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**Datasheet for the decision
of 1 August 2019**

Case Number: T 1690/14 - 3.5.02

Application Number: 08162759.8

Publication Number: 2028764

IPC: H03J1/00

Language of the proceedings: EN

Title of invention:

Method and circuit for saving power of remote control according to user position

Patent Proprietor:

Vestel Elektronik Sanayi ve Ticaret A.S.

Opponent:

Interessengemeinschaft für Rundfunkschutzrechte e.V.

Relevant legal provisions:

EPC Art. 123(2), 84, 56

Keyword:

Amendments - added subject-matter (no)
Claims - clarity (yes)
Inventive step - (yes)



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1690/14 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 1 August 2019

Appellant: Vestel Elektronik Sanayi ve Ticaret A.S.
(Patent Proprietor) Organize Sanayi Bölgesi
45030 Manisa (TR)

Representative: Cayli, Hülya
Paragon Consultancy Inc.
Koza Sokak No: 63/2
GOP
06540 Ankara (TR)

Respondent: Interessengemeinschaft für Rundfunkschutzrechte
(Opponent) e.V.
Hohenzollernstr. 11-13
40211 Düsseldorf (DE)

Representative: Pröll, Jürgen
Die Patenterie GbR
Patent- und Rechtsanwaltssozietät
Leibnizstraße 6
95447 Bayreuth (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 10 June 2014
revoking European patent No. 2028764 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman R. Lord
Members: C. Vassoille
W. Ungler

Summary of Facts and Submissions

I. This is an appeal of the patent proprietor against the decision of the opposition division to revoke European patent no. 2 028 764 for lack of novelty.

II. The following documents are relevant for the present decision:

E3: JP 2006 295635 A

E6: US 5,627,565

III. Oral proceedings before the board took place on 1 August 2019 in the absence of the respondent.

The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained in the following version:

Claims: No. 1 to 4 of the main request filed during the oral proceedings of 1 August 2019.

Description: Pages 2 to 5 of the patent specification filed during the oral proceedings of 1 August 2019.

Drawings: Figures 1 to 4 of the patent specification filed during the oral proceedings of 1 August 2019.

The respondent (opponent) requested in writing in their response to the statement of grounds of appeal dated 27 November 2014 that the appeal be dismissed.

IV. Claim 1 of the appellant's sole request (patent in amended form) reads as follows:

"A method for saving power of a remote control according to user position in an electronic system controllable by means of a remote control, wherein said electronic system comprises more than one infrared

receiver (4, 6) at its lateral sides, comprising the steps in which

- said remote control transmits signals with variable signal power to said electronic system with an infrared signal transmitter (3),
- said electronic system sends radio signals to said remote control, these radio signals indicating the position or location of said electronic system,
- said remote control detects the radio signals indicating the position of said electronic system so as to generate position information with respect to said electronic device,

characterised in that,

- said remote control determines which of the infrared receivers (4, 6) is relatively nearer based on the generated position information,
- said remote control adjusts the signal power of the infrared signals with variable signal power according to the position information it produces with respect to the determined nearer infrared receiver (4 or 6)."

Claims 2 and 3 are dependent on claim 1.

Independent system claim 4 reads as follows:

"A system for saving power of a remote control according to user position in an electronic system controllable by means of a remote control,

characterized in that

- said remote control comprises an infrared signal transmitter (3),
- said electronic system comprises more than one infrared receiver (4, 6) at its lateral sides for receiving infrared signals from the infrared signal transmitter,

- said electronic system comprises at least two radio signal transmitters (1, 2) indicating the position thereof,
- said remote control comprises a unit capable of determining angular and distance position with respect to said electronic device, once said remote control detects radio signals transmitted from said at least two radio signal transmitters, and determines which of the infrared receivers (4, 6) is relatively nearer,
- the output power of said infrared signal transmitter is adjusted according to said angle- and distance-dependant position with respect to the nearer infrared receiver (4 or 6) determined by said remote control."

V. The arguments of the appellant which are relevant for the present decision are as follows:

Amendments

The additional features of claim 1 referring to the provision of more than one infrared receiver at the lateral sides of the electronic device were based on the original application on page 7, lines 17 to 24. This passage indicated that it was determined which of the infrared receivers was nearer to the user. In addition, the original description on page 3, lines 27 to 29 further indicated that the present invention assumed that the position of a remote control corresponds to the position of the user. Determining which of the infrared receivers was nearer to the remote control was therefore directly and unambiguously derivable from the original application.

