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**Datasheet for the decision
of 16 September 2020**

Case Number: T 0490/18 - 3.5.05

Application Number: 14191284.0

Publication Number: 2869180

IPC: G06F3/0488

Language of the proceedings: EN

Title of invention:

Multi-language input method and multi-language input apparatus
using the same

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Multi-language input with accents on touch screen / Samsung

Relevant legal provisions:

EPC Art. 123(2), 56, 84

Keyword:

Inventive step - (no) - obvious modification
Amendments - added subject-matter (yes)
Claims - clarity - auxiliary request (no)



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Case Number: T 0490/18 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 16 September 2020

Appellant: Samsung Electronics Co., Ltd.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 5 October 2017
refusing European patent application No.
14191284.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: N. H. Uhlmann
D. Prietzel-Funk

Summary of Facts and Submissions

The appeal lies from the decision of the examining division to refuse European patent application No. 14191284.0.

- I. The examining division made reference to the following documents:

D1 WO 2009/074278;
D2 US 8 286 104;
D3 EP 0 661 619.
- II. The examining division decided that the sets of claims of the main request and first and second auxiliary requests did not involve an inventive step. The examining division also decided that the third auxiliary request did not satisfy the requirements of Article 84 EPC.
- III. In its statement setting out the grounds of appeal, the appellant maintained all the requests and submitted a further fourth auxiliary request. As a further auxiliary measure, it requested that oral proceedings be held.
- IV. In a communication in preparation for the oral proceedings pursuant to Article 15(1) RPBA 2020, the board set out its provisional view of the case. It considered that none of the requests on file met the requirements of the EPC.
- V. The appellant withdrew its request for oral proceedings, and the proceedings were continued in writing.
- VI. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request, or the first, second or third

auxiliary request, all underlying the impugned decision, or the fourth auxiliary request filed with the statement setting out the grounds of appeal.

VII. Claim 1 of the main request reads as follows:

"A multi-language input method, comprising:

sensing a touch input for a letter entry;
sensing a touch gesture consecutive to the touch input;
identifying a moving direction of the touch gesture;
determining whether a letter corresponding to the touch input is combined with a symbol; and
displaying the letter corresponding to the touch input and a symbol corresponding to the identified moving direction of the touch gesture, if the letter is combined with a symbol; or
displaying the letter corresponding to the touch input without the symbol corresponding to the identified moving direction of the touch gesture, if the letter is not combined with a symbol."

VIII. Claim 1 of the first auxiliary request reads as follows:

"A multi-language input method, comprising:

sensing a touch input for a letter entry;
identifying a letter corresponding to the touch input;
sensing a touch gesture consecutive to the touch input;
identifying a symbol corresponding to a moving direction and a trace of the touch gesture;
determining whether the letter corresponding to the touch input is combined with the symbol corresponding to the touch gesture;
if the letter is combined with the symbol:
 determining whether the symbol corresponding to the moving direction and the trace of the touch gesture is stored in a memory; and

displaying the letter corresponding to the touch input and the symbol corresponding to the touch gesture, if the symbol is stored in the memory; or displaying the letter corresponding to the touch input without the symbol corresponding to the touch gesture, if the symbol is not stored in the memory."

IX. Claim 1 of the second auxiliary request reads as follows:

"A multi-language input method, comprising:

sensing a touch input for a letter entry;
identifying a letter corresponding to the touch input;
sensing a touch gesture consecutive to the touch input, the touch gesture being an input that forms a specific shape between a first point at which the touch input is generated and a second point at which the touch input is ended;
determining whether the identified letter is combined with a symbol among a predefined plurality of symbols;
if the identified letter is combined with a symbol among said plurality of symbols:

identifying a moving direction and a trace of the touch gesture;
determining that a symbol among said plurality of symbols corresponds to the touch gesture if the trace of that symbol is the same as the trace of the touch gesture, or determining that a symbol among said plurality of symbols corresponds to the touch gesture based on the identified moving direction if the trace of the touch gesture does not correspond to the trace of any of the symbols among said plurality of symbols;

and

displaying the identified letter and the identified symbol if that letter is combined with that symbol or displaying the letter corresponding to the touch input without the identified symbol, if a symbol corresponding to the touch gesture is not stored in a memory."

