

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 30 April 2021**

Case Number: T 0200/19 - 3.5.05

Application Number: 05252107.7

Publication Number: 1710666

IPC: G06F3/023

Language of the proceedings: EN

Title of invention:

Handheld electronic device with text disambiguation employing advanced text case feature

Applicant:

BlackBerry Limited

Headword:

Disambiguation of text with upper and lower case/BlackBerry

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (yes)

Decisions cited:

Catchword:



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 0200/19 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 30 April 2021

Appellant: BlackBerry Limited
(Applicant) 2200 University Avenue East
Waterloo, ON N2K 0A7 (CA)

Representative: Hanna Moore + Curley
Garryard House
25-26 Earlsfort Terrace
Dublin 2, D02 PX51 (IE)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 18 September
2018 refusing European patent application No.
05252107.7 pursuant to Article 97(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 examining division posted on 18 September 2018 refusing European patent application No. 05252107.7. A main request and an auxiliary request were refused for not fulfilling the requirements of Article 56 EPC having regard to the disclosure of:

D1: US 6 286 064

II. The notice of appeal was received on 12 November 2018, and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 17 December 2018. The appellant requested that the decision be set aside and that a patent be granted based on the main request or the auxiliary request on which the decision was based, both refiled with the statement setting out the grounds of appeal. Furthermore, oral proceedings were requested if the main request was not allowed.

III. A summons to oral proceedings was issued on 17 December 2020. In a communication pursuant to Article 15(1) RPBA, sent on 3 February 2021, the board gave its preliminary opinion that the main request and the auxiliary request did not meet the requirements of Article 56 EPC in light of the disclosure of D1.

IV. With a letter of response dated 15 March 2021, the appellant submitted a second auxiliary request and provided further arguments with respect to the requirements of Article 56 EPC.

V. Oral proceedings were held on 30 April 2021. The appellant withdrew the main and first auxiliary requests and requested that the decision under appeal be set aside and that a patent be granted based on the claims of the sole request submitted as the second auxiliary request with the letter dated 15 March 2021. The decision of the board was announced at the end of the oral proceedings.

VI. Claim 1 according to the sole request reads as follows:

"A method of disambiguating a character input into a handheld electronic device (4), the handheld electronic device including an input apparatus (8) for inputting characters into the device, an output apparatus for outputting characters, and a processor apparatus (16) for electronically processing characters, including a memory (20) having a plurality of objects stored therein, the plurality of objects including a plurality of language objects (100) that may be constructed or identified from one or more linguistic characters to generate text, each of at least some of the language objects comprising a first linguistic character (48), the input apparatus including a plurality of input members (28,34), each having a plurality of linguistic characters assigned thereto, the method comprising the steps of:

detecting an ambiguous input (204) including a number of input member actuations of a number of the input members, wherein the ambiguous input has an input case makeup of an input sequence of upper and lower case linguistic characters;

generating a plurality of prefix objects, each prefix object comprising a permutation of linguistic characters corresponding with the ambiguous input;

for a first prefix object, identifying first and second language objects corresponding with the first prefix object, at least a portion of the first language object having a first case makeup of a first sequence of upper and/or lower case linguistic characters, at least a portion of the second language object having a second case makeup of a second sequence of upper and/or lower case linguistic characters, the second case makeup being different to the first case makeup;

determining that a portion of the input case makeup corresponds with at least a portion of one of the first case makeup and the second case makeup, and that said portion of the input case makeup includes an upper case linguistic character that corresponds to a same upper case linguistic character within said at least a portion of the one of the first case makeup and the second case makeup;

determining that another portion of the input case makeup includes a linguistic character that is lower case, and that a corresponding linguistic character of the one of the first case makeup and the second case makeup is a linguistic character that is upper case;

outputting as a relatively more preferred variant, in a predetermined quantity of alternative proposed interpretations of the ambiguous input, the first prefix object in accordance with the one of the first case makeup and the second case makeup; and

outputting as a relatively less preferred variant the first prefix object in accordance with the other of the first case makeup and the second case makeup."

Reasons for the Decision

1. Admissibility - Article 13(1) RPBA 2020

The sole request was filed as the second auxiliary request in response to the communication of the board.

Claim 1 was amended with respect to claim 1 of the then first auxiliary request on which the decision was based to define the input sequence as being of upper and lower case linguistic characters, instead of upper and/or lower case linguistic characters. This amendment is supported by paragraph [00147] and Figure 18 of the originally filed application. Thus, the input sequence is defined to comprise at least one upper case character and one lower case character, and the objection raised by the board in oral proceedings in respect of the unclear definition of the input sequence in the then main request is rendered moot.

Claim 1 was further amended to include a further determining step that another portion of the input case makeup must include a linguistic character in lower case, and that a corresponding linguistic character of the one of the first case makeup and the second case makeup was a linguistic character in upper case. This amendment is supported by paragraph [00147] of the originally filed description. Thus, the preferred variant is defined to have an upper case linguistic character corresponding to, i.e. at the same position as, a lower case linguistic character in the input sequence. This is a further distinguishing feature from the prior art considered by the board in the inventive step objection raised in its communication.

Taking into account that the amendments met the requirements of Article 123(2) EPC and were a direct response to the inventive step objection raised by the board in its communication, the board decided in oral

proceedings to admit the then second auxiliary request into the appeal proceedings.

2. Inventive step - Article 56 EPC

2.1 Prior art

D1 was considered the closest prior art in the impugned decision.

D1 discloses a method for disambiguating an input sequence on a reduced keyboard device. A list of candidate words is presented to a user as a result of the disambiguation of an input sequence of keys. The candidate words are ranked according to their frequency of use in the vocabulary to help the user select the desired input. D1 further discloses in column 16, lines 46 to 51, that words with one or more capital letters may be stored in the vocabulary database and associated with keystroke sequences which omit keystrokes indicating capitals, eliminating the need for the user to enter the capital letters. This means that a sequence of input letters in lower case only may lead to a candidate word having upper and lower case letters.

2.2 The subject-matter of claim 1 differs in substance from the disclosure of D1 by the following features:

- for an input sequence having a case makeup, at least two candidate words having the same sequence of letters but different makeup cases are retrieved from the vocabulary and presented to the user in the disambiguation list
- the word ranked first in the disambiguation list is a word having an upper case linguistic character

corresponding to an upper case linguistic character in the input sequence and having an upper case linguistic character corresponding to a lower case linguistic character in the input sequence

- 2.3 The objective technical problem was formulated in the decision as how to enhance a disambiguation process where multiple case makeups exist. However, since D1 does not disclose any disambiguation between words having the same linguistic characters but different case makeups, the board agrees with the appellant that the objective technical problem should not contain the expression "where multiple case makeups exists" and be formulated as how to enhance the efficiency of disambiguation of a user input provided via a reduced keyboard of a handheld device.

D1, in particular with reference to column 16, lines 27 to 51, quoted in the impugned decision, only teaches automatic capitalisation correction of an input sequence provided in lower case and determined to correspond to a word that should always contain at least one upper case letter. D1 is not concerned with disambiguation of words having the same letters but different case makeups. Thus, the board agrees with the appellant that D1 would not have provided any suggestion or motivation for the skilled person facing the objective technical problem to modify the solution disclosed in D1 in such a way as to arrive at the claimed solution.

- 2.4 Moreover, even if the skilled person would have considered that the system of D1 might learn and store versions of words that could present different case makeups in its vocabulary, like "blackberry" and "BIackBerry" or "asics" and "ASICS", the board agrees

with the appellant that the skilled person would not have been prompted, either by D1 or their common general knowledge, to modify the disambiguation process of D1 to arrive at the disambiguation method for the specific class of words presenting different case makeups defined in claim 1.

In this respect, D1 discloses that words resulting from the disambiguation process are presented to the user in order of decreasing frequency of use. The skilled person would have considered numerous modifications that could be made to D1 to present words having the same letter sequence but different case makeups in the disambiguation list. The impugned decision mentions an approach consisting in ranking first the candidate which matches the case input of the user as closely as possible, namely at the level of the case of each character in the input sequence. However, in this case, if the user types an input sequence for an intended word comprising several upper case letters, such as BlackBerry or ASICS, omitting to type all the required upper cases for the input sequence except one, the intended word would not be ranked first in the disambiguation list since the case makeup of the word without upper case letters, such as blackberry and asics in the aforementioned examples, would most resemble the case makeup of the input sequence. Therefore, the approach suggested in the decision does not lead to the same result as claim 1.

The appellant plausibly argued that, for the specific class of words having different possible case makeups, one with some upper case letters and one with only lower case letters, such as BlackBerry/blackberry, ASICS/asics and some company names and acronyms, the method according to claim 1 provides the advantage that

the user's wish to write the word with upper case letters is immediately recognised through the typing of of a single upper case letter in the input sequence. Therefore, the user can rely on the claimed disambiguation method to type only one of the upper case letters within the input sequence, intentionally omitting the other upper case letters and avoiding the need to press different keys more times, as is usually the case on reduced keyboards to obtain upper case letters, to obtain the intended word with upper case letters ranked first in the disambiguation list.

For these reasons, the board holds that the subject-matter of claim 1 involves an inventive step, having regard to the prior art on file. Claim 2 is a dependent claim and as such also meets the requirements of Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the examining division with the order to grant a patent on the basis of the following documents:
 - claims 1 and 2 of the sole request submitted as second auxiliary request with the letter dated 15 March 2021

 - a description and drawings to be adapted.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated