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Datasheet for the decision
of 17 February 2020

Case Number: T 1505/17 - 3.5.07

Application Number: 12742291.3

Publication Number: 2645271

IPC: G06F17/24

Language of the proceedings: EN

Title of invention:
Method and device for graphical management of form

Applicant:
Huawei Technologies Co., Ltd.

Headword:
Transposition gestures/HUAWEI TECHNOLOGIES

Relevant legal provisions:
EPC Art. 56, 84

Keyword:
Inventive step - main request and auxiliary request 2 (no)
Claims - clarity - auxiliary requests 1 and 3 (no)

Case Number: **T 1505/17 - 3.5.07**

**D E C I S I O N
of Technical Board of Appeal 3.5.07
of 17 February 2020**

Appellant:
(Applicant)

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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 22 February
2017 refusing European patent application
No. 12742291.3 pursuant to Article 97(2) EPC**

Composition of the Board:

Chairman   R. Moufang
Members: R. de Man
                   P. San-Bento Furtado

Summary of Facts and Submissions

I.   The applicant (appellant) appealed against the decision
        of the Examining Division refusing European patent
        application No. 12742291.3, which was filed as
        international application PCT/CN2012/074369 on
        19 April 2012 without a priority claim and published,
        under Article 153(4) EPC, as EP 2 645 271 A2.

II.   The decision cited, *inter alia*, the following
        documents:

        D1: US 2006/0184889 A1, published on 17 August 2006;
        D4: US 2012/0011462 A1, published on 12 January 2012.

        The Examining Division decided that the subject-matter
        of claims 1 and 5 of the main request and claim 1 of
        auxiliary requests 1 and 2 lacked inventive step over
        document D1 in combination with notorious knowledge as
        evidenced by document D4.

III.   In its statement of grounds of appeal, the appellant
        maintained the main request and auxiliary requests 1
        and 2 and filed an auxiliary request 3. It submitted
        copies of the claims of all requests.

IV.   In a communication accompanying the summons to oral
        proceedings, the Board raised clarity objections
        against claims 1 and 2 of the main request and
        expressed the preliminary opinion that the subject-
        matter of claim 1 of all requests lacked inventive step
        over document D1.

V.   In a letter dated 13 January 2020, the appellant
        commented on the Board's communication.

VI.   Oral proceedings were held on 17 February 2020 and were
        attended by the appellant. At the end of the oral
        proceedings, the chairman pronounced the Board's
        decision.

VII.   The appellant requested that the decision under appeal
        be set aside and that a patent be granted on the basis
        of the claims of the main request or, in the
        alternative, one of auxiliary requests 1 to 3.

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

        "A table graphics management method, comprising:
             Displaying (51) a table on a display apparatus,
        wherein the table has multiple rows and multiple
        columns, each of the rows comprises multiple frames
        that are sequentially arranged along a first dimension,
        each of the column [*sic*] comprises multiple frames that
        are sequentially arranged along a second dimension, and
        the second dimension is vertical to the first
        dimension, wherein the frames of the rows and the
        columns are filled with information;
             detecting (52) a control track for the table input
        by an input device;
             determining (53) a moving direction of the control
        track according to the detected control track; and
        along the moving direction of the control track,
        transposing original information in the frames of the
        row that are sequentially arranged along the first
        dimension into the frames of the column that are
        sequentially arranged along the second dimension, and
        transposing original information in the frames of the
        column that are sequentially arranged along the second

dimension into the frames of the row that are
sequentially arranged along the first dimension, so as
to acquire a transposed table; and
        displaying (54) the transposed table on the
display apparatus."

IX.   Claim 1 of auxiliary request 1 differs from claim 1 of
         the main request in that the following text has been
         added at the end of the claim:

         "wherein the control track input by the input
         device comprises:
            with any one point of the rows of the table where
         the rows does [*sic*] not intersect the columns of the
         table as a starting point, drawing through a location
         where the rows containing the starting point intersects
         [*sic*] the columns and extending to any one point of the
         columns where the columns does [*sic*] not intersect the
         rows containing the starting point; or
            with any one point of the columns of the table
         where the columns does [*sic*] not intersect the rows of
         the table as a starting point, drawing through a
         location where the columns containing the starting
         point intersects [*sic*] the rows and extending to any
         one point of the rows where the rows does [*sic*] not
         intersect the columns containing the starting point."

X.   Claim 1 of auxiliary requests 2 and 3 differs from
         claim 1 of the main request and auxiliary request 1,
         respectively, in that the following text has been added
         at the end of the claim:

         "wherein the input device is a touch input
         apparatus; and
            the detecting the control track for the table
         input by the input device comprises:

detecting a touch track on the touch input
apparatus for the table, wherein the touch track is
used as the control track for the table."

XI.   The appellant's arguments, where relevant to the
decision, are discussed in detail below.

Reasons for the Decision

1.   The appeal complies with the provisions referred to in
Rule 101 EPC and is therefore admissible.

2.   *The application*

2.1   The application relates to allowing a user to instruct
a computer to transpose a displayed table such that the
columns become rows and the rows become columns.

2.2   The description of the application is mainly concerned
with the transposition illustrated by Figure 1A (the
original table) and Figure 1B (the transposed table):

Title 1	Title 2
A	E
B	F
C	G
D	H

FIG. 1A

Title 1	A	B	C	D
Title 2	E	F	G	H

FIG. 1B

This transposition essentially mirrors the table in its
main diagonal (from the top-left corner to the bottom-
right corner). Paragraph [0028] of the published
application refers to it as "90-degree anticlockwise
transposing along an anticlockwise direction" or "270-

degree clockwise transposing along a clockwise
direction".

2.3   Paragraph [0029] refers to the (reverse) transposition
        transforming the table of Figure 1B back into the table
        of Figure 1A as "90-degree clockwise transposing along
        the clockwise direction" or "270-degree anticlockwise
        transposing along the anticlockwise direction". The
        Board notes, however, that this reverse transposition
        again mirrors the table in its main diagonal and is
        therefore effectively identical to the transposition
        transforming the table of Figure 1A into the table of
        Figure 1B.

2.4   Paragraph [0030] describes a further transposition,
        which transforms the table of Figure 1A into the table
        of Figure 1C:

19				18
D	C	B	A	Title 1
H	G	F	E	Title 2

17

FIG. 1C

This transposition is again referred to as "90-degree
clockwise transposing along the clockwise direction" or
"270-degree anticlockwise transposing along the
anticlockwise direction". But this time it rotates the
table by 90 degrees instead of mirroring it in one of
the table's two diagonals.

At the oral proceedings, the appellant suggested that
Figure 1C was erroneous and should instead have shown
the result of mirroring the table of Figure 1A in the
antidiagonal (from the top-right corner to the bottom-
left corner).

Main request

3.   *The invention as defined by claim 1*

3.1   Claim 1 is directed to a "table graphics management
          method".

3.2   The method first displays a table on a display
          apparatus. The table has multiple rows and columns. The
          claim refers to the cells of the table as "frames":
          each row contains frames sequentially arranged along a
          first dimension, and each column contains frames
          sequentially arranged along a second dimension. The
          frames are "filled with information".

3.3   When a "control track for the table" input by an input
          device is detected, a "moving direction" of the
          detected control track is determined.

          In view of dependent claim 3, the "control track" may
          be a "touch track" entered via a touch input apparatus.
          The Board therefore understands the step "detecting a
          control track" as meaning that an input command in the
          form of a gesture is detected.

3.4   The claim then states:

          "along the moving direction of the control track,
          transposing original information in the frames of the
          row that are sequentially arranged along the first
          dimension into the frames of the column that are
          sequentially arranged along the second dimension, and
          transposing original information in the frames of the
          column that are sequentially arranged along the second
          dimension into the frames of the row that are

sequentially arranged along the first dimension, so as to acquire a transposed table".

Although this refers to a single row and column and to "transposing" information from the frames of the row into the frames of the column and vice versa, from the phrase "so as to acquire a transposed table" and the examples given in the description (see point 2 above), it is clear that what is meant is that the table as a whole is transposed, resulting in the rows of the table being converted into columns and the columns into rows.

3.5   Claim 1 does not specify what is meant by transposing "along the moving direction of the control track".

3.5.1   Figures 7A and 7B give examples of control tracks starting in frame 11 and ending in frame 13 of the table of Figure 1A. Both control tracks lead to the transposition of the table into the table shown in Figure 1B (see paragraphs [0096] to [0098] of the published application). Hence, the user can specify a transposition that transposes corner frame 11 in Figure 1A into corner frame 14 in Figure 1B by inputting a gesture that starts in frame 11 and moves in the general direction of frame 13 (of Figure 1A), i.e. perpendicular to the diagonal in which the table is mirrored.

However, the expression "transposing along the moving direction" is imprecise and could also be understood as referring to the transposition that mirrors the table in the diagonal indicated by the "moving direction".

At the oral proceedings, the appellant agreed that both interpretations were possible.

3.5.2   As explained in points 2.3 and 2.4 above, the
        application is in addition not precise about what other
        table transformations qualify as "transpositions" that
        could be specified by means of a gesture/control track.

3.5.3   The Board will, for the purpose of assessing inventive
        step, interpret claim 1 as meaning that the user has
        the choice between the two transpositions that
        correspond to mirroring the table in one of its
        diagonals, with the control track's "moving direction"
        somehow distinguishing between the two transpositions.

3.6   The claim further specifies that the transposed table
        is displayed on the display apparatus.

4.   *Inventive step*

4.1   Document D1 discloses, in Figures 2, 3 and 4 and
        paragraphs [0038] and [0039], a user interface that
        allows the user to select one or more rows in a
        displayed table by means of the checkboxes 260, and to
        rearrange the table by means of the control icon 212.
        In the rearranged table, which is shown in Figure 4,
        the selected rows have become columns and the non-
        selected rows have been filtered out.

        Paragraph [0040] discloses that, in another embodiment,
        table transposition can occur without filtering.

4.2   Hence, this non-filtering embodiment discloses a method
        comprising a step of displaying a table having multiple
        rows and multiple columns, the cells (or "frames") of
        the table being filled with information, a step of
        receiving from an input device a control input for the
        table in the form of a selection by the user of a
        button in the form of a control icon, a step of

transposing the table, and a step of displaying the
transposed table. The transposition mirrors the table
in the diagonal from the top-left corner to the bottom-
right corner.

4.3   The subject-matter of claim 1 differs from this
        embodiment in that the control input is a "control
        track" instead of a button click and in that the table
        is transposed "along the moving direction of the
        control track", allowing the user to specify one of two
        possible transpositions (see point 3.5.3 above).

4.4   In the Board's judgment, the idea of allowing the user
        to specify one of the two possible table transpositions
        is non-technical, reflecting the user's subjective wish
        to choose how to transform the table. Indeed,
        transposing a displayed table, for example in the
        context of a word processor and for editorial reasons,
        is itself non-technical. This non-technical idea may
        thus be included in the formulation of the objective
        technical problem.

        Hence, the objective technical problem to be solved may
        be formulated as modifying the method of document D1 to
        allow the user to input commands for the two possible
        table transpositions.

4.5   The appellant argued that the skilled person, faced
        with this problem, would provide, in addition to the
        control icon 212, a second control icon to allow the
        user to input a selection of the second table
        transposition. The skilled person would therefore not
        have arrived at the claimed subject-matter.

        The Board agrees that providing a second control icon
        was an obvious solution, but that does not mean that

the skilled person would not have considered other
options.

4.6   In view of the prevalence of smartphones and tablets at
       the filing date of the present application, i.e. in
       April 2012, inputting user interactions by means of
       gestures, e.g. gestures made by moving a mouse or by
       moving a stylus or finger over a touch pad or touch
       screen along a "control track", was well known in the
       art. To implement two different control options, one
       would have had to provide two distinguishable gestures.
       Distinguishing the two gestures on the basis of their
       control track's "moving direction" would have been an
       obvious possibility, just like a scroll-down gesture
       was commonly distinguished from a scroll-up gesture by
       the gesture's direction.

       The skilled person, starting from document D1 and faced
       with the stated problem, would have provided two
       control input options for the two transposition
       operations, for example in the form of separate
       buttons/control icons or, as an equivalent solution, in
       the form of two gestures distinguished by "moving
       direction". The skilled person would thus have arrived
       at the claimed subject-matter without the exercise of
       inventive skill.

4.7   In its statement of grounds of appeal, the appellant
       argued that the use of gestures had several advantages,
       such as replacing a multitude of clicks and requiring
       fewer icons to be displayed. The problem to be solved
       had to be formulated as "modifying the method of
       document D1 for increasing usability on smaller
       displays and/or touch screens".

However, the mentioned advantages are among the known
and expected advantages of the use of gestures (and
indeed are not mentioned in the application as filed)
and therefore cannot support an inventive step.

4.8   The appellant also argued that the claimed gestures
        were particularly intuitive.

        Given the lack of precision in the definition of the
        claimed gestures (see point 3.5.1 above), the Board is
        not convinced that the claim encompasses only the use
        of "intuitive" gestures. In any event, whether or not a
        particular input gesture or other kind of input
        mechanism is intuitive to the user is normally a
        subjective and not a technical matter.

4.9   In sum, the subject-matter of claim 1 lacks inventive
        step (Article 56 EPC).

Auxiliary request 1

5.   *Clarity*

5.1   According to claim 1 of auxiliary request 1, the
        control track input by the input device comprises one
        of:

        -    "with any one point of the rows of the table where
             the rows [do] not intersect the columns of the
             table as a starting point, drawing through a
             location where the rows containing the starting
             point [intersect] the columns and extending to any
             one point of the columns where the columns [do] not
             intersect the rows containing the starting point";
             and

-       "with any one point of the columns of the table
        where the columns [do] not intersect the rows of
        the table as a starting point, drawing through a
        location where the columns containing the starting
        point [intersect] the rows and extending to any one
        point of the rows where the rows [do] not intersect
        the columns containing the starting point".

5.2   Each frame of the table of Figure 1A is the
        intersection of the column and the row containing that
        frame. At the oral proceedings, the appellant confirmed
        that the "rows" of the table included the header row
        (consisting of the "Title 1" and "Title 2" cells).
        Hence, the table has no "points" where "the rows do not
        intersect the columns of the table" or where "the
        columns do not intersect the rows of the table". The
        features added to claim 1 therefore cannot be
        understood and are thus unclear.

5.3   The appellant argued that the skilled person would
        understand that the control track's starting and end
        points were within frames and not on the borders
        between frames. However, any point within a frame is
        still a point where the row and the column containing
        that frame intersect.

5.4   Hence, claim 1 does not meet the requirements of
        Article 84 EPC.

Auxiliary request 2

6.   *Inventive step*

6.1   Claim 1 of auxiliary request 2 adds to claim 1 of the
        main request that the input device is a touch input

apparatus and that the "control track" is a touch track detected on the touch input apparatus.

6.2   Since the use of touch input devices such as touch pads and touch screens was well known in April 2012, the amendments made in auxiliary request 2 do not overcome the objection of lack of inventive step (Article 56 EPC).

Auxiliary request 3

7.   Claim 1 of auxiliary request 3 includes the features of auxiliary request 1 objected to for lack of clarity in point 5 above. It is therefore also unclear (Article 84 EPC).

Conclusion

8.   Since none of the requests on file is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Lichtenvort   R. Moufang

Decision electronically authenticated