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Datasheet for the decision of 1 February 2018

Case Number: T 1969/12 - 3.5.04

Application Number: 07020159.5

Publication Number: 1940160

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Language of the proceedings: EN

Title of invention:
Providing information of image data stored in digital image display apparatus

Applicant:
Humax Co., Ltd.

Headword:

Relevant legal provisions:
EPC 1973 Art. 56, 84

Keyword:
Inventive step - main, first and second auxiliary requests (no)
Claims - clarity - third auxiliary request (no)

Decisions cited:

Catchword:

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Case Number: T 1969/12 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 1 February 2018

Appellant: (Applicant)	Humax Co., Ltd. Humax Village 11-4 Sunae-dong, Bundang-gu Seongnam-si, Gyeonggi-do 463-825 (KR)
Representative:	Zardi, Marco M. Zardi & Co. SA Via Pioda 6 6900 Lugano (CH)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 27 January 2012 refusing European patent application No. 07020159.5 pursuant to Article 97(2) EPC**

Composition of the Board:

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

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division refusing European patent application No. 07020159.5, published as EP 1 940 160 A1.

II. The documents cited in the decision under appeal included the following:

D1: WO 00/16548 A1,
D5: EP 1071286 A1 and
D6: US 2005/0251828 A1.

III. The decision under appeal was based on the following grounds:
- the subject-matter of claim 1 according to the main request lacked an inventive step (Article 56 EPC) starting from document D6 as closest prior art, in combination with teachings from documents D1 and D5, and also starting from document D1 as closest prior art, in combination with teachings from document D6; and
- claim 1 according to the auxiliary request did not involve an inventive step in view of documents D1 and D6.

IV. With the statement of grounds of appeal, the appellant filed amended claims according to a main request and first and second auxiliary requests, as well as an amended description page 3c.

V. In a communication under Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA, OJ EPO 2007, 536) annexed to the summons to oral proceedings, the board informed the appellant of its provisional opinion on the claims filed with the statement of grounds of

appeal. It raised objections as to lack of clarity (Article 84 EPC 1973) and added subject-matter (Article 123(2) EPC) against the claims of the main, first and second auxiliary requests. Moreover, it explained why document D1 was the closest prior art for those claims and why their subject-matter lacked either novelty or inventive step in view of document D1.

VI. With a letter dated 29 December 2017, the appellant filed amended claims according to new main, first and second auxiliary requests, replacing all the previous claims on file.

VII. The board held oral proceedings on 1 February 2018, during which the appellant filed a set of claims according to a third auxiliary request.

The appellant's requests at the end of the oral proceedings were that the decision under appeal be set aside and that a patent be granted in the following version:

Claims
- 1 to 17 of the main request, or
- 1 to 15 of the first auxiliary request, or
- 1 to 14 of the second auxiliary request,
all of these claim requests filed with the letter of 29 December 2017, or
- 1 to 17 of the third auxiliary request filed during the oral proceedings of 1 February 2018.

Description
- Pages 1, 3a, 4 to 7, 10 and 23 as filed on 3 June 2009,
- Pages 2, 3, 8, 9, 11 to 22 and 24 as originally filed,

- Page 3b as filed on 21 October 2011,
- Page 3c as filed on 1 June 2012.

Drawings
Sheets 1/7 to 7/7 as originally filed.

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

VIII. Claim 1 according to the appellant's **main request** reads as follows:

"A device for providing information of image data included in broadcast data stored in a digital image display apparatus (100) according to a broadcast storing signal, the device comprising:

- a channel list generating unit (182), searching receivable broadcast channels received by the digital image display apparatus (100) and generating a list of found channels, and generating channel list data by using the list of found channels,
- a display unit (130), outputting the channel list data through the digital image display apparatus, displaying a sign on a portion added into the channel list data, if a broadcast of a channel selected by a user is recorded, and
- a link unit (184), linking stored image data and information data of the image data, respectively, to the channel list data and adding a tag into the channel list data indicating that the image data is stored, the image data and the information data being included in the broadcast data, the image data and the information data being stored in the digital image display apparatus (100) in response to the broadcast data storing signal received for recording a program corresponding to the image data,

wherein the link unit (184) links the stored image data and the information data, respectively, to the channel list data by providing the tag into a portion of the channel list data generated by the channel list generating unit (182) and including a link point connected to the tag in the stored image data and the stored information data, the tag being information indicating that a program is tagged, and the link point being information indicating a point that is linked with the tag."

