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**Datasheet for the decision
of 14 September 2011**

Case Number: T 0673/08 - 3.5.05

Application Number: 04251161.8

Publication Number: 1569079

IPC: G06F 3/033

Language of the proceedings: EN

Title of invention:

Text input system for a mobile electronic device and methods thereof

Applicant:

RESEARCH IN MOTION LIMITED

Headword:

Touch interface with overlapping key areas/RIM

Relevant legal provisions:

EPC Art. 54

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Novelty and inventive step (yes - after amendment)"

Decisions cited:

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Catchword:

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Case Number: T 0673/08 - 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 14 September 2011

Appellant: RESEARCH IN MOTION LIMITED
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Representative: Fennell, Gareth Charles
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 26 November 2007
refusing European patent application
No. 04251161.8 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

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

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division announced in oral proceedings held on 20 September 2007, with reasons dispatched on 26 November 2007, refusing European Patent Application No. 04 251 161.8.

II. The decision under appeal was based on a main request and three auxiliary requests. The main, first auxiliary, and second auxiliary requests were refused due to lack of novelty, and the third auxiliary request was refused due to lack of inventive step, having regard to the document:

D1: US 5 748 512.

A fourth auxiliary request was not admitted under Rule 86(3) EPC 1973 in view of its late filing during oral proceedings before the examining division and of its non-compliance with the requirements of Article 123(2) EPC.

III. Notice of appeal was received on 15 January 2008. The appeal fee was paid on the same day. A statement setting out the grounds of appeal was received on 20 March 2008. With the statement setting out the grounds of appeal the appellant (applicant) filed an amended fourth auxiliary request. Oral proceedings were requested on an auxiliary basis. In support of its arguments presented in the statement setting out the grounds of appeal, the appellant filed on 5 June 2008 a sworn declaration from an independent expert providing arguments in favour of novelty and inventive step of

the subject-matter of the application in the light of D1.

IV. In a communication accompanying a summons to oral proceedings to be held on 14 September 2011 the board gave its preliminary opinion that none of the appellant's requests met the requirements of Article 54 EPC having regard to D1.

V. In response to the board's negative preliminary assessment of the requests then on file, the appellant filed, with letter of 11 August 2011, the following new set of requests to replace the requests on file:

Request 1: claims identical to the claims of the previous main request;

Request 2: claims 1 to 20 of request 2 filed with letter of 11 August 2011;

Request 3: claims identical to the claims of the previous first auxiliary request;

Request 4: claims 1 to 20 of request 4 filed with letter of 11 August 2011;

Request 5: claims 1 to 20 of request 5 filed with letter of 11 August 2011;

Request 6: claims identical to the claims of the previous fourth auxiliary request.

VI. At the oral proceedings held as scheduled on 14 September 2011, the appellant presented drawing sheets 1 and 2 in support of its argumentation. He requested that the decision under appeal be set aside

and that a patent be granted on the basis of claims 1 to 20 submitted in the oral proceedings as a sole request. The requests filed with letter dated 11 August 2011 were withdrawn.

VII. Independent claim 1 of the appellant's sole request reads as follows:

"A method comprising:
associating areas (412, 414, 416, 612, 614, 616, 810-816, 821-826) of a touch interface (104, 204) of a mobile electronic device (100, 200) with letters such that each area is associated with only one letter and at least some of the associated areas overlap with one another;
detecting (302, 502, 506, 702, 706) a location of a touch on the touch interface (104, 204);
determining which of the overlapping areas include the touch location; and
identifying the letters associated with the overlapping areas determined to include the touch location."

Independent claim 9 of the appellant's sole request reads as follows:

"A mobile electronic device (100, 200) comprising:
one or more touch interfaces (104, 204) configured to display one or more rows of letters and receive a touch; and
a microprocessor (902) configured to associate areas (412, 414, 416, 612, 614, 616, 810-816, 821-826) of the one or more touch interfaces (104, 204) with the letters such that each area is associated with only one letter and at least some of the areas overlap with one

another, and the microprocessor (902) is further configured to determine which of the overlapping areas include the touch location, and identify the letters associated with the overlapping areas determined to include the touch location."

