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Datasheet for the decision of 7 July 2020

Case Number: T 2371/17 - 3.5.05

Application Number: 06122715.3

Publication Number: 1780632

IPC: G06F3/048

Language of the proceedings: EN

Title of invention:
Three-dimensional motion graphical user interface and apparatus and method of providing same

Applicant:
Samsung Electronics Co., Ltd.

Headword:
Animated 3D-GUI/SAMSUNG

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:

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Catchword:

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Case Number: T 2371/17 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 7 July 2020

Appellant: (Applicant)	Samsung Electronics Co., Ltd. 129, Samsung-ro Yeongtong-gu Suwon-si, Gyeonggi-do, 443-742 (KR)
Representative:	Grootscholten, Johannes A.M. Arnold & Siedsma Bezuidenhoutseweg 57 2594 AC The Hague (NL)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 31 May 2017 refusing European patent application No. 06122715.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	A. Ritzka
Members:	P. Cretaine
	E. Mille

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division posted on 31 May 2017 refusing European patent application No. 06122715.3. The application was refused for lack of inventive step (Article 56 EPC) over the disclosure of:

D3: US 6 182 098

II. Notice of appeal was received on 25 July 2017, and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 6 October 2017. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a main request or auxiliary requests I to XI submitted with the statement setting out the grounds of appeal. In the alternative, oral proceedings were requested.

III. A summons to oral proceedings was issued on 4 December 2019. In a communication pursuant to Article 15(1) RPBA sent on 26 February 2020, the board gave its preliminary opinion that the main request and auxiliary requests I to XI did not meet the requirements of Article 56 EPC in light of the disclosure of D3. As illustration of the common general knowledge, the board cited:

D4: US 5 452 414

IV. In a letter of response dated 12 March 2020, the appellant announced that it would not attend the scheduled oral proceedings.

V. By communication dated 7 April 2020, the board announced that the oral proceedings were cancelled.

VI. Claim 1 of that main request reads as follows:

"An apparatus (500) for providing a three-dimensional motion graphical user interface, the apparatus comprising:
a creation module (560) configured to create a polyhedral object (300) having a face (310) on which first information to be communicated to a user is displayed;
a display module (540) configured to display the created polyhedral object; characterized in that the display module (540) is further configured to display an external view of the created polyhedral object; and
the apparatus further comprises:
an interface module (550) configured to display second information, which corresponds to a face (340) of the displayed external view of the polyhedral object, which face is selected by the user, on a projected surface (360) which is formed spatially separated from, and externally to the displayed external view of the polyhedral object using projection effects, such that the first information on the polyhedral object (300) and the second information on the projected surface (360) are dynamically associated with each other."

Claim 1 of auxiliary request I differs from claim 1 of the main request in that the second information on the projected surface corresponds to the first information displayed on the selected face of the displayed external view of the polyhedral object.

Claim 1 of auxiliary request II differs from claim 1 of the main request in that the polyhedral object, not the first information on the polyhedral object, and the second information on the projected surface are dynamically associated with each other.

Claim 1 of auxiliary request III adds to claim 1 of the main request that the second information displayed on the projected surface is at least one of an image, a moving picture and an icon.

Claim 1 of auxiliary request IV adds to claim 1 of auxiliary request II that the second information displayed on the projected surface is at least one of an image, a moving picture and an icon.

Claim 1 of auxiliary request V reads as follows:

"An apparatus (500) for providing a three-dimensional motion graphical user interface, the apparatus comprising:
a creation module (560) configured to create a polyhedral object (300) having a face (310) on which first information to be communicated to a user is displayed;
a display module (540) configured to display the created polyhedral object; **characterized in that**
the polyhedral object has a cover face which is opened when the face on which first information is displayed, is selected;
the display module (540) is further configured to display an external view of the created polyhedral object; and
the apparatus further comprises:
an interface module (550) configured to display, when the cover face is opened, second information, which

corresponds to the face selected by the user, on a projected surface (360) which is formed spatially separated from, and externally to the displayed external view of the polyhedral object using projection effects, wherein the second information is projected from any one of the following: an open face of the polyhedral object, the cover face, an internal space of the polyhedral object or a predetermined medium provided in the internal space of the polyhedral object."