IX. Claim 1 according to the appellant's **first auxiliary request** reads as follows:

"A device for providing information of image data included in broadcast data stored in a digital image display apparatus (100) according to a broadcast selecting signal and a broadcast data storing signal, the device comprising:

- a channel list generating unit (182), searching receivable broadcast channels received by the digital image display apparatus (100) and generating a list of found channels, and generating channel list data by using the list of found channels,
- a display unit (130), outputting the channel list data through the digital image display apparatus, displaying a sign on a portion added into the channel list data, if a broadcast of a channel selected by a user is recorded;
- a link unit (184), linking stored image data and additional information of the image data including transport stream information and recording information of the image data, respectively, to the channel list data and adding a tag into the channel list data indicating that the image data is stored,

wherein the link unit (184) links the stored image data and the information data, respectively, to the channel list data by providing the tag into a portion of the channel list data generated by the channel list generating unit (182) and including a link point connected to the tag in the stored image data and the stored information data, the tag being information indicating that a program is tagged, and the link point being information indicating a point that is linked with the tag, and

wherein the sign is an information related to the tag."

X. Claim 1 according to the appellant's **second auxiliary request** reads as follows:

"A device for providing information of image data included in broadcast data stored in a digital image display apparatus (100) according to a broadcast selecting signal and a broadcast data storing signal, the device comprising:

- a channel list generating unit (182), searching receivable broadcast channels received by the digital image display apparatus (100) and generating a list of found channels, and generating channel list data by using the list of found channels,
- a display unit (130), outputting the channel list data through the digital image display apparatus and displaying a sign on a portion added into the channel list data, if a broadcast of a channel selected by a user is recorded;
- a link unit (184), linking stored image data and additional information of the image data, respectively, to the channel list data, storing the channel list data linked with the image data and the information data,

respectively and adding a tag into the channel list data indicating that the image data is stored,

wherein the sign is an information related to the tag."

XI. Claim 1 according to the appellant's **third auxiliary request** reads as follows:

"A device for providing information of image data included in broadcast data stored in a digital image display apparatus (100) according to a broadcast storing signal, the device comprising:

- a channel list generating unit (182), searching receivable broadcast channels received by the digital image display apparatus (100) and generating a list of found channels, and generating channel list data by using the list of found channels,
- a display unit (130), outputting the channel list data through the digital image display apparatus, and
- the image data and the information data being included in the broadcast data, the image data and the information data being stored in the digital image display apparatus (100) in response to the broadcast data storing signal received for recording a program corresponding to the image data, characterized by the fact that

a link unit (184) links the image data and the information data stored in the digital image display apparatus (100), respectively, to the channel list data by providing a tag into a portion of the channel list data generated by the channel list generating unit (182) and a link point connected to the tag in said stored image data and information data,

whereas said channel list data include, for each of said found channels, a section displaying the name of the found channel and a section displaying the tag

linking said image data and information data stored in the digital image display apparatus (100) from recording said found channel."

XII. The examining division's reasons for the decision under appeal which are relevant to the present decision may be summarised as follows:

Document D1, in particular the channel list shown in figure 5a, could be regarded as the closest prior art for the subject-matter of claim 1 of the main request. In D1, additional information for each scheduled (not recorded) program was linked to the particular cell of the channel list so that it could be accessed therefrom. The subject-matter of claim 1 of the main request differed from the aforementioned channel list in that only recorded programs were considered and those were distinguished by a sign. A skilled person would, however, have modified the grid on figure 5a of D1 in a way hinted at in D6 (figure 5, paragraph [0054]), i.e. would have used a red background for recorded cells. It would have been obvious to limit the method to a subset of the programs, i.e. to those having a red background.

Hence the subject-matter of claim 1 of the main request did not involve an inventive step (Article 56 EPC) in view of D1 and D6.