Independent claim 20 of the appellant's sole request reads as follows:

"A computer readable medium storing instructions for execution by a processor (902) of a mobile device (100, 200) for causing the mobile device (100, 200) to implement the method of any of claims 1 to 8".

VIII. At the end of the oral proceedings the board announced its decision.

Reasons for the Decision:

1. *Admissibility*

The appeal is admissible.

2. Basis for amendments

The claims of the appellant's sole request are based on the claims of the first auxiliary request filed on 9 July 2007. The claims find support *inter alia* in paragraphs [29] to [36] of the description as originally filed.

3. *Novelty and inventive step*

3.1 *Closest prior art*

D1 discloses a touch screen for a PDA, wherein keys of a keyboard are displayed. The keys are displayed as rectangles wherein the geometric centre of a rectangle represents a letter or character on the touch screen. When the user's contact point is within a distance of 0.2 of the width of the rectangle from the geometric centre of a rectangle key, that touch is considered as a "direct hit" and the letter or character represented by the struck key is entered. When the contact point is displaced from the centre of the struck key more than 0.2 times the rectangle's width, the touch screen undertakes a calculation to determine which two keys adjacent to the struck key have their centre points closest to the touch point. These two additional keys with centre points nearest to the contact point and the key actually struck are then sent to an occurrence frequency determination means which selects one of the three candidate keys as the entered key (see column 5, line 11 to column 6, line 7).

3.2 In D1, user's touches on the same point of the touch interface always result in the selection of the same letter(s) or character(s), due to the use of the same distance calculation algorithm and parameters. The points on the touch interface which, when touched by a user, result in the selection of a particular letter or character represent together a certain area, i.e. a group of points, of the touch interface. It may thus be assumed that a link already exists between this area of the touch interface and this particular letter or

character before the touch interface is actually used by the user. A virtual association of overlapping areas with letters is thus present in D1, although this association does not take the form of a direct mapping in memory between letters and areas. Therefore, the associating step of claim 1, taken on its own, cannot be seen as a distinguishing feature between the subject-matter of claim 1 and the disclosure of D1.

The detecting step of claim 1 is also disclosed in D1 and this has not been challenged by the appellant.

The determining and identifying steps in claim 1 however are not disclosed in D1. In that respect, D1 does not disclose areas as such, i.e. groups of points of the touch interface, which can be looked at or searched in for determining if they comprise a certain point, i.e. the touch location. In D1, the identification of the letters is performed solely by distance calculation between the touch point and neighbouring key centres, not by the determination of areas as such. The associating step in claim 1, when further read in combination with the determining and identifying steps of the claim, has hence to be interpreted as defining more than only a virtual association of overlapping areas with letters as in D1. It has to be interpreted within the overall context of claim 1 as defining an association of areas with letters which enables a direct search of areas based on a given touch location.

The subject-matter of claim 1 is thus not disclosed in D1.

3.3 The technical effect of these differences is that the mobile electronic device identifies letters as a result of a direct reference between areas and letters, without needing to calculate distances. The objective technical problem may thus be formulated as how to simplify the system of D1.

There is no hint in D1 for the skilled person to replace the distance calculation algorithm by an association of areas with letters enabling a direct determination of letters. The skilled person would rather try to optimize the distance calculation algorithm in order to design a simpler system. The appellant plausibly argued that the solution of claim 1 enables a more rapid determination of letters and needs less battery power, in particular when the association of areas with letters is implemented by a mapping in memory. Moreover, the solution of claim 1 enables different area shapes to be programmed for different letters whereas the distance calculation algorithm of D1 leads indeed to the same area shape for all letters.

For these reasons, the board judges that the subject-matter of claim 1 involves an inventive step having regard to the disclosure of D1 (Article 56 EPC 1973).

3.4 The same reasoning applies to corresponding independent claims 9 and 20 which contain substantially the same features as claim 1 but expressed in terms of, respectively, a claim for a device and a claim for a computer readable medium.

3.5 The subject-matter of dependent claims 2 to 8 and 10 to 19, which specify further implementation details,

involves mutatis mutandis an inventive step for identical reasons.

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 grant a patent based on claims 1 to 20 as submitted in the oral proceedings, and the description and drawings to be adapted.

The Registrar:

The Chair:

K. Götz

A. Ritzka