Furthermore, throughout the disclosure of the original application, in particular figure 2 and the

corresponding description, it was evident that the determination was performed by the remote control.

Furthermore, the omission of the wording "to the user" did not constitute an intermediate generalisation.

The wording of claim 1 recited that "said remote control determines which of the infrared receivers is relatively nearer". The remote control had no other signals at hand than the signals provided by the electronic system to determine a distance. According to the feature "said remote control determines which of the infrared receivers (4,6) is relatively nearer" the only determination the remote control was capable of doing was therefore the determination of which of the two infrared receivers was nearer to the remote control. It was therefore at least implicitly disclosed that the remote control determined which of the infrared receivers was relatively nearer.

Consequently, the added feature relating to the provision of more than one infrared receiver at lateral sides and determining which of the infrared receivers is relatively nearer to the remote control did not constitute an intermediate generalisation, since the feature in question referred to the only possible type of determination regarding multiple infrared receivers.

Clarity

With respect to the feature that the remote control determines which of the infrared receivers is relatively nearer, it was clear that the remote control had no other signals at hand than the signals provided by the electronic system to determine a distance. According to the feature in question the only

determination of a device being "nearer" the remote control was capable of determining was therefore the determination regarding which of the two infrared receivers is nearer to the remote control, since these were provided at the same positions as the transmitters of the electronic system that provide the respective signals.

Inventive step

As regards the feature of claim 1 that the remote control adjusts the signal power of signals with variable signal power according to the position information it produces with respect to the determined nearer infrared receiver, it was obvious that a transmission component ("ultrasonic transmission components" in document E3) serves a completely different purpose than a receiver. The person skilled in the art therefore would not have received any hint from E3 to use receivers in the sense of claim 1, and in particular not from the disclosure of "ultrasonic transmission components" (see for example E3 in paragraph [0024]).

Additionally, the combination of document E3 with document E6 could not render the subject-matter of claim 1 obvious.

Document E6 was focused on determining the position of an input device as means for moving, e.g. a cursor or pointer on a screen, see for example document E6 in column 1, line 50. To this end the relative position of the input device to an x-z plane of the screen was determined. The sensor of E6 was provided in the screen, while the signal emitted by the input device was analysed. Therefore, document E6 disclosed a

completely different working principle than the claimed invention as well as a totally different underlying problem.

Therefore, the person skilled in the art would not have considered document E6 in the first place.

Moreover, even if the person skilled in the art would have combined documents E3 and E6, they would not have arrived at the subject-matter of claim 1.

VI. The arguments of the respondent which are relevant for the present decision are as follows:

Amendments

The additional features of claim 1 referring to the provision of more than one receiver at lateral sides of the electronic system were not directly and unambiguously disclosed in the application as filed, contrary to the requirements of Article 123(2) EPC.

In particular, the original description on page 7, lines 17 to 25 disclosed that the electronic system comprised more than one receiver at its lateral sides. However, lines 23 to 25 of that passage exclusively disclosed that "[I]t must to be determined as to which of the infrared receivers (4, 6) is relatively nearer to the user". This passage hence did not disclose that it is the remote control that determines which of the receivers is relatively nearer to the user.

Furthermore, the original disclosure in this context "nearer to the user" (emphasis added) was missing in claim 1.

Finally, the additional feature that the signal power of signals is adjusted with variable signal power according to the position information produced with respect to the determined nearer infrared receiver extended beyond the content of the application as filed. In particular, the original application on page 7, line 25 exclusively disclosed that "the power adjustment must be made according to the result of this determination". The passage therefore did not contain a basis for a power adjustment with respect to the determined nearer infrared receiver in the remote control.

Clarity

It was not clear, contrary to the requirements of Article 84 EPC, whether the additional feature of claim 1 that "said remote control determines which of the infrared receivers (4,6) is relatively nearer", referred to the relative proximity to the electronic device, the remote control or the user.

Inventive step

Document E3 dealt with the problem of signal reception from different angles and ensured that infrared signals with sufficient level were always transmitted to the device to be controlled remotely. In this context, particular reference was made to the components 27A, 27B and 27C shown in Figure 3 and the corresponding parts of the description of E3.