XIII. The board's objections raised in the communication under Article 15(1) RPBA annexed to the summons to oral proceedings which are relevant to the present decision may be summarised as follows:

The subject-matter of claim 1 of the main request filed with the statement of grounds of appeal lacked novelty

(Article 54(1) and (2) EPC 1973) over the disclosure of document D1 (see point 9 of the communication).

XIV. The appellant's main arguments regarding the issues relevant to the present decision may be summarised as follows:

Arguments for the main request (inventive step)

Document D1, as closest prior art, failed to disclose the last features of claim 1 reading "wherein the link unit (184) links the stored image data and the information data, respectively, to the channel list data by providing the tag into a portion of the channel list data generated by the channel list generating unit (182) and including a link point connected to the tag in the stored image data and the stored information data, the tag being information indicating that a program is tagged, and the link point being information indicating a point that is linked with the tag." (see page 3, fifth paragraph, of the letter dated 29 December 2017).

Due to the above distinguishing features, the device of claim 1 had the advantage that recorded image data or information data could be searched based on a specific service channel. This also allowed a sign to be shown in a recorded program broadcast cell of the channel list when the channel list was displayed on a screen. Therefore, the search of recorded image or information related to the image on the channel list could be improved (see page 3, eighth paragraph, of the letter dated 29 December 2017).

The objective technical problem therefore was "how to improve search of recorded image or information related

to the image" (see page 3, last sentence, of the letter dated 29 December 2017).

In the device of claim 1, this objective technical problem was solved by the specific arrangement of tag, link point and sign, which allowed the device to search through recorded programs quickly (due to the "tag" and "link point") and enabled the user to quickly see the programs thus obtained (thanks to the "sign").

There was no suggestion in D1 of the above specific arrangement. Hence the subject-matter of claim 1 involved an inventive step.

Arguments for the first auxiliary request (inventive step)

Claim 1 of the first auxiliary request further specified that the "additional information" (corresponding to the "information data" in claim 1 of the main request) included "transport stream information", the content of which was clearly defined both in the MPEG standard and in the description of the application as filed (see page 19, lines 9 to 15).

There was no suggestion in D1 that the recorded additional information included transport stream information.

Arguments for the second auxiliary request (inventive step)

None relating to inventive step.

Arguments for the third auxiliary request (clarity)

None relating to clarity.

Reasons for the Decision

1. The appeal is admissible.

Main request - inventive step (Article 56 EPC 1973)

2. Closest prior art

D1 discloses user television equipment, such as a set-top box (STB), which receives digital broadcast data comprising television programs and program-related information, including electronic program guide (EPG) data (see, for instance, page 1, lines 2 to 5, and from page 2, line 22, to page 3, line 19). The EPG data is used by the STB to display an EPG screen from which the user can, *inter alia*, select a program for recording. When a program is recorded, the additional information data relating to the program is also recorded so that, when the recorded program is played back, the user can interact with the data as if the program were being originally aired (see, for instance, from page 3, line 19, to page 4, line 14). Listings of currently stored programs may be displayed in any form of list, table or grid (see page 14, lines 3 to 6). Examples of presentations of listings of currently stored programs are shown in figure 5b (see also the corresponding description on page 14, lines 6 to 23) and figure 9 (see also the corresponding description from page 21, line 27, to page 22, line 20).

The appellant did not dispute that document D1 could be regarded as the closest prior art and that it disclosed the following features of claim 1:

A device for providing information of image data included in broadcast data stored in a digital image display apparatus according to a broadcast storing signal (see, for instance, page 3, lines 19 to 28), the device comprising:

- a channel list generating unit, searching receivable broadcast channels received by the digital image display apparatus and generating a list of found channels, and generating channel list data by using the list of found channels (implicit from figure 5a, item 56 in figure 4 and the associated description, in particular "the program guide generates an appropriate program listings screen" on page 11, lines 11 to 13) and;
- a display unit, outputting the channel list data through the digital image display apparatus (see, for instance, figures 5a and 5b), displaying a sign on a portion added into the channel list data, if a broadcast of a channel selected by a user is recorded (see figure 5b and from page 14, line 24, to page 15, line 5: it is implicit that there must be an indication, i.e. a "sign" that a program is recorded, on the grid shown in figure 5b for informing the user that the programs in row 145 are recorded programs); and
- a link unit, linking stored image data and information data of the image data, respectively, to the channel list data (implicit from, for instance, page 4, lines 3 to 7 and 10 to 14) and adding a tag into the channel list data indicating that the image data is stored (see figure 5b and from page 14, line 24, to page 15, line 5: it is implicit that there must

be an indication, i.e. a "tag", that a program is recorded, on the grid shown in figure 5b for informing the user that the programs in row 145 are recorded programs), the image data and the information data being included in the broadcast data, the image data and the information data being stored in the digital image display apparatus in response to the broadcast data storing signal received for recording a program corresponding to the image data (see, for instance, page 3, lines 19 to 28, and page 9, lines 9 to 20).

3. Distinguishing features

The appellant submitted that D1 did not disclose the last features of claim 1 reading "wherein the link unit (184) links the stored image data and the information data, respectively, to the channel list data by providing the tag into a portion of the channel list data generated by the channel list generating unit (182) and including a link point connected to the tag in the stored image data and the stored information data, the tag being information indicating that a program is tagged, and the link point being information indicating a point that is linked with the tag."

The board concurs with the appellant that D1 does not disclose a tag and a link point as defined in the above distinguishing features.

4. Technical effect and objective technical problem

The appellant argued that due to the above distinguishing features, the device of claim 1 had the advantage, i.e. **the technical effect**, that recorded image data or information data could be searched based on a specific service channel. Therefore, the search of

recorded image or information related to the image on the channel list could be improved.

According to the appellant, **the objective technical problem** therefore was "how to improve search of recorded image or information related to the image" (see page 3, last sentence, of the letter dated 29 December 2017).

The board is not persuaded that the device of claim 1 achieves **the technical effect** alleged by the appellant, i.e. that recorded image data or information data can be searched **based on a specific service channel** (emphasis added by the board), because there is no feature in claim 1 stating that the stored "information data" comprises information about the channel on which the recorded programs were broadcast. In fact, claim 1 does not specify the content of the "information data" at all. As a consequence, the board is prepared to accept only that the stored "information data", which comprises (unspecified) information related to the recorded programs (the latter called "image data" in claim 1), may be used for searching through the recorded programs, but not that it enables the device to perform a search **based on a specific service channel** from which the stored programs were recorded.

However, the board notes that the appellant's formulation of **the objective technical problem**, contrary to that of the technical effect, does not mention a search **based on a specific service channel**, but, instead, generally refers to "how to improve search of recorded image or information related to the image". The board therefore has no objection to this formulation of the objective technical problem.

5. Obviousness

The distinguishing features of claim 1 essentially state how, for a given recorded program, the following three items are interlinked: the recorded program ("image data" in claim 1), the additional data associated with this program ("information data" in claim 1) and the corresponding entry in the EPG data ("channel list data" in claim 1). According to these distinguishing features, a "tag" is added in a portion of the "channel list data" to indicate that a program ("image data") is stored, and a pointer ("link point") pointing to the tag is included in each of the stored programs and the stored additional data associated with the respective program.

In the device of D1, the same three items, i.e. the recorded program, the associated additional data and the corresponding entry in the EPG data, are also necessarily interlinked. Indeed, by selecting a cell of a stored program in the displayed screen of figure 5b, the user can select either to play back the recorded program or to display the additional information about it (see page 14, line 29, to page 15, line 7). Since the recorded program and the associated additional data may be recorded in non-contiguous space on a storage medium (see page 20, lines 3 to 10), these three items must be interlinked.

D1, however, does not disclose how these three items are interlinked.

In the board's view, the manner in which these three items are interlinked in claim 1, i.e. with a tag in the channel list data and a pointer ("link point") to the tag in each of the recorded programs and the

associated additional data, is simply an arbitrary selection of one among several straightforward arrangements of tag(s) and pointer(s) in order to interlink the three items. The board cannot see any unexpected advantage in the manner in which the tags and pointers are arranged in claim 1. In particular, the board sees no technical reason why this arrangement would "improve search of recorded image or information related to the image" compared to D1.

For the above reasons, the board considers that the subject-matter of claim 1 of the main request does not involve an inventive step in view of prior-art document D1.

Accordingly, the appellant's main request is not allowable.

First auxiliary request - inventive step (Article 56 EPC 1973)

6. Claim 1 of the first auxiliary request differs from claim 1 of the main request essentially in that
   (a) the "information data", renamed "additional information", includes "transport stream information" and "recording information";
   (b) image data is stored according to not only a "broadcast data storing signal" but also a "broadcast selecting signal"; and
   (c) the sign is a piece of information related to the tag.

7. The appellant did not dispute that features (b) and (c) were both obvious in view of D1 because it was standard procedure that the user first had to select a channel before he could select a program for recording (feature (b)) and because both the sign and the tag

conveyed the same information that a given program had been recorded (feature (c)).

The appellant argued that feature (a) rendered the device of claim 1 inventive because there was no suggestion in D1 that the "additional data" could include "transport stream information".

The board is not persuaded by this last argument for the following reasons:

First, it should be noted that claim 1 does not define the content of the "transport stream information".

The appellant explained that the content of the "transport stream information" was defined in the description of the application, namely on page 19, lines 9 to 11, which reads "Referring to FIG. 4, the transport stream data, linked with the TS info 306 can be partitioned into sections such as a SVC name 400, a Freq 402, a symbolrate 404, a polar 406 and a FEC 408, for example.", and on page 19, lines 12 to 15, which reads "In the case of moving picture experts group (MPEG) standard in association with the playback of moving pictures, the transport stream information refers to information related to a transport stream transporting image data and audio data through one stream."

However, the board notes that both passages are examples of what the "transport stream information" could contain rather than definitions of that content.

Second, the expression "including transport stream information" in claim 1 is not construed by the board as meaning that **all** the "transport stream information"

is included in the stored additional information, but rather as meaning that **at least some** of the "transport stream information" is included in the stored additional information. On the basis of this construction, the additional information in D1 also comprises some of the transport stream information because it comprises, *inter alia*, information on the "channel" (see page 20, lines 14 to 24), which is part of the "transport stream information" according to the description of the present application (see "SVC name 400" in page 19, lines 9 to 11, and in figure 4 of the present application).

As to the "recording information" as defined on page 20, lines 6 to 8, and in figure 5 of the present application, all its fields are also present in the stored associated additional information of D1 (see page 20, lines 14 to 24).

For the above reasons, the board regards feature (a) as being known from D1.

As a result, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step in view of prior-art document D1, and the appellant's first auxiliary request is not allowable.

Second auxiliary request - inventive step (Article 56 EPC 1973)

8. Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request essentially in that the reference to transport stream information and recording information has been deleted and in that the distinguishing features of claim 1 of the main request ("wherein the link unit (184) ... is linked with the tag"), which specified how the tag and link point(s)

interlinked the channel list data, the image data and the information data, has been replaced by a more general formulation reading "storing the channel list data linked with the image data and the information data, respectively".

9. Since the subject-matter of claim 1 of the second auxiliary request is broader than that of claim 1 of the first auxiliary request, it does not involve an inventive step for the same reasons as those set out above regarding claim 1 of the first auxiliary request.

10. Accordingly, the appellant's second auxiliary request is not allowable.

Third auxiliary request - clarity (Article 84 EPC 1973)

11. Claim 1 of the third auxiliary request differs from claim 1 of the main request, *inter alia*, by the following additional feature at the end of the claim:

"whereas said channel list data include, for each of said found channels, a section displaying the name of the found channel and a section displaying the tag linking said image data and information data stored in the digital image display apparatus (100) from recording said found channel."

12. The board considers that the above additional feature causes a lack of clarity in claim 1 for the following reasons:

It is unclear in the above wording whether the name of the found channels and the tag are actually displayed because the word "displaying" appears to be used to mean "comprising".

It is also unclear in the above wording in the context of the whole claim whether a "tag" is added for each "found channel" or only for each of the recorded programs.

13. Hence claim 1 of the third auxiliary request does not meet the requirement of clarity of Article 84 EPC 1973.

14. Accordingly, the appellant's third auxiliary request is not allowable.

Conclusion

15. Since none of the appellant's requests are allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

K. Boelicke B. Müller

Decision electronically authenticated