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**Datasheet for the decision
of 3 March 2021**

Case Number: T 0375/18 - 3.5.05

Application Number: 12181412.3

Publication Number: 2562967

IPC: H04L12/28

Language of the proceedings: EN

Title of invention:

Information management system for home appliance

Patent Proprietor:

LG Electronics Inc.

Opponent:

Dr. Jordan, Volker

Headword:

Authenticated home appliance management/LG

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

Novelty - main request (yes)

Inventive step - main request (yes)



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Case Number: T 0375/18 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 3 March 2021

Appellant: Dr. Jordan, Volker
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 19 December
2017 rejecting the opposition filed against
European patent No. 2562967 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: P. Cretaine
D. Prietzel-Funk

Summary of Facts and Submissions

- I. This appeal is against the decision of the opposition division, dispatched on 19 December 2017, to reject the opposition against the European patent No. 2 562 967. The opposition was based on the grounds of Articles 100(a), 100(b) and 100(c) EPC. The opposition division found that the claims as granted (main request) met the requirements of Articles 83, 123(2), 54(2) and (3), and 56 EPC.
- II. The following documents, *inter alia*, were used by the opponent for the objections of lack of novelty and inventive step:
- E13: EP 2 326 114
- E16: US 2005/0160185
- III. With the statement setting out the grounds of appeal, the appellant (opponent) requested that the decision of the opposition division be set aside and that the patent be revoked on the grounds of Articles 100(a), (100(b) and 100(c) EPC. Oral proceedings were requested on an auxiliary basis.
- IV. By letter received on 6 September 2018, the respondent (patentee) filed auxiliary requests 1 to 6. The respondent submitted that the objections under Article 123(2) EPC raised in the statement setting out the grounds of appeal should not be not admitted for being late filed. The respondent requested that the appeal be dismissed and that the patent be maintained as granted or in amended form based on one of auxiliary requests 1 to 6.

- V. A summons to oral proceedings was issued on 4 December 2019.
- VI. By letter received 10 February 2020, the appellant submitted new documents E19, E19a and E20, and requested further that auxiliary requests 1 to 6 be not admitted into the appeal proceedings.
- VII. In a communication pursuant to Article 15(1) RPBA 2020, the board listed the points to be discussed during the oral proceedings. The board indicated that it adhered to the opposition division's interpretation of the feature of a mutual authentication procedure between the home appliance and the wireless terminal and the server system. Furthermore, the board expressed its preliminary view that the main request met the requirements of Articles 83, 123(2), 54 and 56 EPC, and that auxiliary requests 1 to 6 should not be admitted.
- VIII. By letter received on 9 April 2020, the respondent requested that documents E19, E19a and E20 not be admitted into the proceedings and submitted auxiliary requests 1 to 3 to replace previous auxiliary requests 1 to 6. The respondent further requested that the objections under Articles 83 and 123(2) EPC raised by the appellant in the statement setting out the grounds of appeal not be admitted.
- IX. By letter received on 24 April 2020, the appellant further requested that auxiliary requests 1 to 3 not be admitted into the proceedings.
- X. Oral proceedings were held on 3 March 2021. In the course of the proceedings, the appellant withdrew its objection under Article 83 EPC. The appellant requested

that the decision under appeal be set aside and that the patent be revoked. The respondent requested that the appeal be dismissed or that the patent be maintained in amended form on the basis of one of auxiliary requests 1 to 3 submitted with the letter dated 9 April 2020. At the end of the oral proceedings, the decision of the board was announced.

XI. Claim 1 of the main request (claims as granted) reads as follows:

"An information management system for a home appliance comprising:

a home appliance (100) having a communication unit (102), a display unit (104), and a predetermined device ID;

a wireless terminal (200) having a communication unit (202) for communication with the communication unit (102) in the home appliance (100) and a display unit (204), the wireless terminal (200) interlocked with the home appliance (100) for receiving information or a signal generated at the home appliance (100), or transmitting information or a signal generated at the wireless terminal (200) in a direction of the home appliance (100);

a server system (1) provided to be able to communicate with the home appliance (100) and the wireless terminal (200), the server system (1) having the device ID stored therein, and

a representative site (2) provided to be able to communicate with the server system (1) for enabling a user to provide user's information and registration information on home appliances,

wherein the user registers a home appliance (100) to the representative site,

wherein the home appliance registered in the representative site is registered in the server system (1) together with the user's information after transmission of the information from the representative site (2) to the server system (1), wherein the communication unit (102) of the home appliance (100) and the communication unit (202) of the wireless terminal (200) receive/transmit a signal after a mutual authentication procedure between the home appliance and the wireless terminal and the server system is completed, and the information or signal generated at the home appliance is displayed on the display unit (204) in the wireless terminal (200), or the information or signal generated at the wireless terminal (200) is displayed on the display unit (102) in the home appliance (100), or changes operational state of the home appliance (100)."

Due to the outcome of the appeal, there is no need to detail the claims of auxiliary requests 1 to 3.