In particular, paragraph [0024] of E3 stated that the electronic device controlled by the remote control comprised three ultrasonic transmission components 27A to 27C and the remote control calculated coordinate

information. This coordinate information contained distance information and angle information.

Furthermore, paragraph [0029] of E3 stated that the computer section of the remote control took the coordinates of the remote control into account when determining the transmitting power of the remote control.

Furthermore, paragraph [0040] of E3 stated that the computer section of the controlled device took into account the relative position of the remote control to the controlled device when setting the power of the ultrasonic transmission components 27A to 27C.

As a result, the positioning of the remote control relative to the controlled device was already taken into account in E3 by a subsequent evaluation in the remote control of signals provided by components located at different positions in the controlled device.

Whether several ultrasonic transmission components 27A to 27C were used in this context or several infrared receivers arranged at the lateral side of the controlled device, was up to the person skilled in the art.

In the system described in E3, the skilled person would therefore have considered in an obvious way to provide for several infrared receivers arranged at lateral sides of the controlled device to determine the relative position of the remote control relative to the controlled device by means of the remote control and to adjust the transmission power of the remote control as

a function of the relative position previously determined.

The skilled person would thus, on the basis of the overall disclosure of E3, have arrived in an obvious manner at the subject-matter of the independent claims.

Furthermore, it was already known from document E6 that the relative positioning between a transmitter and a receiver had a significant influence on the signals transmitted by the transmitter and received by the receiver and how this relative positioning could be determined. In this context, reference was made, for example, to the summary on the cover page, to the description in column 1, lines 33 to 58, and to column 37, lines 15 to 62 of E6.

Document E6 therefore also dealt with the problem of signal reception as a function of the relative positioning (distance and angle) between a transmitter and a receiver and disclosed how this relative positioning could be determined. A person skilled in the art would therefore have arrived in an obvious manner at the subject-matter of the independent claims by combining documents E3 and E6.

Reasons for the Decision

1. The appeal is admissible.
2. *Non-attendance of the oral proceedings*

The respondent did not reply in substance to the board's communication under Article 15(1) RPBA or to the appellant's letter of 1 July 2019 and, due to their absence at the oral proceedings, the respondent is treated as relying on their written case only (Article 15(3) RPBA).

3. *Clarity (Article 84 EPC)*

- 3.1 The respondent has objected to the following wording of claim 1 as being unclear contrary to the requirements of Article 84 EPC:

- said remote control determines which of the infrared receivers (4,6) is relatively nearer

- 3.2 As regards the wording "relatively nearer", the board considers it clear from the overall disclosure of the contested patent that it indicates a distance between the remote control and the infrared receivers. As has further been submitted by the appellant, the patent in paragraph [0012] recites: "the present invention assuming the position of a remote control to be the same to the position of the user". Consequently, in the context of the patent the position of the remote control corresponds to the position of the user, so that there are no ambiguities in that regard either.
- 3.3 Furthermore, the contested patent is exclusively concerned with the determination of position

information of the remote control, corresponding to the position of the user, with respect to the electronic device and in particular with respect to the infrared receivers. It is therefore entirely clear from the wording of claim 1 in view of the description and the drawings, in particular figure 1, that the wording "relatively nearer" refers to the question of which of the infrared receivers is nearer to the remote control.

3.4 The board has therefore come to the conclusion that claim 1 fulfils the requirements of Article 84 EPC.

4. *Amendments (Article 123(2) EPC)*

4.1 The board considers that the following amendment of claim 1 fulfils the requirements of Article 123(2) EPC:

- said remote control determines which of the infrared receivers (4, 6) is relatively nearer based on the generated position information

4.2 The amendment is based on the original application on page 7, lines 17 to 25, which reads as follows:

"In another preferred system according to the present invention, more than one infrared receiver is used as in Figure 1, illustrating an exemplary system, and in a further preferred system of the present invention, infrared receivers are located at points (4, 6). The reason of locating more than one infrared receiver at the lateral sides of a remotely-controlled electronic device it [sic] to solve the infrared receiver's problem related to receiving signals from lateral (i.e. right/left) angles; for such a solution in which the present invention is used with this method, a small

modification must be carried on the system design, it must be determined as to which of the infrared receivers (4, 6) is relatively nearer to the user, and the power adjustment must be made according to the result of this determination."

- 4.3 The respondent has argued that a determination of which infrared receiver is relatively nearer to be performed by the remote control was not disclosed in the original application.
- 4.4 The board does not find the respondent's argument convincing. The person skilled in the art would readily understand from the original application as a whole and in particular from the description on page 7, lines 17 to 25 that a determination, which of the infrared receivers is relatively nearer to the remote control, can only be based on position information of the remote control and therefore can reasonably only be performed by the remote control. The board further observes that throughout the original application, it is the remote control which determines the position as well as resulting distance and angular information, and that the application does not contain any indication that could reasonably lead the skilled person to the assumption that any element other than the remote control determines position information or resulting distance/angular information. It follows that a determination by the remote control of which of the infrared receivers is relatively nearer based on generated position information is directly and unambiguously derivable from the original application as a whole.

- 4.5 The respondent has further argued that the omission of the wording "to the user" on page 7, line 24 of the original application contravenes Article 123(2) EPC.
- 4.6 The board does not agree with the respondent on this point. As has been argued by the appellant, the application on page 3, lines 27 to 29 discloses the following: "the present invention assuming the position of a remote control to be the same to the position of the user". In the context of the original application the user position thus corresponds to the remote control position. In the board's view, claim 1 even without using the wording "to the user" or "to the remote control", implies that a determination of which of the infrared receivers is relatively nearer refers to the relative distance between the infrared receivers and the remote control. The wording "to the user" is therefore implicitly present in claim 1 and already for this reason its omission does not contravene Article 123(2) EPC.
- 4.7 The respondent has further objected to the last feature of amended claim 1:
- said remote control adjusts the signal power of the infrared signals with variable signal power according to the position information it produces with respect to the determined nearer infrared receiver (4 or 6).

According to the respondent, the original application on page 7 did not disclose that the remote control adjusts the signal power. Rather, page 7, line 25 merely generally stated that "the power adjustment must be made according to the result of this determination", without disclosing where this power adjustment is done.

4.8 The board observes that claim 1 of the original application already disclosed that it is the remote control which adjusts the signal power. Furthermore, the original application does not contain any other teaching than that the remote control adjusts the signal power of infrared signals to be transmitted to the infrared receivers of the electronic device. On the other hand, the original application does not contain any indication that could possibly lead the skilled person to the assumption that the power adjustment is made by any other element than the remote control. It is therefore directly and unambiguously derivable from the original application as a whole that the wording "the power adjustment must be made" implies that it is the remote control which adjusts the signal power of the infrared signals with variable signal power according to the position information it produces with respect to the determined nearer infrared receiver.

4.9 The board has therefore come to the conclusion that the subject-matter of claim 1 fulfils the requirements of Article 123(2) EPC.

5. *Inventive step (Article 56 EPC)*

5.1 Novelty of the subject-matter of claim 1 is not in dispute. Nor is it disputed that document E3 represents the most relevant prior art for the assessment of inventive step.

5.2 The respondent in the reply to the statement of grounds of appeal received on 28 November 2014 has submitted the following on page 5 (as translated by the board):

"The skilled person would therefore have considered, in an obvious manner, to provide in the system described in E3 several infrared receivers located at the lateral sides of the device to be remote-controlled, to determine by means of the remote control the relative position of the remote control relative to the remote-controlled device and to adjust the transmission power of the remote control as a function of the previously determined relative position."

5.3 The board understands this statement as meaning that the respondent has implicitly identified the following features of claim 1 as distinctions over E3:

- providing more than one infrared receiver at lateral sides of the electronic device
- the remote control determines which of the infrared receivers is relatively nearer
- the remote control adjusts the signal power of the infrared signals with variable signal power according to the position information it produces with respect to the determined nearer infrared receiver

5.4 The respondent has argued that the subject-matter of claim 1 does not involve an inventive step in view of document E3.

The central point of the respondent's objection is that the distinguishing features belonged to the common general knowledge of the person skilled in the art and were therefore obvious. In particular, the respondent considers the "ultrasonic transmission components 27A to 27C" disclosed in E3 (see for example paragraph

[0024]) to functionally correspond to infrared receivers provided at lateral sides of the electronic system in the sense of claim 1 and the replacement of the one by the other to be obvious.

