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**Datasheet for the decision
of 17 October 2019**

Case Number: T 1809/15 - 3.5.05

Application Number: 11170994.5

Publication Number: 2372497

IPC: G06F3/041, G06F3/023,
H01H36/00, H03M11/04,
H03M11/02, G06F3/01

Language of the proceedings: EN

Title of invention:

Input apparatus

Applicant:

KYOCERA CORPORATION

Headword:

Input apparatus with tactile feedback / Kyocera

Relevant legal provisions:

EPC Art. 123(2), 54, 111(1)
RPBA Art. 13(1), 13(3)

Keyword:

Novelty - main request (no)

Amendments - added subject-matter (yes)

Late-filed auxiliary requests - amendments after arrangement of oral proceedings - admitted (no) - adjournment of oral proceedings would have been required (yes) - need for additional search (yes) - procedural economy

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 1809/15 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 17 October 2019

Appellant: KYOCERA CORPORATION
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Representative: SSM Sandmair
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 17 March 2015
refusing European patent application No.
11170994.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: N. H. Uhlmann
F. Blumer

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse European patent application No. 11170994.5 because the sole request did not meet the requirements of Articles 84 and 54 EPC.
- II. The reasons for the decision refer to the following prior-art documents:
- D1 POUPLYREV I ET AL: "Tactile Interfaces for Small Touch Screens", PROCEEDINGS OF THE 16TH ANNUAL ACM SYMPOSIUM ON USER INTERFACE SOFTWARE AND TECHNOLOGY : VANCOUVER, CANADA, NOVEMBER 2 - 5, 2003; ACM PRESS, NEW YORK, NY, vol. 5, no. 2, pages 217-220;
- D2 WO 2008/125130;
- D3 US 2006/119586;
- D4 I. SCOTT MACKENZIE ET AL: "The tactile touchpad", CHI '97 EXTENDED ABSTRACTS ON HUMAN FACTORS IN COMPUTING SYSTEMS LOOKING TO THE FUTURE, CHI '97, 1 January 1997, pages 309/310, New York, USA.
- III. In a statement setting out the grounds of appeal, the appellant submitted an amended main request and an amended auxiliary request and requested that the decision be set aside and that a patent be granted on the basis of these requests.
- IV. The board arranged for oral proceedings to be held.
- V. In the summons, the board set out its provisional view of the case. It considered that the main request did not meet the requirements of Articles 54, 84 and 123(2) EPC and that the auxiliary request did not comply with the requirements of Rule 99(2) EPC and Article 12(2) RPBA.

- VI. An anonymous third-party observation was received on 3 June 2019. It comprised two prior-art documents and arguments regarding the requirements of Articles 54, 56 and 84 EPC.
- VII. By letter dated 30 July 2019, the appellant filed an amended main request, renamed the previous main request as first auxiliary request and filed a second auxiliary request.
- VIII. Oral proceedings were held on 17 October 2019 and attended by the appellant's representative.
- IX. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of one of the following requests:
- main request as filed with the letter dated 30 July 2019;
 - first auxiliary request, filed as the main request with the statement setting out the grounds of appeal dated 16 July 2015;
 - second auxiliary request, filed with the letter dated 30 July 2019.
- X. Claim 1 of the main request reads as follows:
- "An input apparatus comprising:
an input unit (12);
a load detection unit for detecting a pressure load on the input unit (12);
a vibration unit (14) for vibrating the input unit (12); and
a control unit (15) for driving the vibration unit (14) with a drive signal such that a tactile sensation corresponding to a click of a push button is generated when the pressure load detected by the load detection unit (13) satisfies a predetermined standard,

wherein there is no vibration when the pressure load is below the predetermined standard."

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

"An input apparatus comprising:
an input unit (12);
a load detection unit for detecting a pressure load on the input unit (12);
a vibration unit (14) for vibrating the input unit (12); and
a control unit (15) for driving the vibration unit (14) with a drive signal such that a similar sensation to a downward motion is provided to an object pressing the input unit (12) when the pressure load detected by the load detection unit (13) satisfies a predetermined standard."

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

"An input apparatus comprising:
an input unit (12);
a load detection unit for detecting a pressure load on the input unit (12);
a vibration unit (14) for vibrating the input unit (12); and
a control unit (15) for driving the vibration unit (14) with a drive signal such that the vibration unit (14) vibrates the input unit (12) for one period at a frequency of 170 Hz, thus generating a click sensation similar to that obtained when operating a push-button switch, when the pressure load detected by the load detection unit (13) satisfies a predetermined standard, wherein there is no vibration when the pressure load is below the predetermined standard."

Reasons for the Decision

1. The invention as described pertains to a tactile feedback function for an input unit and addresses the problem of how to provide a realistic click sensation.

2. Prior art

Document D3 pertains to a user interface device, e.g. a touchpad, which provides a haptic feedback to the user.

Main request

3. Patentability

The board judges that the subject-matter of claim 1 is not novel.