Reasons for the Decision

1. Interpretation of claim 1

The numbering of features of claim 1 detailed in point 12 of the Summary of Facts and Submissions of the impugned decision will be used.

1.1 It was common ground in the procedure that the interpretation of feature F, stating "wherein the communication unit of the home appliance and the communication unit of the wireless terminal receive/

transmit a signal after a mutual authentication procedure between the home appliance and the wireless terminal and the server system is completed", was a crucial issue.

The appellant argued that the interpretation by the opposition division of the mutual authentication procedure defined in feature F as a "three-way procedure" was wrong. However, the wording "mutual authentication procedure" is clear per se and was commonly used at the priority date of the patent in 2011. It defines a procedure in which two entities in a communications link authenticate each other.

Furthermore, the board holds that the wording "mutual authentication between the home appliance and the wireless terminal and the server system", involving three parties and not two, would have had a clear meaning for the skilled person in light of the description and figures. It defines, as illustrated by the term "three-way" used in the impugned decision, a procedure involving a mutual authentication between the server system and the wireless terminal; a mutual authentication between the server system and the home appliance; and a mutual authentication between the wireless terminal and the home appliance.

- 1.2 The board notes that paragraph [0077] of the patent specification describes that a mutual authentication procedure is performed between the wireless terminal and the server system. Paragraph [0196] states that as a precondition for the information exchange between the home appliance and the wireless terminal, an authentication procedure between the server system and the home appliance and between the server system and the wireless terminal is required. In the context of the current application in which the wording "mutual

authentication" is used for defining the authentication between the wireless terminal, the server system and the home appliance, the skilled person would have understood that an authentication procedure between two parties represents a mutual authentication between these parties. After this precondition is met, i.e. after the server system and the home appliance are mutually authenticated and after the server system and the wireless terminal are mutually authenticated, the wireless terminal and the home appliance mutually authenticate. This is described in all the examples illustrated in Figures 6 to 8 and 10 to 26, as described in paragraphs [0200], [0204], [0210], [0221], [0226], [0230], [0234], [0238], [0242], [0246], [0248], [0250], [0253], [0259], [0264], [0269], [0275], [0279], [0282] and [0285] of the patent specification. It is also to be noted that Figure 1 shows a link between the home appliance and the wireless terminal which would enable a mutual authentication between them.

- 1.3 The appellant argued that in paragraphs [0104] to [0109], [0156] to [0162], [0171], [0173], [0177], [0178], and [0195] to [0200] which relate to the registration of the home appliance and the wireless terminal to the server system, no mutual authentication between the parties is disclosed but rather solely an authentication of the wireless terminal and the home appliance by the server system. In the appellant's view, the mutual authentication between the home appliance and the wireless terminal shown in Figures 6 to 8 and 10 to 26 merely indicate that the wireless terminal and the home appliance have both been authenticated by the server system, as described in the above cited paragraphs. Furthermore, it argued that while paragraphs [0350] and [0403] did show a mutual authentication, it was only between the home appliance

and a server and not between the home appliance and the wireless terminal. Moreover, according to the appellant, authentication of the home appliance and authentication of the wireless terminal by the server actually amounted to authentication of the user of the home appliance and the wireless terminal by simply using a user ID and password, as described in paragraphs [0192] and [0193], and by paragraphs [0323] and [0328] in combination with Figure 32.

- 1.4 The board is not convinced by these arguments and considers that the paragraphs and figures mentioned in point 2.2 above provide ample support for the disclosure of a three-way mutual authentication, as assessed by the opposition division (see point 2.1 above). Moreover, the board does not find any support in the description and figures for the appellant's interpretation that the wireless terminal and the home appliance are mutually authenticated through the server. Furthermore, the authentication of the home appliance and the wireless terminal involves, according to paragraph [0197], authentication numbers differing from the ID and password of the user manipulating the home appliance or the wireless terminal. This implies that authentication of the home appliance and the wireless terminal is not reduced to a user authentication.

2. Article 100(a) EPC / Article 54 EPC

The appellant based its objection during the oral proceedings on the disclosure of E16.

- 2.1 It was common ground during the oral proceedings that E16 disclosed features A, B, C1, C2, D1, D2 and G of claim 1.

According to the appellant, features E1 to E3 and F were also disclosed in E16. The representative site of feature E1 was the retailer terminal disclosed in embodiment 2 of E16, which accessed the relay server to request user registration (see paragraph [0097]) by having the retailer transmitting a product number of the home appliance refrigerator, i.e. registration information on home appliances within the meaning of feature E1, together with the user ID and password, i.e. user information within the meaning of feature E1 (see paragraph [0099]). Feature F2, it said, was disclosed as the mobile phone of the user initiating the relay request in paragraph [0095]. While feature E3 was disclosed in paragraphs [0099] and [0100], which taught that the registration information on the home appliance and the user information were transmitted together to the server system, and that the home appliance and the user were then registered in the server. Finally, according to the appellant, feature F, i.e. the mutual authentication between the home appliance and the wireless terminal and the server system, was disclosed in paragraph [0079] for the authentication between the server system and the wireless terminal and in paragraph [0101] for the authentication between the home appliance and the wireless terminal. According to the appellant, step (3) in Figures 14 and 15 also showed an authentication between the home appliance and the wireless terminal.