- 5.5 The board is not convinced by this line of argumentation. As has been argued by the appellant, a transmission component neither functionally nor in any other respect corresponds to a receiving component. Rather, it serves an entirely different purpose, which is the transmission and not the reception of signals. The board further observes that claim 1 specifies *infrared* receivers whereas E3 is concerned with *ultrasonic* transmission components, and E3 therefore additionally refers to a substantially different transmission technology.
- 5.6 The respondent did not provide any convincing argument as to why the person skilled in the art would be prompted to replace the ultrasonic transmission components of E3 by infrared receivers, and further to provide them at lateral sides of the electronic system. The only argument provided by the respondent in this respect is that whether a plurality of ultrasonic transmission components 27A to 27C were used in this context or several infrared receivers arranged at lateral sides of the electronic device to be controlled remotely, was at the discretion of the person skilled in the art. The board considers this to be an unsubstantiated allegation for which the respondent has not provided any support.
- 5.7 Moreover, as regards the feature of determining which of the infrared receivers is relatively nearer (to the remote control), the board observes that the respondent did not provide any argument at all, let alone an

argument as to why the skilled person would have been motivated to implement this feature in the method and system of document E3, which would entail significant modifications of the overall system of E3.

- 5.8 The respondent has additionally referred to document E6, but has merely argued that the significant influence of the relative positioning between a transmitter and a receiver on the signals transmitted by the transmitter and received by the receiver as well as the determination thereof was already known from document E6. The respondent however did not provide any explanation as to how this general finding could affect an alleged obviousness of the subject-matter of claim 1.
- 5.9 Furthermore, the board cannot recognise any relevance with respect to the distinguishing features of claim 1 of the cited passage of E6 in column 1, lines 33 to 58, which refers to the emission of ultrasonic sound waves by sound sources 2a and 2b.
- 5.10 The further passage of E6 cited by the respondent in column 37, lines 15 to 62 refers to the determination of an inclination and rotation angle between a light sensing section and a detection section. Again, the board does not see how the skilled person would have been motivated by the above passage of E6 to implement the distinguishing features in E3, and the respondent did not provide any arguments in this respect.
- 5.11 As regards a combination of document E3 with E6, the respondent has argued that E6 dealt with the problem of signal reception as a function of the relative positioning (distance and angle) between a transmitter and a receiver and disclosed how this relative

positioning could be determined. The respondent has concluded that a person skilled in the art would therefore have arrived in an obvious manner at the subject-matter of the independent claim 1 by a combination of documents E3 and E6.

- 5.12 The board does not find this argument convincing and rather agrees with the appellant that document E6 relates to a different working principle involving the determination of the position of an input device as means for moving a cursor or a pointer on a screen. It is therefore questionable whether the skilled person would have considered document E6. Even if it would have been taken into consideration, however, there is nothing in this document that would have motivated the person skilled in the art to implement the distinguishing features in E3, so as to arrive at the claimed invention.
- 5.13 The board concludes that the respondent did not provide a convincing line of argument as to why the subject-matter of claim 1 was obvious to the person skilled in the art in view of E3 either in combination with common general knowledge or with document E6. In any event, the board cannot recognise any suggestion in the cited prior art documents, which would have prompted the skilled person to modify the method and system of E3 in such a manner as to arrive at the claimed invention.
- 5.14 The board has therefore come to the conclusion that the subject-matter of claim 1 was not rendered obvious to the person skilled in the art by a combination of document E3 with the common general knowledge or with document E6. The subject-matter of claim 1 therefore involves an inventive step in the sense of Article 56 EPC.

6. *Other matters*

Claims 2 and 3 of the appellant's sole request are dependent on claim 1, and claim 4 defines a system which comprises system features corresponding to the method steps of claim 1. The above conclusions concerning clarity, added subject-matter and inventive step therefore apply also to these claims. Since no objections to these claims have been raised by the respondent beyond those raised with respect to claim 1, as discussed above, the board concludes that none of these objections raised by the respondent prejudice the maintenance of the patent in the form of the appellant's main request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent as amended in the following version:

Claims: No. 1 to 4 of the main request filed during the oral proceedings of 1 August 2019.

Description: Pages 2 to 5 of the patent specification filed during the oral proceedings of 1 August 2019.

Drawings: Figures 1 to 4 of the patent specification filed during the oral proceedings of 1 August 2019.

The Registrar:

The Chairman:



U. Bultmann

R. Lord

Decision electronically authenticated