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Datasheet for the decision of 22 August 2017

Case Number: T 1046/15 - 3.5.05

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Title of invention:
Touch event model for web pages

Applicant:
Apple Inc.

Headword:
Processing web-page gestures/APPLE

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

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Case Number: T 1046/15 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 22 August 2017

Appellant: (Applicant)	Apple Inc. Cupertino, CA 95014 (US)
Representative:	Gillard, Matthew Paul Withers & Rogers LLP 4 More London Riverside London SE1 2AU (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 12 December 2014 refusing European patent application No. 12188748.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	A. Ritzka
Members:	K. Bengi-Akyuerek
	D. Prietzel-Funk

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse the present European patent application (divided out from its parent application EP 09700006.1) on the grounds of added subject-matter (Article 123(2) EPC) and lack of inventive step (Article 56 EPC) with respect to the claims of a main request and two auxiliary requests, having regard mainly to the disclosure of

D1: US-A-2005/0162402.

II. With the statement setting out the grounds of appeal, the appellant filed claims based on the main request and the two auxiliary requests underlying the appealed decision, and amended sets of claims as third to fifth auxiliary requests. It requested that the decision of the examining division be set aside and that a patent be granted on the basis of one of those claim requests.

III. In an annex to the summons to oral proceedings pursuant to Article 15(1) RPBA, the board gave its preliminary opinion on the appeal. In particular, it raised objections under Articles 123(2), 76(1), 54 and 56 EPC, mainly having regard to D1 and

E1: US-A-2002/0015064.

Prior-art document E1 had been cited (as D3) in the examination proceedings of the closely related European patent applications EP 11184222.5, EP 11184223.3 and EP 11184224.1, and was introduced by the board under Article 114(1) EPC due to its relevance for the assessment of novelty and inventive step of the pending

claims.

IV. By a letter of reply dated 21 July 2017, the appellant filed amended claims according to a new main request and two auxiliary requests, replacing the former claim requests on file, together with counter-arguments to the objections raised in the board's communication under Article 15(1) RPBA.

V. Oral proceedings were held on 22 August 2017, during which the admissibility and allowability of the claim requests on file were discussed.

The appellant's final request was 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 of the first or second auxiliary request, all submitted with the letter dated 21 July 2017.

At the end of the oral proceedings, the board's decision was announced.

VI. Claim 1 of the **main request** reads as follows:

"A method for processing touches, the method comprising:

receiving simultaneous touch input signals associated with one or more regions of a web page displayed on a touch-sensitive display, wherein each region is associated with a respective node in a document object model and the web page includes code for processing one or more gesture events;

determining separate touch events associated with the one or more regions of the web page based on the touch input signals;

determining a gesture event by combining the

separate touch events associated with the one or more regions of the web page, wherein the gesture event includes one or more of scale information and rotation information; and

sending the gesture event to the web page for processing the gesture event by executing the code included in the web page."

Claim 1 of the **first auxiliary request** reads as follows (amendments to claim 1 of the main request underlined by the board):

"A method for processing touches, the method comprising:

receiving simultaneous touch input signals associated with one or more regions of a web page displayed on a touch-sensitive display, wherein each region is associated with a respective node in a document object model and the web page includes code for processing one or more gesture events;

determining separate touch events associated with the one or more regions of the web page based on the touch input signals, wherein each touch event is one of the following types: touch start, touch move, touch end and touch cancel;

determining a gesture event by combining the separate touch events associated with the one or more regions of the web page, wherein the gesture event includes one or more of scale information and rotation information; and

sending the gesture event to the web page for processing the gesture event by executing the code included in the web page."

Claim 1 of the **second auxiliary request** comprises all the features of claim 1 of the main request, and

further adds the following at its end:

"sending the separate touch events corresponding to the gesture event to the web page for processing by executing the code included in the web page."

Reasons for the Decision

1. MAIN REQUEST

Claim 1 of the main request comprises the following features:

A method for processing touches, the method comprising the steps of:

(a) receiving simultaneous touch input signals associated with one or more regions of a web page displayed on a touch-sensitive device,
(b) wherein each region is associated with a respective node in a document object model,
(c) wherein the web page includes code for processing one or more gesture events;
(d) determining separate touch events associated with the one or more regions of the web page based on the touch input signals;
(e) determining a gesture event by combining the separate touch events associated with the one or more regions of the web page,
(f) wherein the gesture event includes one or more of scale and rotation information;
(g) sending the gesture event to the web page for processing the gesture event by executing the code included in the web page.

1.1 *Novelty and inventive step (Articles 54 and 56 EPC)*

1.1.1 The board considers document **D1** to be a suitable starting point for assessing novelty and inventive step, because it is concerned with detecting and processing touch and gesture events associated with web pages on a touch-screen device (see e.g. paragraphs [0068] and [0127] in conjunction with Fig. 26).

1.1.2 As to feature (a), D1 teaches that a user can stroke his/her fingers across a touch-sensitive device ("sensing surface") to browse web content, including active objects and thus a region of an active web page, via e.g. simultaneous vertical/horizontal scrolling (see paragraph [0068]). The appellant contended that D1 did not mention web pages at all and that paragraph [0068] of D1 was irrelevant because it did not refer to gestures involving *multiple* touches. It is apparent to the board, however, that the above paragraph of D1 expressly mentions touch processing on *web* pages (*"... the present active space interaction method can also be used for web browsing ..., an operator can stroke his/her fingers (4) across a sensing surface (1), thereby controllably browsing web content ..."*; emphasis added by the board) and that gestures like "circling" or "double touching", as referred to in paragraph [0068] of D1, clearly correspond to multi-touch gestures based on *simultaneous* touch input signals within the meaning of feature (a) of claim 1.

1.1.3 As to feature (b), the board notes that it is inherent to the use of active web pages as in D1 that such web pages are typically implemented through a standardised document object model (DOM) comprising model nodes

associated with different web page areas. This was not contested by the appellant.

1.1.4 As to feature (c), D1 mentions the use of active objects within the respective web pages (see paragraph [0068]). The board holds that the use of "active objects" in items of a web page in turn means that they *must* include executable codes or programs. Since, moreover, D1 also teaches that touch events like finger strokes are translated into gesture events such as circling or dragging (see e.g. paragraph [0068], last sentence) as well as turning or grabbing (see paragraph [0115]), the active web page necessarily includes a code to process the gesture events thus derived.

1.1.5 As to feature (d), D1 teaches that the coordinates of the respective touches are detected and processed accordingly (see e.g. paragraph [0048]: *"... the messages received by the computerized systems from the present touch-sensing device are the absolute position (a point, or a coordinate) of each sensing finger ..."* in conjunction with paragraph [0052], last sentence: *"All electrical signals sensed ... will be sent to a micro-controller (19) to interpret raw signals and send signal interpretations and commands to a communicatively coupled computerized system ..."*). Since, contrary to the appellant's view, the board understands that detected touch coordinates do indeed correspond to touch events within the meaning of the present application itself (see e.g. paragraph [0018], last sentence: *"... each touch event can include a set of coordinates at which a touch is currently occurring"*), feature (d) is considered to be anticipated too.

1.1.6 As to feature (e), it is apparent to the board that D1 likewise demonstrates that gesture events are derived by combining different touch events, such as detecting a certain finger movement while another finger of the user presses the device surface (see in particular paragraph [0115]: *"... Shortly after at least one finger presses the sensing surface (1) and causes a selection signal Sn=1, the movement of other pointers from the same hand will be interpreted by the computerized systems as any number of programmed gestures corresponding to the pointer movement. Programmed gestures may include ... press then twist hand to simulate turning a knob gesture, press then put two fingers together to grab object ..."*; emphasis added by the board).

In that context, the appellant argued that D1 was silent about how multi-touch gestures, such as the knob-turn gesture mentioned in paragraph [0115] of D1, were in fact recognised and about whether gesture events were synthesised from touches via intermediary entities in the form of touch events for different touches. However, the board notes that a skilled reader would readily understand that in the above passage of D1 pressing the sensing surface would correspond to a "first touch event" associated with first touch coordinates detected, while the following movement with another finger would correspond to a "second touch event" associated with second touch coordinates detected, in full accordance with feature (e).

1.1.7 As to feature (f), it is clear from D1 that, for implementing e.g. the turning or grabbing gestures, rotation (extent of turning) and scale (extent of stretching/shrinking) information is likewise to be conveyed to the active web page (see e.g.

paragraph [0115]: *"... press then twist hand to simulate turning a knob gesture ..."* and paragraph [0117]: *"... performing a grab gesture in a window and then moving hands to stretch or shrink the window ..."*).

1.1.8 As to feature (g), D1 mentions the use of active objects within the respective web pages (see paragraph [0068]). The board holds that the use of "active objects" in certain items of a web page in turn means that they must include executable codes or programs. However, it is not directly and unambiguously derivable from D1 that gesture events are indeed processed by those active objects included in the web page, i.e. by the web page itself.

1.1.9 In view of the above, the board concludes that the present claim 1 is distinguished from D1 by feature (g), namely in that the determined gesture event is sent to the web page for processing the gesture event by executing the code included in the web page. Accordingly, the subject-matter of present claim 1 is found to be novel over D1 (Article 54 EPC).

1.1.10 As to the resulting technical effect of distinguishing feature (g), the board holds that directly sending the gesture event, which has been already detected by the device's (operating) software, to the web page in fact shifts the task of gesture interpretation from the developer of the device's operating system to the respective web-page developer, as is implied in the present application itself (see paragraph [0024], last sentence: *"This way, a developer has access to a gesture event ... which provides the developer with more flexibility when developing a web application"*), rather than improving the quality and consistency of

gesture detection in itself (see statement setting out the grounds of appeal, page 8, last paragraph). Hence, the objective technical problem may be framed as "how to relieve the web-page developer's burden of processing gesture events", as was put forward by the appellant at the oral proceedings before the board.

1.1.11 Concerning the inventive step as regards feature (g), the appellant argued that D1 was silent about *where* gesture events were in fact processed. However, the board believes that the question *where* the determined gesture events are eventually to be processed (e.g. at the client's operating system or at the web page itself) is a matter of choice between equally likely implementation alternatives from which the skilled person would choose, depending on practical considerations such as implementation complexity, preferences or market needs, etc. If it is generally preferred that, for whatever reasons, the application developer is to be provided with more flexibility and thus a lighter burden in processing or interpreting the obtained gesture events, the skilled person in the field of touch-screen devices would certainly do so, without encountering any practical difficulties in simply forwarding the resulting gesture events to the relevant web page according to distinguishing feature (g).

1.1.12 Hence, the subject-matter of present claim 1 does not involve an inventive step, having regard to D1 and the skilled person's common general knowledge.

1.2 In conclusion, the main request is not allowable under Article 56 EPC.

2. FIRST AUXILIARY REQUEST

Claim 1 of this auxiliary request differs from claim 1 of the main request in that it further specifies that (emphasis added by the board)

(h) the touch event is a touch start, touch move, touch end or a touch cancel.

Feature (h) is supported by paragraph [0021] of the present application as originally filed.

2.1 *Inventive step (Article 56 EPC)*

2.1.1 The feature analysis and observations concerning the main request set out in point 1.1 above apply *mutatis mutandis* to claim 1 of the first auxiliary request.

2.1.2 As to new feature (h), the board judges that the mere classification or labelling of events at a conceptual level only cannot *per se* contribute to an inventive, synergistic technical effect in conjunction with the remaining features (a) to (g). In that regard, the appellant submitted that feature (h) more clearly indicated that "touch events" within the meaning of the present invention constituted abstract forms of the physically detected "touch input signals". The board however points out again that "touch events" may well be a set of coordinates according to the present application (see paragraph [0018], last sentence), as is the case in the system of D1. In any event, the individual types of touches in D1, for example, with regard to the knob-turning or grabbing gesture, as illustratively described in paragraphs [0115] and [0116], may well imply the use of touch states according to feature (h). So, feature (h) cannot render

the present subject-matter inventive over the teaching of D1.

2.2 Hence, the first auxiliary request is not allowable under Article 56 EPC either.

3. SECOND AUXILIARY REQUEST

Claim 1 of this auxiliary request differs from claim 1 of the main request in that it further specifies that (emphasis added by the board)

(i) the separate touch events corresponding to the gesture event are also sent to the web page for processing by executing the code included in the web page.

Feature (i) is based on paragraphs [0021] and [0024] of the present application as originally filed.

3.1 *Inventive step (Article 56 EPC)*

3.1.1 The feature analysis and observations concerning the main request set out in point 1.1 above apply *mutatis mutandis* to claim 1 of this second auxiliary request.

3.1.2 As to new feature (i), the appellant argued that its inventive technical effect was to open up richer possibilities to the web-page developer and thus increase the flexibility of gesture processing. The board is not convinced. Firstly, the question of *what* information is actually sent to a certain unit is unrelated to the problem of *where* that information is eventually forwarded to (according to feature (g) of claim 1). Secondly, sending *only* the end result derived from some data or sending *both* the end result *and* the

raw data on which the result is based (according to features (g) and (i) of claim 1) represent equally likely measures, the choice of which depends on a trade-off between their known or predictable advantages (i.e. more/less data) and disadvantages (e.g. greater complexity) for the web-page developer and belongs to the ordinary competence of the skilled person. Hence, also feature (i) cannot render the subject-matter claimed inventive over D1.

3.2 In sum, the second auxiliary request is likewise not allowable under Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz-Wein A. Ritzka

Decision electronically authenticated