- X. Claim 1 of the third auxiliary request reads as follows:

"A multi-language input method, comprising:

sensing a touch input for a letter entry;
sensing a touch gesture consecutive to the touch input, wherein the touch gesture is an input that forms a specific shape between a first point at which the touch input is generated and a second point at which the touch input is ended; and
displaying a letter corresponding to the touch input and a symbol corresponding to the touch gesture;
wherein sensing the touch gesture comprises identifying a moving direction and a trace of the touch gesture;
the method further comprising determining the direction in which the touch gesture has moved, that is, the direction in which the symbol is combined with the letter, based on a corresponding relation between the first point and the second point."

- XI. Claim 1 of the fourth auxiliary request reads as follows:

"A multi-language input method, comprising:

sensing a touch input for a letter entry;
sensing a touch gesture consecutive to the touch input;
identifying a moving direction of the touch gesture;

determining whether a symbol corresponding to the touch gesture and the moving direction is combined on top of a letter corresponding to the touch input; and displaying the letter corresponding to the touch input with the symbol corresponding to the touch gesture and the moving direction, if the symbol is combined on the top of the letter; or displaying the letter corresponding to the touch input without the symbol corresponding to the touch gesture and the moving direction, if the symbol is not combined on the top of the letter."

Reasons for the Decision

1. The present application pertains to a method and apparatus for entering characters using touch input. By way of a touch gesture, the user may input a letter and a symbol, e.g. an accent. The letter and the symbol are displayed together.
2. Document D3 discloses related techniques for facilitating the input of transformed or modified characters.

Main request

3. Patentability

The board confirms the outcome of the inventive-step analysis in the decision under appeal.

- 3.1 The board agrees that the following features distinguish the subject-matter of claim 1 from the disclosure of document D3:

(m1) identifying a moving direction of the touch gesture and a symbol corresponding to the moving direction;

(m2) determining whether a letter corresponding to the touch input is combined with a symbol; if not, no symbol is identified or displayed.

The appellant did not argue that other distinguishing features were present.

3.2 The board agrees with the appellant that document D3, in particular Figure 7 and column 5, lines 29 to 48, does not disclose any implementation details. However, the description of the application in suit merely teaches (page 17, lines 25 and 26):

"The control unit 120 determines a moving direction, a moving distance, a trace, etc. of the touch gesture by analyzing a control signal received from the input unit 140."

In relation to the determination of a moving direction, no further details are provided in the application documents. In this regard, the board notes that the explanation on page 14, line 32 to page 15, line 2 pertains to the different notion of "combination direction".

D3 discloses that position data outputted from the pointing device is received and used to determine the shape of the locus drawn with the pointing device (D3, claim 1). In other words, D3 teaches that position data of the pointing device, which corresponds to the "control signal" of the application in suit, is analysed. Furthermore, and in view of Figure 7 and column 5, lines 36 to 38, it is clear that the device of D3 must be able to distinguish between pen movements corresponding to a slash (/) and a backslash (\). The main difference between these movements is the moving direction; hence, document D3 strongly suggests that

the moving direction of the pen is detected and used to identify the corresponding symbol.

- 3.3 The board agrees that the identification of the symbol may be implemented by comparing the shape formed by the inputted co-ordinates with reference shapes. However, as explained above, the specific difference between a slash and a backslash suggests that the moving direction is detected.
- 3.4 For these reasons, the feature (m1) does not contribute towards any inventive step.
- 3.5 Feature (m2) leads to the technical effects of displaying a correct letter even if user input is imprecise and reducing the computational load.
- 3.6 The objective technical problem is thus how to modify D3's device to achieve these effects.
- 3.7 The person skilled in the art of multi-language input methods (description, page 1, lines 7 to 9; D3, column 5, lines 38 to 40) is aware that not all letters of an alphabet can be combined with an "umlaut" or "accent" symbol. To reduce the computational load, it is clear that if the specific mark (e.g. a slash) is drawn on a character (D3, column 5, lines 45 to 47) which cannot be combined with a symbol, there is no need to identify the symbol. Hence, the skilled person would be motivated to avoid the identification, and consequently the displaying, of a symbol.
- 3.8 Hence, feature (m2) does not contribute towards any inventive step.
- 3.9 Consequently, the subject-matter of claim 1 does not involve an inventive step.

