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**Datasheet for the decision
of 7 May 2019**

Case Number: T 2223/15 - 3.5.05

Application Number: 11162706.3

Publication Number: 2511794

IPC: G06F3/023

Language of the proceedings: EN

Title of invention:

A portable electronic device having user-configurable multi-function key entry timeout

Applicant:

Doro AB

Headword:

User-configurable multi-function key entry timeout / Doro

Relevant legal provisions:

EPC Art. 56, 113(1)
RPBA Art. 15(1)

Keyword:

Inventive step - (no) - effect not made credible within the whole scope of claim

Decisions cited:

Catchword:



Beschwerdekammern
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Case Number: T 2223/15 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 7 May 2019

Appellant: Doro AB
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 12 May 2015
refusing European patent application No.
11162706.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: N. H. Uhlmann
G. Weiss

Summary of Facts and Submissions

- I. The appeal is against the examining division's decision to refuse European patent application No. 11162706.3.
- II. The reasons for the decision under appeal refer to the following documents:

D1 US 2010/115402;
D2 US 6 744 422;
D3 US 6 130 628.
- III. The examining division decided that the subject-matter of claim 1 of the sole request lacked inventive step based on document D2 as the closest prior art.
- IV. In its statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and a patent be granted based on the claims of a main request and four auxiliary requests. All the requests were submitted for the first time with the statement setting out the grounds of appeal, with the fourth auxiliary request corresponding to the request refused in the contested decision.
- V. The board arranged to hold oral proceedings.
- VI. In the summons, the board set out its provisional view on the case. The board considered that the requirements of Articles 123(2), 84 and 56 EPC were not met.
- VII. In response, the appellant filed a main request, identical to the fourth auxiliary request, and a single, amended, auxiliary request and submitted arguments regarding these requests. Moreover, all other requests from the grounds of appeal were cancelled. The appellant informed the board that it would not be attending or represented at the oral proceedings.

- VIII. The board cancelled the oral proceedings.
- IX. The appellant requested that the decision under appeal be set aside and that a patent be granted based on a main request with claims 1 to 7 submitted with the letter dated 28 February 2019, or on an auxiliary request with claims 1 to 7 submitted with the same letter, and the drawings and description on which the decision under appeal was based.
- X. Claim 1 of the main request reads as follows:
- "A portable electronic device comprising
- a display (430; 336; 203; 253);
- a keypad (440; 337; 204; 254) having a plurality of keys (204a; 254a), at least some of which have multiple functions, specifically such that when a time lapse between two successive actuations of one and the same particular key is shorter than a threshold delay time (*multiTap_delay*), a first action is taken on said display, whereas otherwise a second action is taken on said display; and
- control means (460) for user-configurable setting of said threshold delay time (*multiTap delay*),
- characterized by**
- user behavior monitoring means (470) configured to watch for a predefined user behavior pattern and, upon detection of said user behavior pattern, cause said control means (460) to
- present on said display (430; 336; 203; 253) an offer to change said threshold delay time to a value reflecting said user behavior pattern,
- accept a confirmation from the user (1), and
- set said threshold delay time (*multiTap_delay*) to the

offered and accepted value,

wherein said predefined user behavior pattern involves one of the following:

- use of one or more other services in said portable electronic device than voice calls, the portable electronic device having a radio transceiver (310) for connection to a mobile telecommunication network (110), wherein the offered value represents a shorter threshold delay time than a default threshold delay time,

- the user having made one or more changes to a plurality of user-configurable settings in a graphical user interface of the portable electronic device, wherein the offered value represents a shorter threshold delay time than a default threshold delay time, and

- downloading, installation or execution of a particular application program or type of application program, the portable electronic device having an operating system capable of executing one or more application programs (340-346)."

- XI. Claim 1 of the auxiliary request differs from claim 1 of the main request in that the first two types of user behaviour patterns have been removed and the wording "wherein the user (1) is assessed as being experienced and is offered a shorter threshold delay time than default when the particular application program or type of application program is a video game, media player or instant messaging application, and wherein the user (1) is conversely offered a longer threshold delay time than default when the particular application program or

type of application program is a medication reminder application, elderly care application or visual aid application"
has been added at the end of the claim's text.

Reasons for the Decision

1. Procedural aspects

1.1 Appeal proceedings

In its statement setting out the grounds of appeal, the appellant made, as a precaution, "a request for Oral Proceedings should the Board be of mind to refuse all the requests herein without further written communication". Subsequently, the board issued a written communication dated 23 January 2019 which dealt with all requests then on file. In its letter of response dated 28 February 2019, the appellant stated that "all other requests from the Applicant's Grounds of Appeal have been cancelled". In the board's view, this statement amounts to an unambiguous withdrawal of the request for oral proceedings. Moreover, the appellant indicated that nobody would attend the oral proceedings on its behalf.

Consequently, the board decided to cancel oral proceedings and to conclude the appeal proceedings by issuing this written decision.

1.2 Examination proceedings

The appellant submitted that it had not had the chance to be heard on certain issues (statement of grounds, page 5, sixth paragraph, and page 6, first full paragraph).

The board agrees that the aspect of no technical considerations being involved in choosing one of the

claimed predefined user behaviour patterns (decision under appeal, section 2.1.10) was mentioned for the first time in the decision under appeal and that one of the objective technical problems had been changed from the summons to oral proceedings (section 4.1.5 b.) to the appealed decision (section 2.1.5. b.).

With regard to the choice of patterns, this argument amounts to a minor addition to the line of reasoning of the examining division, which does not change in substance the core of the inventive step argumentation.

While the formulation of the objective technical problem b) has been amended, the reasoning with regard to inventive step remains in substance the same and the problem formulation appears to be amended in view of the arguments of the then applicant in its letter dated 27 March 2015 in preparation for oral proceedings, which were held in the absence of the then applicant. At these oral proceedings, any outstanding issues could and should have been discussed.

Consequently, no violation of the right to be heard, as enshrined in Article 113(1) EPC, took place.

Thus, the board does not order that the case be remitted for further prosecution.

2. The invention

The application pertains to a keypad with keys in which some keys have a second function, which is activated upon two actuations of the key within a time interval shorter than a threshold delay time.

The problem addressed is to achieve an adaptable threshold delay time, e.g. to shorten this time for more experienced user.

The solution comprises monitoring means watching for

predefined user behaviour pattern and adapting the threshold delay time based on the observed user behaviour pattern. Several such patterns are claimed: use of non-voice services; making changes of user settings (both leading to a reduced time threshold); downloading, installing or executing applications (the effect would depend on the type of the application).

3. Prior art

Document D1 discloses a text input method in which a time period threshold can be configured by the user.

Document D2 discloses a method for determining and adapting a cursor advance time delay for a multi-tap key based on measured time between selections of a key.

Document D3 discloses a T9-like input method, in which a predetermined time-between-presses period can be adjusted by a user or service technician.

Main request

4. Inventive step

4.1 The subject-matter of claim 1 does not involve an inventive step.

4.2 The board agrees with the appellant and the division that document D2 forms a suitable starting point for the inventive step analysis of the claimed subject-matter. The appellant did not contest that this document discloses all features of claim 1 except features *a*, *b*, *c* and *c'*.

4.3 The board agrees that document D2 does not disclose the features
a "present on said display an offer to change said threshold delay time to a value reflecting said user behavior pattern",

b "accept a confirmation from the user, and set said threshold delay time to the offered and accepted value" and

c "said predefined user behavior pattern involves one of the following:

- use of one or more other services in said portable electronic device than voice calls, the portable electronic device having a radio transceiver for connection to a mobile telecommunication network, wherein the offered value represents a shorter threshold delay time than a default threshold delay time,
- the user having made one or more changes to a plurality of user-configurable settings in a graphical user interface of the portable electronic device, wherein the offered value represents a shorter threshold delay time than a default threshold delay time, and
- downloading, installation or execution of a particular application program or type of application program, the portable electronic device having an operating system capable of executing one or more application programs".

4.4 With regard to features *c* and *c'*, the appellant argued essentially as follows:

First, document D2 does not disclose feature *c'* "user behavior monitoring means configured to watch for a predefined user behavior pattern".

Second, feature *c* contributes, together with feature *c'*, to inventiveness of the subject-matter claimed.

4.5 As to the first argument, the board judges that document D2 discloses feature *c'*.

This document describes that a user presses keys on a device, with a time interval in-between, which corresponds to a user behaviour. Furthermore, the method as described in this document comprises a step of measuring elapsed time between key presses. The measured elapsed time is compared with a cursor advance time delay. Depending on the outcome of the comparison, the cursor advance time delay is adjusted. If the measured elapsed time is longer than the cursor advance time delay, then this time delay is increased and vice versa. This functionality corresponds to monitoring for two distinct user behaviour patterns: keypresses with either a longer or shorter time between presses than the cursor advance time delay (see D2, column 3, lines 3-6, and column 4, lines 36-46).

The appellant argued that "the actual measurement used in D2 is not the **behaviour** that the user presses keys, it is the **skill** employed by the user to press keys **quickly**" (bold by the appellant). The board agrees that the notions of "user behaviour" and "user skill" have different meaning. However, document D2 does not refer to pressing keys quickly but to measuring the time between two key presses by the user. Moreover, in the context of a user interacting with a device, watching for user skill falls under the broader notion of watching for user behaviour because the skill of a user only becomes recognisable for the device via the behaviour of the user.

4.6 With regard to the second argument of the appellant, the board holds as follows.

As a first step of the problem-solution analysis, the technical effect of the distinguishing features has to be established. The appellant submits that a technical effect would be that feature c would allow for a faster

adaptation of the multi-tap delay. Furthermore, the appellant argues that the objective technical problem to be solved "should be defined as how to provide a faster and more adaptable setting of the typing speed".

The board does not agree with this problem formulation because the subject-matter claimed does not relate to typing speed. Moreover, no degree of adaptability can be consistently deduced from the distinguishing features or indeed from the claim as a whole. No change to the multi-tap delay threshold could set the speed with which a user is actually typing.

- 4.7 Regarding the technical effect submitted by the appellant, feature *c* does not lead to any technical effect which is credibly achieved over essentially the whole scope of protection sought by claim 1. The whole scope of protection comprises the downloading, installation or execution of not further specified application programs or types of application programs, be it triggered by user input or any other means.

The three user behaviour patterns enlisted in feature *c* were, beyond any reasonable doubt, generally known at the time the application in suit was filed.

The decisive question is whether the adaptation of the threshold delay time upon detection of one of these, as such known, user behaviour patterns leads to a technical effect.

The board will address, also in view of the auxiliary request, the third claimed user behaviour pattern.

The downloading, installation or execution of a particular application program or type of application program, while as such clearly technical in nature, does not permit any reliable determination of the level

of experience or proficiency or typing abilities of the user. For instance, an elderly care application (third last paragraph of the description) may well be used by a person who is actually working in an assisted living facility. Furthermore, and in particular in the case of an elderly person who owns a mobile phone, it may well be that a grandchild is executing a video game application.

- 4.8 The appellant submitted that the inventors found out that actions referred to in the listed behaviour patterns were among the very first actions taken by an advanced user. The board disagrees. To state that a user, as a very first action, would execute a video game application amounts to mere speculation.

The argument of the appellant that the teaching of document D2 would rather lead to the user adapting to the device is of no relevance for the presence of any technical effect caused by claimed feature c.

The appellant stated that the relevant question to be asked is "simply: Does the monitoring of a user's behaviour in terms of ... using apps in the portable device, tell us anything about the user's likely level of experience?". The board holds that this question cannot be reliably answered in the affirmative. Further to the observations above, at the time of filing of the present application, even such basic functions of a smartphone like voice calls were often implemented as apps.

The explanation of the appellant that "for the general population of mobile phone users, the claimed functionality WILL normally result in a fast and intelligent adaptation of the setting" is not convincing. While in some cases the adaptation might be

fast and intelligent, in other cases, some of which were set out above, the adaptation might be useless or wrong. The board agrees that "100,0 % satisfaction rate" is not needed. However, the number of examples given above demonstrate that no technical effect is credibly achieved over essentially the whole scope of protection sought by claim 1.

The appellant submitted further that "the example of a caretaker downloading an elderly care application seems to be something of a margin exception". The board disagrees. First, the description of the application in suit refers to elderly care applications. Second, it is not a margin exception that elderly people live in assisted living facilities and are supported there by caretakers. That elderly care systems might be divided into two different apps and that "there is a plethora of other apps that highly correlate to more or less advanced users" clearly demonstrates that the specific application, or the specific type of application, does play a role for establishing a technical effect.

Finally, the appellant stated: "Experience shows that the three particular patterns are both correlated to typing speed to a sufficient degree and used by experienced users quickly enough to allow for fast and accurate adaptation". The board is not persuaded. Absent any documentation regarding this experience, the statement amounts to an allegation without probative value.

- 4.9 In view of these explanations, distinguishing feature *c* does not lead to any credible technical effect.
- 4.10 With regard to features *a* and *b*, the appellant argues that by providing the user with the option to accept an offered change of the threshold delay time, the danger

of having a non-satisfactory threshold value or rendering the device unusable to the current user may be prevented. The appellant explains further that an objective technical problem related to distinguishing features *a* and *b* "should be how to prevent an incorrect determination of a user's proficiency to render the device inoperable" and that these features would provide for a faster setting of the typing speed "because a change may be made without accidentally changing the typing speed incorrectly". Moreover, the appellant submits that distinguishing features *a*, *b* and *c* do not relate to partial problems, that document "D2 is completely void of any measures being taken for preventing an incorrect determination" and that there is no incitement to apply features *a* and *b* in D2.

The board cannot accept this reasoning and notes that it is questionable to what extent the presenting of a changed threshold delay time value, for instance "0,4 seconds", to an inexperienced user would enable them to prevent an incorrect value. Furthermore, while it is certainly helpful and hence desirable for the skilled person to let the user confirm changes to settings, like changes to the threshold delay time, it is abundantly clear that such confirmation techniques were generally known at the relevant date. Moreover, it was demonstrated above that feature *c* does not lead to any technical effect.

- 4.11 Consequently, the subject-matter of claim 1 does not involve an inventive step in view of document D2 and the general knowledge of the skilled person.

Auxiliary request

5. Inventive step

5.1 The subject-matter of claim 1 does not involve an inventive step.

5.2 The appellant submitted that the inventors would have found that for specific types of applications it could be assessed that the user is experienced, while for other specific types of applications it could be assessed that the user should be offered a longer threshold delay.

5.3 Using a media player application, like using a camera application, does not imply any information about the level of experience or proficiency or typing abilities of the user. Indeed, many elderly people use media player applications to see pictures or movies of their relatives, without being necessarily able to type at an above average speed.

5.4 For the reasons given in sections 4.7 and 4.8, use of an elderly care application does not reliably point to a less experienced user or to a user who only could type slowly.

5.5 Hence, the explanations given in sections 4.7 and 4.8 with regard to feature *c* of claim 1 of the main request apply as well to the user behaviour pattern of claim 1 of the auxiliary request, which does not lead to any credible technical effect.

5.6 Consequently, the subject-matter of claim 1 does not involve an inventive step in view of document D2 and the general knowledge of the skilled person.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated