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**Datasheet for the decision
of 24 August 2016**

Case Number: T 0928/11 - 3.5.04

Application Number: 06252094.5

Publication Number: 1715689

IPC: H04N7/10

Language of the proceedings: EN

Title of invention:

Image display device, method of controlling the same and home network system

Applicant:

LG Electronics Inc.

Headword:

Relevant legal provisions:

EPC 1973 Art. 56

Keyword:

Inventive step - (no)
Request for oral proceedings to be held by video conference -
(refused)

Decisions cited:

T 1942/12, T 2068/14

Catchword:



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Case Number: T 0928/11 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 24 August 2016

Appellant: LG Electronics Inc.
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Youngdungpo-gu
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Representative: Hale, Peter
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 30 November
2010 refusing European patent application
No. 06252094.5 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman C. Kunzelmann
Members: M. Paci
B. Müller

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division refusing European patent application No. 06252094.5 published as EP 1 715 689 A2.
- II. The documents cited in the decision under appeal included the following:

D1: EP 1 355 451 A2
- III. The application was refused on the grounds that claims 1, 7 and 11 of the sole request did not meet the requirement of clarity of Article 84 EPC. The examining division also observed in a section entitled "Additional remarks not forming part of the decision" that, notwithstanding the clarity objections, if the claims were construed according to the applicant's interpretation, their subject-matter would not involve an inventive step (Article 56 EPC) in view of prior-art document D1.
- IV. In the notice of appeal, the appellant requested that the decision under appeal be set aside. With the statement of grounds of appeal, the appellant filed amended claims 1 to 12 replacing all previous claims on file and requested the grant of a patent on the basis of these amended claims. As a precaution, the appellant also requested oral proceedings.
- V. The board summoned the appellant to oral proceedings and in a communication under Article 15(1) RPBA (Rules of Procedure of the Boards of Appeal of the EPO, OJ EPO 2007, 536) gave its preliminary opinion that

- the amended claims complied with the requirements of Article 123(2) EPC and overcame the objections of lack of clarity set out in the decision under appeal;
- the wording of the amended claims nonetheless still lacked clarity (Article 84 EPC 1973) for a number of other reasons; and
- the subject-matter of amended claims 1 and 7 did not involve an inventive step in view of prior-art document D1, for the reasons set out in the board's communication and essentially corresponding to the examining division's observations under "Additional remarks not forming part of the decision".

- VI. With a letter dated 22 July 2016, the appellant filed three sets of claims according to a main and first and second auxiliary requests, replacing all previous claims on file.
- VII. In a letter dated 8 August 2016, the appellant requested that the oral proceedings scheduled for 24 August 2016 be held by video conference. The appellant also stated that if this request was not accepted by the board, neither the appellant nor its representative would attend the oral proceedings.
- VIII. With a "Communication of the Registry" faxed to the appellant on 17 August 2016, the appellant was informed that the oral proceedings could not be held by video conference.
- IX. The board held oral proceedings on 24 August 2016. As announced, the duly summoned appellant did not attend. The Chairman noted that the appellant had requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims according to the main request, the first auxiliary request or the

second auxiliary request, all requests filed with the letter dated 22 July 2016. At the end of the oral proceedings, he announced the board's decision.

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

"An image display device (100) for controlling operation of plural external devices of different types through a home network, the device comprising:

 a tuner (101) arranged to receive a broadcasting signal;

 a demux (102) arranged to divide the received broadcasting signal into a video data, an audio data, and an additional data;

 an audio processing unit (103) arranged to process the audio data;

 a video processing unit (105) arranged to process the video data;

 a display unit (106) arranged to display the video data outputted from the video processing unit; and characterized by further comprising:

 a key input unit (107) for inputting a transmission setup including i) selection of a received broadcasting signal stored in memory (109), or a channel of a received broadcasting signal to be transmitted ii) a time for transmission to an external device, and iii) identification of a selected external device using the key input unit (107);

 a memory (109) for storing the transmission setup;

 a controller (108) arranged to control operation of the image display device (100) according to an output of the key input unit (107);

 wherein the image display device (100) determines and outputs transmission data according to the type of the selected external device, a first type having only

a speaker and no display unit and a second type having a speaker and a display unit wherein data selected from video data, audio data and additional data in the broadcasting signal is transmitted to the selected external device at the time for transmission of the transmission setup; and

a communication unit (110) being configured to communicate the data with the selected external device."

- XI. Claim 1 according to the appellant's **first auxiliary request** reads as follows (additions to claim 1 of the main request are underlined, deletions are ~~struck-through~~, long identical text portions are replaced by "[...]"):

"An image display device (100) for controlling operation of plural external devices of different types through a home network system, the device comprising:

[...]

wherein the image display device (100) determines and outputs transmission data according to the type of the selected external device, a first type having only a speaker and no display unit and a second type having a speaker and a display unit wherein transmission data selected from video data, audio data and additional data in the broadcasting signal is transmitted to the selected external device at the time for transmission of the transmission setup; and

a communication unit (110) being configured to perform data communication ~~communicate the data~~ with the selected external device."

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

through, long identical text portions are replaced by "[...]":

"An image display device (100) for controlling operation of plural external devices of different types through a home network system, the device comprising:

[...]

a controller (108) arranged to control operation of the image display device (100) according to an output of the key input unit (107) +,

wherein the image display device (100) is arranged to determines and outputs transmission data selected from video data, audio data and additional data in the broadcasting signal according to the type of the selected external device at the time for transmission of the transmission setup, and

wherein:

the selected transmission data is audio data when the selected external device is a first type having only a speaker and no display unit, and

the selected transmission data is video data, audio data and additional data when the selected external device is a second type having a speaker and a display unit ~~wherein data selected from video data, audio data and additional data in the broadcasting signal is transmitted to the selected external device at the time for transmission of the transmission setup; and~~

a communication unit (110) being configured to perform data communication ~~communicate the data with the selected external device."~~

XIII. The examining division's additional remarks as to inventive step in the decision under appeal may be summarised as follows:

Document D1, the closest prior art, disclosed an image display device comprising almost all the features of claim 1 of the sole request underlying the decision under appeal, the sole difference being, if not implicit in D1, that the controller selected only those components (video and/or audio and/or data) which it had determined could be handled by the user-selected external device.

The objective technical problem could be formulated as how to avoid malfunction caused by transmitting inappropriate content components to external devices with only limited capacity to handle the full range of content components, for example by sending video signals to a pair of headphones.

There was no inventive step because it was a matter of routine for the skilled person to overcome this problem by sending only those components which the selected external devices could adequately process.

XIV. In its communication under Article 15(1) RPBA the board informed the appellant that the examining division's reasoning as to inventive step was also relevant to amended claim 1 filed with the statement of grounds of appeal. More specifically, the board explained that the distinguishing features of claim 1 were that the selected external device could be of a first type having only a speaker and no display unit and that the transmission data output by the controller in that case was "according to this first type". The objective technical problem remained as formulated by the examining division and the solution of claim 1 was regarded as obvious because D1 hinted that some external devices could only receive audio data and that

only audio data would be transmitted to these external devices.

- XV. The appellant's arguments as to inventive step (which were submitted with the letter of 22 July 2016) may be summarised as follows:

The arguments applied equally to the main request, first auxiliary request and second auxiliary request. In particular, the claim language of the second auxiliary request further restricted the possibility of any ambiguity.

In D1, the session manager matched external devices which had complementary data-processing capabilities (see paragraph [0121]) and actively prevented communication between non-complementary devices by deactivating device buttons on a graphic user interface (GUI). For instance, the user was not permitted the option of allowing a digital video cassette recorder (DVCR) to communicate with a CD device, because the DVCR was capable of outputting and accepting a video signal (and very likely an audio signal too), but the CD device could only output an audio signal (see paragraph [0112]). Moreover, the examples provided in D1 suggested that data transmitted between two complementary devices was a whole broadcasting signal (e.g. a TV show) rather than data selected from within the broadcasting signal.

In contrast to D1, the image display device of claim 1 advantageously provided the user with the capability to select, from a broadcasting signal, subsets of data which could be used by a particular external device and to transmit only those subsets to the external device at a time selected by the user. In the case of an

external device of a first type having only a speaker but no display unit (e.g. a speaker), it allowed to select only the audio data from a broadcasting signal comprising video, audio and additional data, and to transmit only the audio data (i.e. the soundtrack) to the external device. It had the technical effect of minimising the volume of data transmitted and, as identified in the decision under appeal and in the communication of the board, of avoiding malfunction caused by transmitting inappropriate content components to external devices (for example by sending video signals to a pair of headphones).

The objective technical problem solved by claim 1 was therefore correctly identified in section 12 of the communication of the board as how to avoid a malfunction caused by transmitting inappropriate content components to external devices with only limited capacity to handle the full range of content components.

D1 provided an alternative solution to this problem, which was to restrict a user's choice so that errors could not occur. It was based on the fundamental assumption that the user would not want, for example, to send a video to a device which could not display a video. What D1 completely failed to recognise, and what formed the inventive spark for the present invention, was that while a device might not be able to display a video, it might have capabilities to handle some of the data that made up that video. Specifically, a video might comprise video and audio data, and certain devices might be able to handle the audio even if they could not handle the video. Nothing in D1 hinted or suggested that a piece of content (i.e. a video, or the "broadcasting signal" in the claim language) should be

broken down into its constituent parts (i.e video data and audio data) before the ability of a device to handle these constituent parts was assessed.

D1 took the view that in order to maintain the stability of the system a user should be prevented from making inappropriate choices. In contrast, the present invention identified potential connections between devices that a user might not have intuitively recognised. The two approaches were diametrically opposed; one restricted choice and the other increased it. With this in mind, it was clear that the skilled person starting with D1 and faced with the objective technical problem would not have modified the teaching of D1 to arrive at the subject-matter of claim 1.

Reasons for the Decision

1. The appeal is admissible.

The request to hold oral proceedings by video conference

2. Irrespective of whether a "general framework" is a prerequisite for holding oral proceedings by video conference before a board of appeal (see decision T 1942/12, point 2 of the Reasons), the appellant in any case did not provide any reason for exceptionally doing so (see decision T 2068/14, points 1.2.2 to 1.2.5 of the Reasons). As a consequence, the appellant's request was refused.

The invention

3. The invention relates to an image display device for controlling the operation of multiple other devices of different types via a home network system.

Main request - inventive step (Article 56 EPC 1973)

4. Preliminary remark

The claims according to the main request filed with the letter dated 22 July 2016 are identical to the claims of the sole request filed with the statement of grounds of appeal.

5. Construction of claim 1

The appellant's argumentation as to inventive step in view of D1 (summarised under point XV *supra*) is based on a construction of claim 1 according to which the claimed image display device has the capability to **select, from a broadcasting signal, subsets of data** which the selected external device can handle and to **transmit only those subsets** to the external device.

The board does not share the appellant's construction of claim 1 for the following reasons:

First, the board notes that the appellant did not indicate in its letter of 22 July 2016 (which contained all the arguments on inventive step submitted by the appellant during the appeal proceedings) which wording in claim 1 implied that subsets of data from the broadcasting signal, instead of the whole broadcasting signal, could be transmitted to a selected external device.

However, this is not a problem because it is quite clear to the board that the appellant must have been relying for its construction on the expression "wherein data selected from video data, audio data and additional data in the broadcasting signal is transmitted" in claim 1.

The board further notes that the above expression had been used once in the application as filed in the given context, namely in dependent claim 11; hence, the use of this expression in claim 1 of the present main request does **not** raise an issue under Article 123(2) EPC.

However, the board considers that, in the light of the description and drawings, this expression should **not** be construed as meaning that **subsets** of the data contained in the broadcasting signal (e.g. only the audio data from a broadcasting signal containing video, audio and additional data) are transmitted to the external device. Instead, in the board's view, this expression should be construed as meaning that **the whole broadcasting signal** selected by the user is transmitted, but that the broadcasting signal itself may contain only some of video, audio and additional data, for instance, only audio data in the case of a broadcasting signal on a radio channel.

The board arrives at the above construction because there is no mention in the description and drawings of less than the whole broadcasting signal being transmitted to the selected external device. The description discloses two concrete examples of transmission of audio data only to an external device capable only of handling audio data: however, in both

cases, the audio data is **not a subset** of the broadcasting signal but the **whole** broadcasting signal from a radio channel (see paragraph [0030], first sentence, and paragraph [0034] of the application as filed).

The appellant gave an example of only the soundtrack (audio data) of an audio-visual broadcasting programme being transmitted to an external device having a speaker but no display unit. However, no such example is disclosed in the application as filed.

6. Disclosure of D1 - closest prior art

It is undisputed that D1 represents the closest prior art and that it discloses a home network comprising "home devices" of different types corresponding to the "external devices" of present claim 1 (see, for instance, paragraph [0002] and figure 1 of D1). Any home device having a display, e.g. digital television (DTV) 102, can be used to display a graphic user interface (GUI) to allow the user to enter commands for setting up data transmission between two home devices: see, for instance, paragraphs [0029] and [0082] to [0085] and figures 8 to 13, of D1. A controller (called "session manager" in D1: see "SESSION MANAGER" section starting at paragraph [0082]) controls the operation of the image display device according to the user input. The user input can select a current broadcasting signal (received via DBSS 104) or a stored broadcasting signal (stored in DVCR 110), set a time for transmission (see "timer select a program" in paragraph [0087]) and identify a selected home device for the transmission (see figures 11 to 13). Moreover, the controller (session manager) makes sure that the home devices at both ends of the data transmission have matching

capabilities, i.e. that the receiving home device can accept the type of data transmitted by the transmitting home device: see, for instance, paragraphs [0097] to [0101]. In the board's view, it is implicit that only the type of data corresponding to the matching capabilities is transmitted between the two home devices.

7. Distinguishing features

7.1 The board thus considers that the only distinguishing features of claim 1, i.e. the features which are not explicitly or implicitly disclosed in D1, are that the selected external device can be of a first type having only a speaker and no display unit and that in such a case the image display device determines and outputs transmission data according to this first type.

7.2 The appellant submitted that there were other distinguishing features, such as the selection of subsets of data from the broadcasting signal; however, for the reasons given under point 5 *supra*, the board considers that these additional distinguishing features are based on an incorrect construction of claim 1 and therefore do not exist.

8. Objective technical problem

The appellant did not dispute that the objective technical problem can be formulated, as proposed by the examining division under point 35 of the decision under appeal, as how to avoid a malfunction caused by transmitting inappropriate content components to external devices with only limited capacity to handle the full range of content components (for example by sending video signals to a pair of headphones).

9. Obviousness

An external device of a first type having only a speaker and no display unit is strongly hinted at in D1. Indeed, as explained in paragraphs [0120] and [0121] of D1, the capabilities of the home devices are either source-like or sink-like and "each source-like capability has a complementing sink-like capability that is compatible with it". Since some of the devices of D1 are sources of audio data but not of video data (see, for instance, "audio server" in paragraph [0102] and "CD player" in paragraph [0120]), it would have been obvious to the skilled person that the home network of D1 should also include home devices which are sinks of audio data, a prime example of which would be "speakers" (e.g. loudspeakers or headphones). These speakers, i.e. external devices of the "first type" according to the claim language, would thus have received from the image display device a broadcasting signal comprising audio data only, as stated in the distinguishing features of claim 1.

The appellant's arguments as to why the skilled person would not have arrived at the subject-matter of claim 1 when starting from D1 are all based on the incorrect construction of claim 1 refuted by the board under section 5 *supra*.

For the above reasons, the skilled person starting from D1 would have arrived at the image display device of claim 1 without an inventive step.

10. Conclusion on the main request

Since the subject-matter of claim 1 does not involve an inventive step, the appellant's main request is not allowable.

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

11. Claim 1 of the first auxiliary request differs from claim 1 of the main request only by minor amendments (see point XI *supra*) addressing objections of lack of clarity raised in the board's communication.

These amendments, however, do not substantially change the claimed subject-matter. The board's reasoning under points 5 to 9 *supra* therefore also applies to claim 1 of the first auxiliary request.

12. Conclusion on the first auxiliary request

Since the subject-matter of claim 1 does not involve an inventive step, the appellant's first auxiliary request is not allowable.

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

13. Relative to claim 1 of the main request, several changes have been made in the wording of claim 1 of the second auxiliary request, essentially by reordering features in order to improve the clarity of the claim (see point XII *supra*).

In the board's view, this reordering of features does not substantially change the subject-matter of claim 1. Nor has the appellant argued otherwise.

The board thus considers that its reasoning under points 5 to 9 *supra* also applies to claim 1 of the second auxiliary request.

14. Conclusion on the second auxiliary request

Since the subject-matter of claim 1 does not involve an inventive step, the appellant's second auxiliary request is not allowable.

Conclusion

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

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

C. Kunzelmann

Decision electronically authenticated