Alternatively, the appellant argued in oral proceedings that the representative site was disclosed as the connectable device data base 123 of embodiment 1 of E16 (see paragraph [0074] and Figure 2) or the user information database 125 of embodiment 2 of E16 (see paragraph [0095] and Figure 10).

2.2 The board is not convinced that features E1, E2, E3 and F are disclosed in E16 for the following reasons.

Feature E1 requires a site able to communicate with the relay server for inputting user information. However, paragraph [0097] describes that the relay server is accessed from a retailer terminal to request user registration. This user registration is performed only one time at the first purchase of a product of a manufacturer. The board agrees with the respondent that the skilled person would have understood from the wording of claim 1 and the context of the whole application that the user defined in features E1 to E3 is the user of the home appliance and the wireless terminal. The retailer terminal described in E16 is able to communicate with the relay server but not for enabling a user to provide user information and registration information on home appliances, as defined in feature E1. Moreover, the retailer terminal cannot be considered to be a site communicating with the relay server. Furthermore, the connectable device database 123 and the user information database 125 are not sites communicating with the relay server which enable the user to provide user information and registration information on home appliances. They are merely databases in the relay server which store user information and corresponding home appliance information. Therefore, feature E1 is not disclosed in E16.

Feature E2 is not disclosed in E16 either because, as mentioned above, the user of the home appliance and the wireless terminal does not register a home appliance. Paragraph [0095], cited by the appellant to support this point, relates to a relay request from the

wireless terminal and not to the registering of a home appliance.

Feature E3 is also not disclosed in E16 since the retailer terminal cannot be considered, as mentioned above, to be a representative site within the meaning of feature E1.

With respect to feature F, paragraph [0079] cited by the appellant discloses authentication of the access terminal, i.e. a wireless terminal, by the server and not authentication of the server by the wireless terminal. Paragraph [0101] cited by the appellant discloses authentication of the cellular mobile phone, i.e. a wireless terminal, by the home appliance through the relay server, but not authentication of the home appliance by the wireless terminal. Finally, step (3) in Figures 14 and 15 shows authentication of the wireless terminal by the home appliance but not authentication of the home appliance. The mutual authentication between the wireless terminal and the home appliance and the server is thus not disclosed in E16.

For these reasons, the board holds that the subject-matter of claim 1 is new over the disclosure of E16.

3. Article 100(a) EPC / Article 56 EPC

The appellant based its objection during the oral proceedings on the disclosure of E16.

3.1 The appellant asserted that in E16 the retailer terminal 107, shown for instance in Figure 13, registered the user terminal 105 and the home appliance 101 in the server 103. The server 103 was

thus able to receive registration data on the user and the home appliance from the retailer terminal. Therefore, according to the appellant, the retailer terminal has the same functionality as the representative site defined in feature E1. Thus, features E1 to E3 were not inventive. Moreover, the appellant argued that mutual authentication was a common measure, as illustrated by E13. Implementing mutual authentication between the wireless terminal and the home appliance and the server system as per feature F would therefore have been obvious for the skilled person seeking to increase the security of the whole system. Thus, according to the appellant, the subject-matter of claim 1 did not involve an inventive step having regard to E16.

3.2 The board is not convinced by these arguments.

The technical effect of distinguishing feature F is that, as stated by the appellant, the security of the system is increased. The board agrees with the respondent that the skilled person would not have implemented in E16 a mutual authentication between the home appliance and the wireless terminal and the server system due to the technical complexity involved and the fact that the security level in E16 is considered sufficient, as stated in paragraph [0009].

The technical effect of distinguishing features E1 to E3 is that the user can select which home appliances they wish to register for remote control, whereas in E16 the retailer decides which device should be registered for remote control for a particular user. The board agrees with the respondent that the disclosure of E16, namely to have the registration of

home appliances and users performed once and by a retailer terminal only, teaches against the concept of the patent which is to offer each user the flexibility to register the home appliances they wish and at a time that is not necessarily the time of purchase of the home appliances.

For these reasons, the board holds that the subject-matter of claim 1 involves an inventive step, having regard to the disclosure of E16.

4. Article 100(c) EPC / Article 123(2) EPC

The appellant raised for the first time in the statement setting out the grounds of appeal an objection under Article 123(2) EPC against feature F of claim 1 as granted. Although a ground for opposition under Article 100(c) EPC had been used in the notice of opposition against claim 1 as granted, the objection underlying this ground was not directed at feature F. Thus, in oral proceedings, the board has decided not to admit this objection into the appeal proceedings under Article 12(4) RPBA 2007.

5. Conclusion

The grounds of opposition under Articles 100 (a) and (c) EPC do not prejudice the maintenance of the patent.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



A. Chavinier-Tomsic

A. Ritzka

Decision electronically authenticated