Claim 1 of auxiliary request VI reads as follows:

"An apparatus (500) for providing a three-dimensional motion graphical user interface, the apparatus comprising:
a creation module (560) configured to create a polyhedral object (300) having a face (310) on which first information to be communicated to a user is displayed;
a display module (540) configured to display the created polyhedral object;
characterized in that
the polyhedral object (300) has at least one cover face, which can be opened and closed;
the apparatus further comprises a storage module (520) configured to store attributes of the polyhedral object, which attributes comprise at least one of information on which face is a cover face, a method of opening and closing the cover face, and a speed of opening and closing the cover face; and
the apparatus further comprises:
an interface module (550) configured to, when the cover face is opened, display second information, which corresponds to a face (340) of the displayed polyhedral object selected by the user, on a projected surface

(360) formed spatially separated from the displayed polyhedral object."

Claim 1 of auxiliary request VII reads as follows:

"An apparatus (500) for providing a three-dimensional motion graphical user interface, the apparatus comprising:
a creation module (560) configured to create a polyhedron object;
a display module (540) configured to display the created polyhedral object;
a storage module (520) storing information on attributes of the polyhedron object;
an input module (510) configured to receive an input value for selecting a predetermined face of the polyhedron object input by a user;
an interface module (550) configured to provide a three-dimensional motion graphical user interface by using the polyhedron object created by the creation module;
wherein the interface module (550) includes an object attribute assignment module (551), a motion processing module (552), and an object management module (553);
wherein the object attribute assignment module (551) is configured to assign the attributes to the polyhedron object and to map information on an information face of the polyhedral object according to the assigned attributes;
wherein the object management module (553) is configured to search the storage module (520), when a predetermined face is selected by a user, so as to provide information which is related to information displayed on the selected face, to the motion processing module (552);

wherein the motion processing module (552) is configured
to process motion of the polyhedron object according to the attributes specified by the object attribute assignment module (551);
to open a cover face (340) of the polyhedron object and to form a projected surface (360) at one side apart from the polyhedron object; and
to display information, which is supplied from the object management module (553), on the projected surface (360) through the cover face (340);
a control module (530) configured to control an operation of the interface module by processing the input value input through the input module;
wherein the display module (540) is configured to display a processing result of the interface module;
wherein the object management module (553) is configured to perform, when a user selects a predetermined face of a polyhedron object, a process of highlighting the selected face."

Claim 1 of auxiliary request VIII adds to claim 1 of auxiliary request VII that the selected face is the cover face that is operable to be opened and closed; that the second information is projected from any one of the following: an open face of the polyhedral object, the cover face, an internal space of the polyhedral object or a predetermined medium provided in the internal space of the polyhedral object; and that the motion processing module is configured to make the projected surface and the information displayed on the projected surface disappear and to close the cover face upon receipt of a user's command.

Claim 1 of auxiliary request IX differs from claim 1 of auxiliary request VI in that the wording "an interface

module (550) configured to, when the cover face is opened, display second information" has been replaced by "an interface module (550) configured to display second information".

Claim 1 of auxiliary request X adds to claim 1 of the main request that the polyhedral object has at least one cover face, which can be opened and closed, and that the apparatus further comprises a storage module configured to store attributes of the polyhedral object. These attributes comprising at least one of information on which the face is a cover face, a method of opening and closing the cover face, and a speed of opening and closing the cover face.

Claim 1 of auxiliary request XI adds to claim 1 of auxiliary request X that the second information displayed on the projected surface is at least one of an image, a moving picture and an icon.

The main request and auxiliary requests I to VI and IX to XI comprise a further independent claim relating to a corresponding method (claim 9).

Reasons for the Decision

1. The appeal is admissible (see point II).

2. As announced in its response dated 12 March 2020 to the summons of the board, the appellant announced that it would not attend the oral proceedings.

In deciding not to attend the scheduled oral proceedings, the appellant has chosen not to make any further submissions during any such proceedings held.

As a consequence, the oral proceedings were cancelled by the board, and the duly summoned appellant has thus to be treated as relying only on its written case.

3. Prior art

D3 describes a graphical user interface which displays headlines of news stories on a polyhedral graphical object (60, Figure 9). By clicking on one of the faces of the polyhedral object, the corresponding news story is displayed in full in a pop-up window (72, Figure 9) under the corresponding headline.

D4 describes a manipulable polyhedral icon for a graphical user interface (Figure 8). In an embodiment illustrated in Figures 9A and 9B, the icon is displayed as an open "shoebox" having a full visible bottom face 71 and four side walls 72. By clicking on a wall, the "shoebox" is opened and the wall is dropped down to a position planar with the bottom view to display additional information 73.

4. Main request

Claim 1 differs from claim 1 of the former main request on which the decision is based only in that the first information on the polyhedral object, instead of the polyhedral object itself, is dynamically associated with the second information on the projected surface. However, this feature is already disclosed in D3 in which the headline on the selected face of the polyhedral object and the headline in the pop-up window are the same.

With respect to the other features of claim 1, the board agrees with the findings of the examining

division that the identified distinguishing feature of displaying the second information on a projected surface using projection effects represents a mere presentation of information. An association between the first and second displayed information, as claimed, is achieved in D3 by having the same headline displayed on the selected face of the polyhedral object and in the pop-up window, which can both be viewed by the user. All the effects that the appellant considers to be achieved by the projection effects actually rely on the user's preferences and do not contribute to any technical effect and/or are already achieved by the method of D3. In particular, guiding the user's eyes from the selected face to the projected surface, as well as a one-to-one correspondence, is clearly achieved in D3 when the large pop-up window having the same headline (72, Figure 9) appears above the polyhedral object (60, Figure 9) showing the selected face in a prominent position. A definitive advantage of the eye guiding provided by the projection effects over the eye guiding achieved by D3 could only rely on the user's preferences and thus cannot confer a technical character to the projection effects. The appellant has further argued that using projection effects would save space on the projected surface and thus enable this surface to display more second information, in contrast to the pop-up window in D3 that must display the headline in addition to the second information. However, in the board's view, the projection effects themselves take up space on the display and thus limit the size of the projected surface and by consequence the display space dedicated to the second information.

For these reasons, the subject-matter of claim 1 does not involve an inventive step over the disclosure of D3 (Article 56 EPC).

5. Auxiliary request I

Claim 1 differs from claim 1 of the main request only in that the second information corresponds to the first information displayed on the selected face.

However, this feature is already disclosed in D3 by having the news story displayed in the pop-up window being related to the headline displayed on the selected face of the polyhedral object.

For these reasons, claim 1 of auxiliary request I does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

6. Auxiliary request II

Claim 1 differs from claim 1 of the main request in that the association is between the polyhedral object and the second information. The arguments provided by the appellant are substantially the same as for the main request. Additionally, the appellant argued in respect of auxiliary request II that the projection effects provide a small time delay which provides the user with a comfortable amount of time to move their eyes from focusing on the polyhedron object to focusing on the second information on the projected surface. The board first notes that no such time delay is defined in claim 1 or even mentioned in the description. Second, the property that a time delay to move the eyes is "comfortable" or not for a user is heavily dependent on the user's preferences and cannot be related to a technical effect.

For these reasons, claim 1 of auxiliary request II does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

7. Auxiliary request III

Claim 1 adds to claim 1 of the main request that the second information is an image, a moving picture or an icon.

The appellant has argued that the system of D3 is not able to provide a dynamical association in this case since the headline on the selected face of the object is not present in the pop-up window. However, in the board's view, the dynamical association is provided in D3 not only by the appearance of the headline in both places, but also by the fact that the selected face of the object is displayed fixed on the forward face of the object (see D3, column 3, lines 54 to 62).

For these reasons, claim 1 of auxiliary request III does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

8. Auxiliary request IV

Claim 1 adds to claim 1 of auxiliary request II that the second information is an image, a moving picture or an icon.

For the same reasons as expressed in relation with auxiliary request III, claim 1 of auxiliary request IV does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

9. Auxiliary request V

Claim 1 is identical to claim 1 of former auxiliary request II on which the decision is based. As identified in the decision, the differences between the subject-matter of claim 1 and the disclosure of D3 are that:
- the polyhedral object has a cover face which is opened when the face on which the first information is displayed, is selected; and that
- projecting the second information is by using projection effects, when the cover face is opened, from any one of the following: an open face of the polyhedral object, the cover face, an internal space of the polyhedral object or a predetermined medium provided in the internal space of the polyhedral object.