3.1 Document D3 discloses, using the wording of claim 1:

An input apparatus comprising:

an input unit (touchpad 16);

a load detection unit for detecting a pressure load on the input unit (paragraphs 51 and 89, "resistive or other types of touchpads can detect the amount of pressure applied by the user");

a vibration unit for vibrating the input unit (paragraphs 62 and 63, Figure 3, piezoelectric actuators 42); and

a control unit for driving the vibration unit with a drive signal (paragraph 59, "the touchpad device also includes circuitry that receives signals from the host and outputs tactile sensations in accordance with the host signals using one or more actuators")

such that a tactile sensation corresponding to a click of a push button is generated when the pressure load detected by the load detection unit satisfies a predetermined standard (paragraphs 86 to 92, Figures 9

to 11, a haptic effect is assigned to push down and release events, to provide a realistic emulation and better recreation of a button press to the operator, of a snap button), wherein there is no vibration when the pressure load is below the predetermined standard (paragraphs 51, 86 and 89, realistic emulation is provided for both button press and release operations, thus the pressure threshold referred to in paragraph 89 is necessarily used in both cases).

- 3.2 The appellant argued in writing that document D3, in paragraph 89, disclosed a pressure threshold only when a user removes his finger, and not when the pressure increases.

The board is not persuaded by this argument. Paragraph 89 of document D3 teaches that "**even** when the user removes his fingers, the forces can still be felt" (bold marking by the board). Thus, while this paragraph refers explicitly to the "button up" situation, it is apparent that the same threshold crossing check is done in the "button down" case as well. This finding is confirmed by paragraph 86, which teaches that realistic emulation is provided for both button press and release operations of a mechanical button and Figure 10, which depicts the two force profiles of such a button.

- 3.3 At the oral proceedings, the appellant explained that the paragraphs 86 to 92 of document D3 described the properties of a mechanical button and not a tactile sensation corresponding to the click of a push button.

The board disagrees because these paragraphs describe both the properties of a mechanical button and their

simulation using a haptic response generated by the touchpad.

First auxiliary request

4. The board holds that claim 1 as presently amended does not meet the requirements of Articles 76(1) and 123(2) EPC.

4.1 Claim 1 requires that "similar sensation to a downward motion [be] provided" by the vibration unit. The appellant stated in writing that this feature was based on paragraphs 29 - 31 and 33.

The board is not persuaded. First, these paragraphs do not describe embodiments of the invention but "a principle of a method to provide a click sensation by an input apparatus according to the present invention" (paragraph 19). However, present claim 1 does not relate to a click sensation but to the different notion of "similar sensation to a downward motion". Second, paragraphs 33 and 31 and Figure 1 make clear that there is no vibration when the load is below the value of point B, and at point B, a tactile sensation corresponding to a click of a push button is generated, i.e. vibrating for one period at the frequency of 170 Hz. Hence, the application specifically refers to the movement of a push button, as depicted in Figure 1, and not to any downward motion as presently claimed. Third, paragraph 29 likewise relates to a specific change of load between points B and C and not to any downward motion.

4.2 At the oral proceedings, the appellant argued that paragraph 22 provided further basis for this amendment.

The board does not agree. This paragraph, the preceding paragraph and Figure 1 describe the properties of a

mechanical push-button switch and do not pertain to a sensation caused by a vibration unit. Moreover, paragraph 33, which also refers to Figure 1, states that a "tactile sensation" or a "pressure sensation" is simulated, but not a sensation similar to a downward motion.

Second auxiliary request

- 5. Admittance into the appeal procedure
 - 5.1 This request was submitted by letter dated 30 July 2019, after oral proceedings had been arranged. Hence, the admitting of this request is at the discretion of the board, pursuant to Article 13, paragraphs (1) and (3) RPBA.
 - 5.2 Claim 1 was amended by, inter alia, defining that the vibration is "for one period at a frequency of 170 Hz".
 - 5.3 The appellant's letter does not provide any arguments as to the admissibility of this request.
 - 5.4 At the oral proceedings, the appellant explained that claim 1 of this request was amended due to the two documents submitted by an anonymous third party because these documents changed the prior-art situation. It argued furthermore that the amendments were caused by the board's preliminary opinion and that they did not go in a totally different direction.
 - 5.5 The board observes that the impugned decision is based, among others, on lack of novelty. This finding of the examining division was essentially confirmed by the board in its communication pursuant to Article 15(1) RPBA. Moreover, the two documents submitted by the third party are not more relevant with regard to patentability than document D3, and they were not addressed by the board in its communication.

- 5.6 Therefore, after the appellant submitted its statement of grounds, no change of the factual situation took place, which gave rise to submitting an amended claim based on features from the description.
- 5.7 Moreover, the presently claimed specific vibration, or any other frequency or duration, was never part of the claims in front of the search and examining divisions. Consequently, a proper examination of the added feature "for one period at a frequency of 170 Hz" would necessitate a further search.
- 5.8 In this situation, the board judges that a remittal to the examining division for further prosecution (Article 111(1) EPC, last sub-sentence), including a further search, would contravene the need for procedural economy.
- 5.9 If the board were to perform a further search, pursuant to Article 111(1) EPC, second sentence, first sub-sentence, this would clearly necessitate an adjournment of the oral proceedings, contrary to Article 13(3) RPBA.
- 5.10 For these reasons, the board decided that the second auxiliary request was not to be admitted into the appeal proceedings, based on Article 13, paragraphs (1) and (3) RPBA.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated