to record the particular segment, recording, based on the second user preference and based on how much space is available in memory, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory."

Reasons for the Decision

1. The appeal is admissible.

The invention

2. The invention relates to a method of recording segments of programming content comprising a live transmission, such as a sporting event. Transmitted start triggers indicate the start time of programming content and segment triggers indicate the start time of segments of the programming content. The recording of segments is based on user preferences on a type of live segment to be recorded and a type of preceding live segment to be recorded.

Main request and first and second auxiliary requests - taken into account in the appeal proceedings

3. Contrary to what the board had expressed in its preliminary opinion (see point V above), the then second auxiliary request did not include new dependent claims. Thus, the objection under Article 12(4) RPBA 2007 against the then second auxiliary request is no longer maintained.

In response to the board's objection under Article 123(2) EPC raised for the first time in the communication under Article 15(1) RPBA 2020 ("*the communication*"), the appellant filed a new main request and new first and second auxiliary requests which *prima facie* overcame this objection. The board accepted that this constituted "*exceptional circumstances*" within the meaning of Article 13(2) RPBA 2020 and took these new requests into account.

Main request - inventive step (Articles 52(1) EPC and 56 EPC)

4. Closest prior art

4.1 The examining division held document D1 to be the closest prior art for the subject-matter of claim 1.

4.2 The board, however, is of the view that the closest prior art is not document D1 but document D4 for the reasons set out below.

4.3 Both documents D1 and D4 are closely related to the method of claim 1 in that they both disclose a method of detecting start triggers indicating the start times of live television programmes and programme segments in a digital television stream. According to both documents, in response to the detection of a start trigger, the recording of the corresponding programme or programme segment may be started.

Document D4, however, is more relevant than document D1 to the subject-matter of claim 1 in that it also discloses the feature of claim 1 that "*the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches*" (see D4, page 19, lines 1 to 4 and page 34, lines 6 and 7).

When the description of the current application is taken into account, document D4 is also more relevant than document D1 because the start triggers in D4, like those in the current application, contain the start times of the programmes and/or segments and because these start triggers are transmitted **prior to** the programmes/segments. In contrast, the start triggers of D1 appear not to contain any data representing a start

time and must thus be transmitted in the stream **at** the start time of the programmes/segments.

4.4 The appellant did not dispute the board's finding that document D4 represented the closest prior art.

5. Distinguishing features

5.1 In the board's view, document D4 discloses the following features of claim 1:

A method, comprising:

detecting, by a device, a plurality of start triggers on a first stream, the plurality of start triggers indicating a start time for programming content, wherein the programming content comprises a live transmission and the plurality of start triggers are detected at decreasing intervals as a start time of the live transmission approaches; **[see, for instance, the start triggers ("segmentation messages" in D4) indicating the start time of programs (e.g. 102 in figure 2a) and program portions (e.g. 108 in figure 2a) on page 5, lines 2 to 7, and page 11, lines 20 to 34; the decreasing intervals on page 19, lines 1 to 4, and page 34, lines 6 and 7; and the live transmission on page 20, lines 21 to 23]**

in response to detecting one of the plurality of start triggers on the first stream, switching, by the device, to a second stream comprising the programming content; **[each program is transmitted in a different elementary stream (see page 4, lines 4 to 8) and the start triggers may be transmitted separately from the program stream (see page 22, lines 1 to 6; page 31, lines 27 to 29; and original claim 66); the detection of start triggers in one stream and the subsequent recording of a program received in another stream thus**

imply the switching from a first stream comprising the start triggers to a second stream comprising the program (see page 30, lines 25 to 31)]

detecting, by the device, one or more segment triggers on the second stream, the one or more segment triggers indicating one or more segments of the programming content; **[the start trigger 116 in figure 2a for segment 108 ("chapter 108" in D4) is inside program 102 (see figure 2a); it is thus in the same stream as program 102]**

recording, based on a first user preference indicating a ~~type of~~ live segment to be recorded,a particular segment from the one or more segments; **[see, for instance, page 30, lines 25 to 31, and page 31, lines 32 to 34)]** *and*

~~in response to a determination to record the particular segment, recording, based on a second user preference indicating a type of preceding live segment to be recorded with the type of live segment to be recorded, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory~~.

5.2 The appellant argued that the start triggers in D4 (called "*segmentation messages*" in D4) are in the same stream as the programming content, as illustrated in Figure 2a and stated on page 5, lines 2 to 7 (see point 2.1 of the statement of grounds of appeal). Hence the features of claim 1 that the start triggers are in a first stream and the programming content is in a second stream and that there is a switch from the first stream to the second stream were not disclosed in D4.

5.3 The board does not find the appellant's arguments persuasive for the following reasons.

Figure 2a and page 5, lines 2 to 7 describe an embodiment of the invention of D4. However, other passages of D4 disclose that the start triggers and the programming content may also be in separate streams (see page 22, lines 1 to 6, page 31, lines 27 to 29 and claim 66).

5.4 For the above reasons, the method of claim 1 differs from that of D4 by the following distinguishing features:

(a) a particular segment is recorded "based on a first user preference indicating a **type of** live segment to be recorded" (emphasis added by the board)

(b) "in response to a determination to record the particular segment, recording, based on a second user preference indicating a type of preceding live segment to be recorded with the type of live segment to be recorded, another segment preceding the particular segment, wherein the recording the another segment comprises transferring the another segment from a buffer to a record memory"

6. Objective technical problem

6.1 It is established case law of the boards that any aspects based on the subjective interests, personal preferences and (business/commercial) activities or circumstances of the user are non-technical in nature (see decisions T 478/06, point 6 of the Reasons and T 972/07, point 6 of the Reasons).

6.2 Distinguishing features (a) and (b) allow a user to set preferences such that a live programme segment of a

certain type (e.g. sports) and a preceding segment are automatically recorded.

6.3 In the board's view, allowing the user to state their preferences on which segments of a programme should be recorded based on the type of programme is non-technical because it is essentially based on commercial and psychological considerations, i.e. on making a product more attractive to the user and in creating an effect in the user's mind. Technical aspects only come into play with the technical implementation of such a non-technical idea.

6.4 In line with the "COMVIK approach" established by the case law of the boards, if the problem is based on a mix of technical and non-technical considerations, the objective technical problem may have to be formulated by including the non-technical aspects, whether novel or not, as part of the framework of the technical problem that is to be solved, in particular as a constraint that has to be met (see decision T 641/00 "Two identities/COMVIK", OJ EPO 2003, 352, point 5 ff of the Reasons; decision T 154/04, OJ EPO 2008, 46, point 16 of the Reasons; opinion G 3/08, OJ EPO 2011, 10, point 10.13.2 of the Reasons; decision G 1/19, OJ EPO 2021, A77, points 30 to 34 of the Reasons and Case Law of the Boards of Appeal of the EPO, 9th edition, July 2019, I.D.9.1.4).

6.5 In the current case, the board thus considers that **the objective technical problem** should be formulated as how to allow a user to set preferences such that a live programme segment of a certain type (e.g. sports) and a preceding segment are automatically recorded.

6.6 The appellant argued that the aim of allowing a user to set preferences such that a live programme segment of a certain type (e.g. sports) and a preceding segment are automatically recorded was partly technical and thus should not be included as an aim in the formulation of the objective technical problem. Indeed, recording only these segments has the technical effect of reducing the memory space required for the recording.

6.7 The board does not find the appellant's arguments persuasive for the following reasons.

D4 also allows the user to select segments of programming content for recording instead of recording the entire programming content. The above feature of claim 1 that the recorded segments are a type of live segment and a type of preceding live segment does not guarantee that less memory space is required than for recording segments selected by the user as in D4. Thus, for this reason alone, the technical effect alleged by the appellant does not exist.

6.8 The appellant also argued that the board wrongly applied the COMVIK approach. In the COMVIK decision (T 641/00), the technical and non-technical features could be clearly separated. In the claimed method, the user preferences were intrinsically linked to the recording.

6.9 The board does not find this argument persuasive for the following reasons.

As explained under point 6.3 above, the non-technical aspects in this case relate to allowing users to specify their preferences on which types of live segments to record. These preferences concern the

content of a segment, not its technical features. Allowing the user to state recording preferences based on segment content addresses a problem of how to make a product more attractive to the user and only creates an effect in the user's mind. Neither this problem nor this effect is technical. It is therefore justified to give the non-technical aspects to the skilled person in the objective technical problem as an aim to be achieved. Technical aspects only come into play with the technical implementation of the non-technical idea, in the current case, for instance, through the use of a buffer.

The situation is similar to that in the COMVIK decision (T 641/00), in which a non-technical idea of allowing user-selectable discrimination between calls for different purposes or by different users was given to the skilled person as an aim to be achieved in the objective technical problem (see point 7, second paragraph and point 14). The solution to the objective technical problem comprised technical features, such as allocating at least two identities to the subscriber identity module.

In conclusion, the current claimed invention, like that of decision T 641/00, comprises both a non-technical idea and a technical implementation of it. In both cases, these two aspects can be clearly separated.

7. Obviousness

7.1 The board considers that starting from D4 and faced with the above objective technical problem, the skilled person would immediately have realised that the user had to be allowed to state their preferences, for instance, via a user interface, as was well known in

the art. The skilled person would also have realised that a technical problem had to be overcome in that the preceding live segment might have already started being received when start triggers for an incoming live segment were received (see the example on page 34, lines 3 to 7, according to which two start triggers are received 15 and 5 seconds prior to the start of a segment, i.e. shortly before the segment itself, and likely after the preceding segment has already started). In the board's view, the solution to this problem would have been straightforward to the skilled person: to use a circular buffer to store received segments for long enough so that they are still stored in the buffer when start triggers for the next segment are received. Such a circular buffer for buffering incoming broadcast programmes was well known in the art (see, for instance, paragraphs [0049] and [0226] of D3).

Hence the skilled person would have arrived at the distinguishing features of claim 1 without any inventive activity.

7.2 The appellant argued that even faced with the above objective technical problem, the skilled person would not have wanted to adapt the method of D4 in the direction of the distinguishing features because it would have been contrary to the clear disclosure of D4 that the user should manually select which segments were to be recorded and which were not. Moreover, there was no suggestion in D4 to select a segment based on a user preference indicating a type of live segment and to also go back in time to record a preceding segment.

7.3 The board does not find the appellant's arguments persuasive for the following reasons.

Under the COMVIK approach, the objective technical problem may have to be formulated by including the non-technical aspects, whether novel or not, as part of the framework of the technical problem to be solved, in particular as a constraint that has to be met. In other words, the skilled person is given the non-technical aspects, i.e. a specification of what is desired for non-technical reasons, and is tasked with finding a technical solution corresponding to that specification.

In this case, the board concurs with the appellant that document D4 does not suggest the above distinguishing features. However, as explained in the preceding paragraph, the objective technical problem provides the skilled person with the aim to "*allow a user to set preferences such that a live program segment of a certain type (e.g. sports) and a preceding segment are automatically recorded*". Given that aim, the skilled person would have arrived at the distinguishing features without inventive activity for the reasons set out under point 7.1 above.

8. Conclusion on the main request

For the above reasons, the subject-matter of claim 1 of the main request does not involve an inventive step (Article 56 EPC) in view of document D4 and the skilled person's common general knowledge.

Hence the appellant's main request is not allowable.

First auxiliary request - inventive step (Articles 52(1) EPC and 56 EPC)

9. Compared to claim 1 of the main request, the method of claim 1 of the first auxiliary request adds the initial additional step of "*determining, based on a setting stored in memory, that at least one program recording is scheduled*" and then performs the steps of the method of claim 1 of the main request "*in response to the determining*".

10. The appellant argued that there was no suggestion in D4 to only perform the steps of the method of claim 1 if "*at least one program recording is scheduled*".

11. The board does not find the appellant's arguments persuasive for the following reasons.

Document D4 (see page 30, lines 26 to 31) discloses that users may program PVR (personal video recorder) 278 to record programming content at designated times based on an EPG and that the start and end times for recording the selected programming content may be adjusted based on start triggers. If no programme is scheduled for recording in D4, the board thus regards it as obvious that the steps intended for recording segments of that programme need not be performed.

12. Conclusion on the first auxiliary request

For the above reasons, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step in view of document D4 and the skilled person's common general knowledge.

Hence the appellant's first auxiliary request is not allowable.

Second auxiliary request - inventive step (Articles 52(1) EPC and 56 EPC)

13. Compared to claim 1 of the main request, claim 1 of the second auxiliary request essentially adds the following features taken from a dependent claim (see point XII above):
- the live transmission is for "*a sporting event*"
- the "*type of live segment*" is a "*type of play, in the sporting event*"
- the "*type of preceding live segment*" is "*a predetermined number of plays preceding the type of play*"

14. In the board's view, the above additional features of claim 1 (the live transmission being a sporting event, the type of live segment being a type of play in the sporting event and the type of preceding live segment being a predetermined number of plays) relate to non-technical aspects (for the reasons given under point 6.3 above) which would thus be given to the skilled person as an aim to be achieved in the formulation of the objective technical problem.

Starting from D4 and faced with such an objective technical problem, the skilled person would arrive at the claimed solution without an inventive step for essentially the same reasons as in point 7.1 above, the only difference being that the type of live segment and the type of preceding live segment are more specifically defined.

15. The appellant argued that the above additional features were partially technical because they produced the technical effect of allowing recording based on a type of play, such as a touchdown in American football, a goal in European football or a match point in tennis, even though the time of such an event could not be known in advance.

16. The board does not find the appellant's arguments persuasive for the following reasons.

The start triggers and the segment triggers in D4 allow adjusting the start and end times of a segment in real-time, including for a sporting event. The above additional features only further specify the content of the live transmission, i.e. a sporting event, and the type of segments to be recorded based on user preferences (a type of play and a preceding number of plays). These additional features thus only relate to a type of content (a type of play in a sporting event) corresponding to user preferences. They are thus non-technical. In the board's view, these additional features have no technical implication other than the receiving device must be able to recognise these types of segments. The time at which they are transmitted may well be unexpected, but this is generally the case for segments of a live programme.

17. Conclusion on the second auxiliary request

For the above reasons, the subject-matter of claim 1 of the second auxiliary request does not involve an inventive step in view of document D4 and the skilled person's common general knowledge.

Hence the appellant's second auxiliary request is not allowable.

Third auxiliary request - inventive step (Articles 52(1) EPC and 56 EPC)

18. Claim 1 of the third auxiliary request comprises the additional features of claim 1 of the first auxiliary request and claim 1 of the second auxiliary request.

19. The appellant did not submit that there was a synergy between these features.

20. Thus, for inventive step, the reasons given above regarding the first and second auxiliary requests apply to the method of claim 1 of the third auxiliary request.

21. Conclusion on the third auxiliary request

For the above reasons, the subject-matter of claim 1 of the third auxiliary request does not involve an inventive step in view of document D4 and the skilled person's common general knowledge.

Hence the appellant's third auxiliary request is not allowable.

Fourth auxiliary request - admittance (Article 13(1) RPBA 2020)

22. Under Article 13(1), first sentence, RPBA 2020, any amendment to a party's appeal case after it has filed its grounds of appeal or reply is subject to the party's justification for its amendment and may be admitted only at the discretion of the board. Under Article 13(1), fourth sentence, RPBA 2020, the board

must exercise its discretion in view of, *inter alia*, whether the party has demonstrated that any amendment *prima facie* overcomes the issues raised by the board and does not give rise to new objections.

23. Claim 1 of the fourth auxiliary request differs from claim 1 of the main request by the additional feature that the recording of a preceding segment is based on "*how much space is available in memory*" (see point XIV above).

24. The appellant submitted the following arguments why this amendment overcame the board's objection of lack of inventive step raised in the board's communication:
(a) D4 (page 23, lines 20 to 26) mentions that memory 76 has a memory capacity on the order of terabytes. With such a huge memory capacity, available memory space would not have been an issue in D4. Hence D4 teaches away from the above additional feature.
(b) Taking into account the available memory space renders the recording more flexible because the preceding live segment is not recorded if the available memory space is insufficient.

25. Re argument (a), the board notes that memory 76 is located at the headend, not at PVR 278 of the user's set-top terminal where the programming content is recorded (see memory 76 in Figure 5a; PVR 278 and its memory 276 in Figure 9; and page 30, lines 25 to 28).

26. Re argument (b), it was common general knowledge that how much memory space is available must always be taken into account when recording programming content, if only because there might not be sufficient memory space for the recording. Moreover, the recording in D4 is performed on segments of the programming content rather

than on the entire programming content. If there was not enough memory space for all the desired segments in D4, at least some of desired segments could still be recorded. The recording in the method of claim 1 is therefore not more flexible than in D4. Hence argument (b) is not persuasive either.

27. For the above reasons, the board considered that the appellant had not demonstrated that the amendments in claim 1 of the fourth auxiliary request *prima facie* overcome the issue of lack of inventive step raised by the board in its communication. Accordingly, the board exercised its discretion under Article 13(1) RPBA 2020 in not admitting the fourth auxiliary request.

Fifth auxiliary request - admittance (Article 13(1) RPBA 2007)

28. Claim 1 of the fifth auxiliary request differs from claim 1 of the third request by the same additional feature that the recording of a preceding segment is based on "*how much space is available in memory*" (see point XV above).

29. The appellant argued that the claimed subject-matter involved an inventive step because there was a synergistic effect between the additional features of claim 1 of the third auxiliary request and those of the fifth auxiliary request: the duration of a live sporting event was unpredictable and thus the memory space required could not be known at the beginning of the recording. In support of its arguments, the appellant filed two emails comprising examples of "*type of play*" in sports.

30. The board notes that most live events, regardless of their type, may have an unpredictable length. This is not specific to sporting events. The alleged synergy specific to sporting events is therefore not convincing. The examples of "*type of play*" filed by email do not change that conclusion.

31. Hence the board exercised its discretion under Article 13(1) RPBA 2020 in not admitting the fifth auxiliary request.

Conclusion

32. Since none of the appellant's main and first to third auxiliary requests is allowable and the fourth and fifth auxiliary requests were not admitted, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairwoman:

K. Boelicke B. Willems

Decision electronically authenticated