First auxiliary request

4. Amendments

4.1 The following features, among others, have been added to the independent claims:

(a) identifying a symbol corresponding to a moving direction and a trace of the touch gesture;

(b) determining whether the symbol corresponding to the moving direction and the trace of the touch gesture is stored in a memory.

4.2 In the board's view, there is no basis in the original application documents for feature (b).

Page 17, line 35 to page 18, line 3 discloses that a relation between a touch gesture and a symbol may have been stored in the memory unit. However, no basis is apparent for the symbol being stored in a memory. Furthermore, according to the same passage in the description, it is determined "whether a symbol corresponding to a touch gesture is presented based on the stored relation".

4.3 There is no basis for features (a) and (b) in combination.

In particular, it is not disclosed in the description and it does not make sense to first identify a symbol (feature (a)) and then to determine whether this already identified symbol, or a corresponding relation, is stored in a memory (feature (b)).

5. Patentability

The board considers that the subject-matter of the independent claims does not involve an inventive step.

- 5.1 In the statement setting out the grounds of appeal, the appellant argued that the examining division's line of argument was flawed because it was based on two independent embodiments in document D1.
- 5.2 The board observes that the decision under appeal (sections 3.3 and 3.4) refers to D1 to demonstrate that an input gesture did not necessarily overlap a key.
- 5.3 However, the independent claims do not define the location or extent of the touch gesture in any way. Hence, D3's teaching of drawing the marks over the key (column 5, lines 36 to 40) falls perfectly within the terms of the touch gesture of present claim 1. Consequently, there is no need to consult document D1.
- 5.4 For these reasons, the arguments of the appellant are not convincing. The board refers furthermore to the explanations regarding the main request above.

Second auxiliary request

6. The appellant agreed that the substance of the first and second auxiliary requests is the same (minutes of the first-instance oral proceedings, section 6.2 on page 3).

Furthermore, neither the decision under appeal nor the statement setting out the grounds of appeal sets out any specific arguments with regard to the second auxiliary request.

The board holds that the subject-matter of the independent claims does not involve any inventive step, for essentially the same reasons given for the first auxiliary request.

Third auxiliary request

7. Clarity and support by the description, Article 84 EPC
- The independent claims do not meet the requirements of Article 84 EPC for the following reasons.
- 7.1 The method according to claim 1 comprises
- "determining the direction in which the touch gesture has moved, that is, the direction in which the symbol is combined with the letter, based on a corresponding relation between the first point and the second point".
- 7.2 The only teaching in the description which refers to a relation between the two points (page 14, line 33 to page 15, line 2) does not include specific examples of a letter and a symbol, while the only example with a different combination direction of a letter and a parenthesis (page 15, lines 3 to 7) does not pertain to the relation between the first point and the second point, but to the type of symbol, i.e. a closing parenthesis.
- 7.3 For example, it is not clear how the combination direction of a closing parenthesis or a colon (with the second point being essentially under the first point, i.e. neither of the points is to the left or right of the other) could be determined.
- 7.4 More generally, it is not clear how a single touch gesture could be used to identify a symbol and a combination direction for that symbol. In actual fact, the relative position of the first point and second point is defined by the shape of the symbol.

Fourth auxiliary request

8. The independent claims of this request have been amended; however, the appellant did not present any

basis for these amendments. Moreover, no specific arguments with regard to inventive step were submitted. Thus, no arguments why this request overcomes the reasons for refusal were presented, and it is not self-evident either, in particular in view of the observations in sections 3. and 5. above.

For these reasons, the board holds that the fourth auxiliary request is not allowable due to a lack of substantiation.

9. Consequently, none of the requests on file is allowable. Hence, the appeal is not allowable and must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated