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Datasheet for the decision of 21 July 2020

Case Number: T 1452/14 - 3.5.04

Application Number: 09720027.3

Publication Number: 2269376

IPC: H04N7/16, H04N7/24

Language of the proceedings: EN

Title of invention:
APPARATUS AND METHODS FOR CONTROLLING AN ENTERTAINMENT DEVICE USING A MOBILE COMMUNICATION DEVICE

Applicant:
Echostar Technologies L.L.C.
Dish Network L.L.C.

Headword:

Relevant legal provisions:
EPC Art. 84

Keyword:
Claims - clarity (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
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Beschwerdekammern

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Case Number: T 1452/14 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 21 July 2020

Appellant: (Applicant 1)	Echostar Technologies L.L.C. 90 Inverness Circle East Englewood, CO 80112 (US)
Appellant: (Applicant 2)	Dish Network L.L.C. 9601 S. Meridian Blvd. Englewood, CO 80112 (US)
Representative:	Sadler, Peter Frederick Reddie & Grose LLP The White Chapel Building 10 Whitechapel High Street London E1 8QS (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 25 February 2014 refusing European patent application No. 09720027.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	C. Kunzelmann
Members:	B. Willems
	B. Müller

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division dated 25 February 2014 refusing European patent application No. 09 720 027.3, which was published as international application WO 2009/114247 A2.

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

D1: US 2006/233519 A1; and

D4: H. Kalva et al: "*Multi-view Video Navigation Using Motion Sensing Remote Controllers*", Digest of Technical Papers, International Conference on Consumer Electronics, ICCE 2008, IEEE, 9 January 2008, pages 1 and 2, XP031297628, ISBN: 978-1-4244-1458-1.

III. The application was refused on the grounds that the subject-matter of claims 1, 6 and 10 of the main request and the first to third auxiliary requests then on file lacked inventive step over the combined disclosures of documents D1 and D4 and the common general knowledge of a person skilled in the art (Article 56 EPC).

IV. The applicants (hereinafter: appellants) filed notice of appeal. With the statement of grounds of appeal, the appellants filed amended description pages 1, 1a and 1b and claims according to a main request and first to third auxiliary requests. They submitted that the claims of the main request and of the second and third auxiliary requests corresponded to the claims of the respective requests filed by letter dated

7 January 2014, and requested that the decision under appeal be set aside and that a European patent be granted on the basis of the claims of the requests filed with the statement of grounds of appeal. The appellants indicated a basis for the amendments in the application as filed and provided reasons as to why the claims of all the requests met the requirements of Article 56 EPC.

V. The board issued a summons to oral proceedings. In a communication under Article 15(1) RPBA (Rules of Procedure of the Boards of Appeal, OJ 2007, 536), annexed to the summons, the board introduced the following documents into the appeal proceedings:

D5: WO 2007/024271 A1;

D6: EP 1 757 344 A1.

The board gave the following preliminary opinion.

- Claim 1 of each of the requests did not meet the requirements of Article 84 EPC because they defined a result to be achieved without specifying all the necessary features for achieving the result.

- Claim 1 of each of the requests did not meet the requirements of Article 56 EPC because the claimed subject-matter lacked inventive step over the combined disclosures of documents D5 and D4 and the common general knowledge of a person skilled in the art.

- Claim 1 of the second and third auxiliary requests did not meet the requirements of Article 123(2) EPC.

VI. With the reply dated 19 February 2020, the appellants filed amended claims according to a main request and first and second auxiliary requests, replacing all the previous requests on file. They indicated a basis for the amendments in the application as filed and submitted arguments as to why the amended claims met the requirements of Articles 56 and 84 EPC. The appellants requested that the decision under appeal be set aside and that a European patent be granted on the basis of the claims according to the main request or, alternatively, on the basis of the claims of either the first or second auxiliary request, all requests filed with the letter dated 19 February 2020.

VII. By communication of the Registry dated 16 March 2020, the appellants were informed that due to precautionary measures against the spread of the coronavirus (COVID-19), the oral proceedings scheduled for 19 March 2020 could not take place and had been rescheduled for 21 July 2020.

VIII. By communication of the Registry dated 17 June 2020, the appellants were asked whether, considering the current precautionary measures against the spread of the coronavirus (COVID-19), in particular existing travel restrictions in Europe, they expected not to be affected by these travel restrictions and would be able to come to the premises of the Boards of Appeal to participate in the oral proceedings scheduled for 21 July 2020. The appellants were asked whether they would agree to have the oral proceedings held by video conference.

IX. By letter dated 24 June 2020, the appellants requested that the oral proceedings be conducted over video

conferencing technology and that the summons to oral proceedings be adapted and updated in this regard.

X. By communication dated 30 June 2020, the registrar of the board informed the appellants that the oral proceedings scheduled for 21 July 2020 would be held by video conference.

XI. The board held oral proceedings on 21 July 2020.

During the oral proceedings, the appellants withdrew all pending auxiliary requests, including those filed during the oral proceedings.

The appellants' final requests were that the decision under appeal be set aside and that a European patent be granted on the basis of the claims according to the main request filed with the letter dated 19 February 2020.

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

XII. Claim 1 of the sole request reads as follows:

"A mobile telephone comprising:

an input device (402) that receives user input requesting manipulation of playback of content outputted for presentation by a television receiver;

characterised in that the mobile telephone further comprises:

a motion detector (404) operable for determining positional information regarding the mobile telephone

by detecting and measuring the intensity and size of light sources emanated from a sensor bar and, responsive to measuring the intensity and size of the light sources, performing mathematical operations to determine the coordinates of the mobile telephone;

a processor (406) communicatively coupled to the input device and communicatively coupled to the motion detector that translates the user input and the positional information into a command compatible with the television receiver, wherein the command comprises the coordinates of a cursor to be outputted for presentation by the television receiver; and

a wireless transmitter (408) that transmits the command to the television receiver to control the television receiver to manipulate playback of the content on a display device communicatively coupled to the television receiver, based on the user input and the mobile telephone positional information."

XIII. The appellants' arguments relevant to the present decision may be summarised as follows.

(a) Determining relative positions of the mobile telephone compared with its previous position did not require any knowledge of the real size and the intensity of the light sources at the sensor bar (see letter dated 19 February 2020, page 2, second full paragraph).

(b) The claimed measurement did not result in the absolute position of the mobile telephone being determined. However, commanding the cursor only required the determination of a relative position with respect to a frame of reference, which could

be any arbitrary starting point. The user's initial pose set the initial coordinates of a frame of reference with respect to which changes were determined.

(c) There were many options for designing a system for determining the relative position of the mobile telephone. One option was to provide multiple light sources of a known constant intensity. The skilled person would know how to infer the position of the mobile telephone from the measurement of the size and intensity of these multiple light sources. By placing the light sources diagonally rather than in a horizontal plane, it was possible to detect different changes in measured intensity and size for each of the light sources if the telephone was moved upwards or downwards.

(d) The skilled person knew general techniques for mapping a determined movement of the mobile telephone to a commanded movement of the cursor. If the sensor bar was arranged in a horizontal plane, moving the telephone to the left or the right would result in a different change in measured intensity and size for each of the light sources. This difference could be translated into a movement of the cursor to the left or the right. Detecting the same change in measured intensity for each of the light sources (if the telephone was moved towards the sensor bar or vertically) could either be considered a non-relative movement or be translated into a movement of the cursor in one direction, e.g. moving the cursor upwards or downwards.

(e) Determining the level of cursor movement that corresponded to the movement of the mobile phone,

i.e. scaling the movement, was not an essential feature to be defined in the claim (see letter dated 19 February 2020, page 4, fifth paragraph).

Reasons for the Decision

1. The appeal is admissible.

2. *The invention*

The application relates to the fact that users may be confused by multiple remote controls if their household includes a variety of entertainment devices, such as a television set, each having a remote control. It proposes that users use their mobile communication device, in particular their mobile telephone, which operates as a remote control for the entertainment device (see paragraph [0018]). In one embodiment, the entertainment device may include a sensor bar that emits multiple light sources, the light from which is detectable by the mobile telephone. In this embodiment, the detection of the light makes it possible to determine coordinates of a cursor to be output for presentation by the entertainment device (see paragraph [0039]).

3. *Clarity (Article 84 EPC)*

3.1 According to the established case law of the Boards of Appeal of the European Patent Office, Article 84 EPC has to be interpreted as meaning not only that a claim must be comprehensible from a technical point of view, but also that the claim must define all the essential features of the invention. If an independent claim contains a feature defined by a result to be achieved which essentially corresponds to the problem underlying

the application, the remaining features of the claim have to include all essential features necessary for achieving that result (see Case Law of the Boards of Appeal of the European Patent Office, 9th edition 2019, II.A.3.2).

3.2 Claim 1 specifies that the mobile telephone for which protection is sought comprises:

"*a motion detector (404) operable for determining positional information regarding the mobile telephone by detecting and measuring the intensity and size of light sources emanated from a sensor bar and, responsive to measuring the intensity and size of the light sources, performing mathematical operations to determine the coordinates of the mobile telephone;*

a processor (406) [...] that translates the user input and the positional information into a command compatible with the television receiver, wherein the command comprises the coordinates of a cursor to be outputted for presentation by the television receiver".

Thus, the commands comprising the coordinates of the cursor are the result of a "*translation*" of a user input and the measurement of the intensity and size of the light sources.

3.3 According to the description, paragraphs [0039] and [0040], the positional information of the mobile communication device (i.e. the mobile telephone) is used to determine the coordinates of a cursor displayed on the presentation device. Thus, the problem underlying the claimed embodiment may be defined as how to generate commands to control a television receiver on the basis of measurements of the intensity and size

of light sources of a sensor bar (see statement of grounds of appeal, page 2, third paragraph).

This problem essentially corresponds to the result identified in point 3.2 above.

3.4 However, claim 1 does not specify all the essential features necessary for translating the user input and the measurements into commands comprising the coordinates of the cursor.

Claim 1 does not specify any mapping between the measurements and the commands which are generated. In particular, claim 1 does not specify any features for "*translating*" the measured size and intensity into the position of a cursor.

3.4.1 The board is not convinced that determining the relative position of the mobile telephone compared with its previous position does not require any additional knowledge of the real size and the intensity of the light sources at the sensor bar (see point XIII(a) above). The real size, intensity and position of different light sources of unspecified sensor bars may have largely different values. If the real size, intensity and position of the light sources were taken to be constant over time (but unknown), a change in the measured size and measured intensity at the position of the mobile telephone would make it possible to detect that the position of the mobile telephone had changed, but not by how much. Claim 1 does not specify any means for acquiring this additional information.

3.4.2 The relative position with respect to a frame of reference can only be determined if the frame of reference has been previously defined. Contrary to the

appellants' view, the board finds that the step of mapping the user's initial pose to the cursor's initial coordinates is an essential feature for "*translating*" the measured size and intensity into the position of a cursor (see point XIII(b) above).

3.4.3 Claim 1 specifies that the mobile phone's position can be determined by measuring two parameters: intensity and size of the light sources. The board agrees with the appellants that there are many options for designing a system which can determine the relative position of the mobile telephone (see point XIII(c) above). The board is of the opinion that the claim needs to specify the particular "*options*" the appellants selected to obviate the need to measure further parameters, such as the position of the "*blobs*" on a camera sensor. If, for instance, choosing more than two light sources or a specific arrangement of the light sources obviates the need to measure further parameters, then the number of light sources or this arrangement are essential for achieving the claimed result (see point XIII(c) above).

3.4.4 Claim 1 does not put any limits on either the two-dimensional movement of the cursor or the movement of the mobile telephone. Mapping different changes in measured intensity and size for each of the light sources, caused by the left-right movement of the mobile telephone interacting with a sensor bar placed in a horizontal plane, to a left-right movement of the cursor may be considered intuitive. The board also acknowledges that a person skilled in the art knows general techniques for mapping a determined movement of the mobile telephone to a commanded movement of the cursor (see point XIII(d) above). However, assuming there were two ideal point light sources arranged on

the sensor bar axis, moving the mobile telephone radially away from the sensor bar axis by some amount in a plane perpendicular to the sensor bar axis generates the same changes in measured intensity and size for each of the light sources, irrespective of the direction of the radial movement in the plane, because the change in distance from the light sources is the same. Thus, commanding a cursor to move upwards or downwards based on the measurements of intensity and size of the light sources requires a specific mapping.

3.4.5 The board is not convinced that determining the "*level of movement*" of the cursor that corresponds to the movement of the mobile phone is not an essential feature to be defined in the claim (see point XIII(e) above). The new position of the cursor can only be determined if both the direction of the movement and the "*level of movement*" are known.

3.5 In view of the above, claim 1 does not meet the requirements of Article 84 EPC because it defines a result to be achieved without specifying all the necessary features for achieving the result.

4. Since the appellants' sole request is not 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 on behalf of C. Kunzelmann (unable to act)

Decision electronically authenticated