These features define an animation on the graphical user interface upon the user selecting a face of the polyhedral object. The board agrees in substance with the examining division that the effects of this animation are of an aesthetic nature and relate to psychological and cognitive aspects of the human user such that the animation features do in fact merely represent a presentation of information. Moreover, opening a face of a three-dimensional icon is a well-known feature in the field of graphical user interfaces, as illustrated by D4 (see Figures 9A and 9B). The appellant has argued that a technical effect of this animation is to better attract the visual attention of the user. In the board's view, this effect depends mainly on the user's preferences and does not represent a technical effect on which an inventive step argument can be based.

For these reasons, claim 1 of auxiliary request V does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

10. Auxiliary request VI

Claim 1 is identical to claim 1 of former auxiliary request III on which the decision is based. As identified in the decision, the differences between the subject-matter of claim 1 and the disclosure of D3 are that:
- the cover face can be opened and closed; and that
- the attributes of the polyhedral object comprise at least one of information on which the face is a cover face, a method of opening and closing the cover face, and a speed of opening and closing the cover face.

The board agrees in substance with the examining division that these features relate to the obvious implementation of the animation of the graphical user interface. Since the animation per se is devoid of technical character (see point 9 above), these features cannot contribute to an inventive step of the subject-matter of claim 1.

For these reasons, claim 1 of auxiliary request VI does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

11. Auxiliary request VII

Claim 1 is identical to claim 1 of former auxiliary request IV on which the decision is based. As identified in the decision, the differences between the subject-matter of claim 1 and the disclosure of D3 are that:

- a motion processing module is configured to process motion of the polyhedron object according to the attributes specified by the object attribute assignment module; to open a cover face of the polyhedron object; and to display information, which is supplied from the object management module, on the projected surface through the cover face; and that
- the object management module is configured to perform, when a user selects a predetermined face of a polyhedron object, a process of highlighting the selected face.

As to the first group of distinguishing features, the board agrees with the examining division that these features relate to the obvious implementation of the animation of the graphical user interface. Since the animation per se is devoid of technical character (see point 9 above), these features cannot contribute to an inventive step of the subject-matter of claim 1.

In respect of the second distinguishing feature, the board also agrees with the examining division that highlighting a selected icon or icon part is a common measure in the field of graphical user interface.

For these reasons, auxiliary request VII does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

12. Auxiliary request VIII

Claim 1 is identical to claim 1 of former auxiliary request V on which the decision is based. Claim 1 adds to claim 1 of auxiliary request VII that:

a) the selected face is the cover face that is operable to be opened and closed
b) the second information is projected from any one of the following: an open face of the polyhedral object, the cover face, an internal space of the polyhedral object or a predetermined medium provided in the internal space of the polyhedral object
c) the motion processing module is configured to make the projected surface and the information displayed on the projected surface disappear and to close the cover face upon receipt of a user's command

The board agrees in substance with the decision that features a) and b) relate to a mere non-technical presentation of the visual association and that the alleged advantage of such a presentation, namely that it is easier and more intuitive, relies solely on the user's preferences and not on a technical effect. Moreover, the interaction between the user and the graphical user interface defined in feature c) is an obvious measure in the technical field, as illustrated for instance by D4, Figures 9A and 9b, which describes the opening of a wall of an icon when the user clicks on it.

For these reasons, claim 1 auxiliary request VIII does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

13. Auxiliary request IX

Claim 1 differs from claim 1 according to auxiliary request VI only in that the wording "when the cover face is opened" in line 15 has been deleted.

Thus, for the same reasons as for auxiliary request VI, claim 1 of auxiliary request IX does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

14. Auxiliary request X

Claim 1 adds to claim 1 of the main request that:
- The polyhedral object has at least one cover face, which can be opened and closed.
- The apparatus further comprises a storage module configured to store attributes of the polyhedral object. These attributes comprising at least one of information on which the face is a cover face, a method of opening and closing the cover face, and a speed of opening and closing the cover face.

These additional features have already been considered in respect of auxiliary request VI, and the board has already decided that these features cannot contribute to an inventive step.

For these reasons, claim 1 of auxiliary request X does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

15. Auxiliary request XI

Claim 1 adds to claim 1 of auxiliary request X that the second information displayed on the projected surface is at least one of an image, a moving picture and an icon.

These additional features have already been considered in respect of auxiliary request III, and the board has

decided that these features cannot contribute to an inventive step.

For these reasons, claim 1 of auxiliary request XI does not meet the requirements of Article 56 EPC, having regard to the disclosure of D3.

16. Conclusion

None of the requests is allowable under Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

A. Chavinier-Tomsic A. Ritzka

Decision electronically authenticated