

EXHIBIT 5.07

means for transferring a directional scroll call to determine if directional scrolling is enabled.

65. (Withdrawn) In an environment with user interface software interacting with a software application and a user input contacting a view of a display of a device, a method for operating through an application programming interface (API) , comprising:

receiving a directional scroll call to determine if directional scrolling is enabled.

66. (Withdrawn) The method as in claim 65, further comprising:

receiving a directional scroll angle call to set a scroll angle for locking the scrolling in at least one of a vertical or a horizontal direction.

67. (Withdrawn) The method of claim 65, wherein a drag user input forming an angle with a horizontal direction that is less than or equal to a first scroll angle locks the scrolling in the horizontal direction.

68. (Withdrawn) The method of claim 65, wherein a drag user input forming an angle with a vertical direction that is less than or equal to a second scroll angle locks the scrolling in the vertical direction.

69. (Withdrawn) A machine readable medium storing executable program instructions which when executed cause a data processing system to perform a method comprising:

receiving a directional scroll call to determine if directional scrolling is enabled.

70. (Withdrawn) The medium as in claim 69, further comprising:

receiving a directional scroll angle call to set a scroll angle for locking the scrolling in at least one of a vertical or a horizontal direction.

71. (Withdrawn) The medium of claim 69, wherein a drag user input forming an angle with a horizontal direction that is less than or equal to a first scroll angle locks the scrolling in the horizontal direction.

72. (Withdrawn) The medium of claim 69, wherein a drag user input forming an angle with a vertical direction that is less than or equal to a second scroll angle locks the scrolling in the vertical direction.

73. (Withdrawn) In an environment with user interface software interacting with a software application, an apparatus, comprising:

means for receiving a directional scroll call to determine if directional scrolling is enabled.

74. (Withdrawn) A computer read medium containing executable instructions, comprising:

program code configured, when executed, to transfer a bounce call through an application programming interface to cause a bounce of a scrolled region in an opposite direction of a scroll based on a region past an edge of the scrolled region being visible in a display region at the end of the scroll.

75. (Withdrawn) The medium as in claim 74, wherein transferring the bounce call is either one of issuing, initiating, invoking or receiving the bounce call.

76. (Withdrawn) A computer read medium containing executable instructions, comprising:

program code configured, when executed, to transfer a rubberband call through an application programming interface to cause a rubberband effect on a scrolled region by a predetermined maximum displacement when the scrolled region exceeds a display edge based on a scroll.

77. (Withdrawn) The medium as in claim 76, wherein transferring the rubberband call is either one of issuing, initiating, invoking or receiving the rubberband call.

78. (Withdrawn) A computer read medium containing executable instructions, comprising:

program code configured, when executed, to transfer a directional scroll call through an application programming interface to set a scroll angle for locking the scrolling in at least one of a vertical or horizontal direction.

79. (Withdrawn) The medium as in claim 78, wherein transferring the directional scroll call is either one of issuing, initiating, invoking or receiving the directional scroll call.

80. (Withdrawn) A platform for performing scrolling operations, comprising:

a processing unit coupled to an input panel;

a memory coupled to the processor; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the processing unit, the programs including:

instructions for transferring a bounce call through an application programming interface to cause a bounce of a scrolled region in an opposite direction of a scroll based on a region past an edge of the scrolled region being visible in a display region at the end of the scroll.

81. (Withdrawn) The platform of claim 80, wherein the one or more programs further comprise instructions for transferring a rubberband call through an application programming interface that has a rubberband effect on a scrolled region by a predetermined maximum displacement when the scrolled region exceeds a display edge based on a scroll.

82. (Withdrawn) The platform of claim 80, wherein the one or more programs further comprise instructions for transferring a directional scroll call through an application programming interface to set a scroll angle for locking the scrolling in at least one of a vertical or a horizontal direction.

83. (Withdrawn) The platform as in claim 80, wherein transferring the bounce call is either one of issuing, initiating, invoking or receiving the bounce call.

84. (Withdrawn) The platform as in claim 81, wherein transferring the rubberband call is either one of issuing, initiating, invoking or receiving the rubberband call.

85. (Withdrawn) The platform as in claim 82, wherein transferring the directional scroll call is either one of issuing, initiating, invoking or receiving the directional scroll call.

86. (Withdrawn) A framework for performing scrolling operations, comprising:
a directory for storing one or more programs and associated resources, wherein the programs contain instructions that when executed provide an application programming interface to specify a bounce operation to cause a bounce of a scrolled region in an opposite direction of a scroll based on a region past an edge of the scrolled region being visible in a display region at the end of the scroll.

87. (Withdrawn) The framework of claim 86, wherein the one or more programs further comprise instructions that when executed provide an application programming interface to specify a rubberband operation that has a rubberband effect on a scrolled region by a predetermined maximum displacement when the scrolled region exceeds a display edge based on a scroll.

88. (Withdrawn) The framework of claim 86, wherein the one or more programs further comprise instructions that when executed provide an application programming interface to specify a directional scroll operation to set a scroll angle for locking the scrolling in at least one of a vertical or a horizontal direction.

89. (Currently amended) ~~In an environment with user interface software interacting with a software application, an~~ An apparatus, comprising:

means for receiving, through a hardware device, a user input on a display of the apparatus;

means for creating an event object in response to the user input;

means for determining whether the event object invokes a scroll or gesture operation;

means for issuing at least one scroll or gesture call based on invoking the scroll or gesture operation;

means for responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object ~~based on an amount of a scroll with the scroll stopped at a predetermined position in relation to the user input;~~ and

means for responding to at least one gesture call, if issued, by scaling the view associated with the event object based on receiving a plurality of input points in the form of the user input.

90. (Previously presented) The apparatus as in claim 89, further comprising:

means for rubberbanding a scrolling region displayed within the window by a predetermined maximum displacement when the scrolling region exceeds a window edge based on the scroll.

91. (Previously presented) The apparatus as in claim 89, further comprising:

means for attaching scroll indicators to a content edge of the window.

92. (Previously presented) The apparatus as in claim 89, further comprising:

means for attaching scroll indicators to the window edge.

93. (Previously presented) The apparatus as in claim 89, wherein determining whether the event object invokes a scroll or gesture operation is based on receiving a drag user input for a certain time period.

94. (Previously presented) The apparatus as in claim 89, further comprising:
means for responding to at least one gesture call, if issued, by rotating a view associated with the event object based on receiving a plurality of input points in the form of the user input.

95. (Previously presented) The apparatus as in claim 89, wherein the apparatus is one of: a data processing device, a portable device, a portable data processing device, a multi touch device, a multi touch portable device, a wireless device, and a cell phone.

Conclusion

Applicant respectfully submits that in view of the corrected section and discussion set forth herein, the Notice of Non-Compliant Amendment has been overcome. Accordingly, the present and amended claims should be found to be in condition for allowance.

If a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact the undersigned at (408) 720-8300.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: May 20, 2010

/Jeremy Schweigert/
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Electronic Acknowledgement Receipt

EFS ID:	7656708
Application Number:	11620717
International Application Number:	
Confirmation Number:	9801
Title of Invention:	Application Programming Interfaces for Scrolling Operations
First Named Inventor/Applicant Name:	Andrew Platzer
Customer Number:	45217
Filer:	Jeremy A. Schweigert/Leslie Rogan
Filer Authorized By:	Jeremy A. Schweigert
Attorney Docket Number:	04860.P4895
Receipt Date:	20-MAY-2010
Filing Date:	07-JAN-2007
Time Stamp:	19:16:25
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		4860P4895_Resp_to_Non-compliant_Amnd.pdf	68168 <small>8fa6107fe0e70919485068674e5b951cbca2c339</small>	yes	18

Multipart Description/PDF files in .zip description			
Document Description		Start	End
Supplemental Response or Supplemental Amendment		1	1
Claims		2	17
Applicant Arguments/Remarks Made in an Amendment		18	18

Warnings:

Information:

Total Files Size (in bytes):	68168
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/620,717	Filing Date 01/07/2007	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN			
	(Column 1)	(Column 2)	SMALL ENTITY <input type="checkbox"/>	OR	SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A		N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A		N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =		X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>						
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL		TOTAL	

APPLICATION AS AMENDED – PART II						OTHER THAN			
	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY	OR	SMALL ENTITY			
AMENDMENT	05/20/2010	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
Total <small>(37 CFR 1.16(i))</small>	*	95	Minus	** 95	=	0	OR	X \$52=	0
Independent <small>(37 CFR 1.16(h))</small>	*	26	Minus	***26	=	0	OR	X \$220=	0
<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>									
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>									
						TOTAL ADD'L FEE		TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY	OR	SMALL ENTITY		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
Total <small>(37 CFR 1.16(i))</small>	*		Minus	**	=		OR	X \$ =
Independent <small>(37 CFR 1.16(h))</small>	*		Minus	***	=		OR	X \$ =
<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>								
						TOTAL ADD'L FEE		TOTAL ADD'L FEE

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
 /LINDA A. WASHINGTON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
11/620,717 01/07/2007 Andrew Platzer 04860.P4895 9801

45217 7590 06/21/2010
APPLE INC./BSTZ
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER

BAUTISTA, XIOMARA L

ART UNIT PAPER NUMBER

2179

MAIL DATE DELIVERY MODE

06/21/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No. 11/620,717	Applicant(s) PLATZER ET AL.	
	Examiner X. L. Bautista	Art Unit 2179	

All participants (applicant, applicant's representative, PTO personnel):

- (1) X. L. Bautista. (3) Jim Scheller (applic. rep).
(2) Jeremy Schweighert (applic. rep). (4) _____.

Date of Interview: 09 June 2010.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
If Yes, brief description: _____.

Claim(s) discussed: 1-14 and 89-95.

Identification of prior art discussed: Lii (US 7576732) and Hollemans et al (US 2007/0252821).

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Mr. Schweighert and Mr Scheller explained that the claims are allowable over the prior art of record because the combined references fail to teach or suggest creating an event object that determines whether a user input applied to a touchscreen invokes a scroll operation or a gesture operation by simply distinguishing between the scroll operation and the gesture operation without having to select an object or icon to define the operation.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/X. L. Bautista/
Primary Examiner, Art Unit 2179

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
11/620,723 01/07/2007 Andrew Platzer 04860.P5054 9807

45217 7590 06/08/2010
APPLE INC./BSTZ
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
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EXAMINER

NGUYEN, PHU K

ART UNIT PAPER NUMBER

2628

MAIL DATE DELIVERY MODE

06/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/620,723	Applicant(s) PLATZER ET AL.	
	Examiner PHU NGUYEN	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 March 2010.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-9 and 11-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3-9 and 11-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/17/2010</u>.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|--|--|

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-9, 11-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over CALKINS et al. (7,173,623) in view of Sinister et al (9,957,392).

As per claim 1, Calkins teaches the claimed “machine implemented method for animating views displayed on a display of a device” (Calkins, column 6, lines 49-60), comprising: “starting at least two animations” (Calkins, column 7, lines 16-32); “determining the progress of each animation to provide progress information for each animation, wherein the progress information is provided in response to at least one progress call from a software component” (Calkins, column 9, lines 2-8, 18-26); and “updating each of the at least two animations to the display based on a single timer” (Calkins, the parent timeline; column 12, lines 43-45; column 13, lines 4-17; column 7, lines 46 to column 8, line 43, column 15, lines 28-35). When Calkins parent timeline is re-executed, all its children timelines is re-executed (column 13, lines 7-11) and Calkins parent timeline can be re-executed when the updates of its children time nodes are initiated (column 14, lines 28-34). Therefore, when Calkins parent timeline is re-executed, it updates its existing timing nodes to the new references established to the dependent animations (column 16, lines 42-50). It is noted that Calkins does not teach

“wherein the single animation timer, based on the progress information from each of the animations, determines whether to update the display.” However, Sinister teaches that “the single animation timer, based on the progress information from each of the animations, determines whether to update the display” is well known in the art (Sinister, the time references are passed to the animators as a single timeline, and hence the display of the animations are updated and determined by the single timer; column 9, line 46 to column 10, line 6, 39-46; column 11, lines 41-57).

RESPONSE TO APPLICANT’S ARGUMENTS:

Applicant’s arguments filed March 9, 2010 have been fully considered but they are not deemed to be persuasive.

Applicant’s arguments are deemed to be moot under a new ground of rejection.

Claim 3 adds into claim 1 “determining the progress of each animation comprises calculating the current progress of the animation if progress has occurred” (Calkins, column 15, lines 36-42).

Claim 4 adds into claim 1 “determining whether each animation is associated with a delegate; and notifying each delegate” (Calkins, column 13, lines 18-34).

Claim 5-7 add into claim 1 “the animations comprise transform, frame, and opacity animations” which Calkins does not teach. However, the transform, frame, and

opacity animations are widely used in the art, and Applicant does not provide any specific reason of improvements using these animations; therefore, any of “the animations comprise transform, frame, and opacity animations” is commonly known as mere design choice of display.

RESPONSE TO APPLICANT’S ARGUMENTS:

Applicant’s arguments filed March 9, 2010 have been fully considered but they are not deemed to be persuasive.

Examiner considers the "transfer animation, frame animation, and opacity animation" are well known element in the animation art and makes the rejection as Official Notice. Examiner believes that Applicant, as one of ordinary skill in the art, should recognize that the “transfer animation, frame animation, and opacity animation” had being widely used before the date of Applicant’s invention.

Claim 8 adds into claim 1 “the device is one of: a data processing device, a portable device, a portable data processing device, a multi touch device, a multi touch portable device, a wireless device, and a cell phone” (Calkins, column 6, lines 2-18).

Claims 9-13, and similar claims 17 and 22, claim a computer readable medium which performs the claimed method of claims 1-4, 8; therefore, they are rejected under the same reason.

Claims 14, 18, and 23-25 claim an apparatus/device which performs the steps of the claimed method in claims 1-4, 8; therefore they are rejected under the same reason.

Due to the similarity of claims 15, 16, 19-21 to claims 1-8, they are rejected under the same reason.

Claims 9, 14, and 22 are objected to because of the following informalities: A phrase "non-transitory" should be inserted after "readable" (line 1) to exclude the wave carrier which is non-statutory under 35 USC 101. Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHU NGUYEN whose telephone number is (571)272-7645. The examiner can normally be reached on M-F/8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272 7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Phu K. Nguyen/
Primary Examiner, Art Unit 2628



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11/620,709	01/07/2007	Andrew Platzer	04860.P5060	9789

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EXAMINER

NGUYEN, PHU K

ART UNIT	PAPER NUMBER
2628	

MAIL DATE	DELIVERY MODE
06/09/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/620,709	Applicant(s) PLATZER ET AL.	
	Examiner PHU NGUYEN	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 February 2010.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/16/10</u> . | 6) <input type="checkbox"/> Other: _____. |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over CALKINS et al. (7,173,623) in view of .

As per claim 1, Calkins teaches the claimed “device having a display with multiple views and user interface software interacts with multiple software applications that alter the multiple views” (Calkins, column 3, lines 47-62; column 7, lines 16-32), a method for operating through an application programming interface (API), comprising: “transferring a first synchronization call associated with a first view to synchronize animations for the multiple views of the display” (Calkins, column 9, line 54 to column 10, line 4); and “transferring a second synchronization call associated with a second view to synchronize the animations for the multiple views of the display” (Calkins, column 12, lines 49-53); “wherein each of the first and second synchronization call comprises an identification of the synchronization of the first and second software applications which are associated with the first and second views respectively” (Calkins, column 7, lines 25-32). Applicant argues that Calkins does not teach “the synchronization of animations associated with two separate processes and two separate views. Calkins fails to teach or disclose separate synchronization function calls with each function call specifying an identification of the synchronization for the

separate processes” which is not persuasive. Calkins’ animation classes 222 with their parent timelines are different processes having different views. Since an animation class’ parent timeline can be a child timeline of an “overall” parent timeline, two separate animation classes 222 can have their timelines synchronized by the “overall” parent timeline. Since each of Calkins’ animation classes has its own “view” and its own “synchronization timeline,” the synchronization of Calkins’ animation classes meets the claimed “first and second synchronization calls associated with the first and second views” as claimed (see Simister, the time references are passed to the animators as a single timeline, and hence the animations are complete at the same time; column 9, line 46 to column 10, line 6, 39-46; column 11, lines 41-57). Thus, it would have been obvious, in view of the teaching of Simister, to configure Calkins as claimed because the use of a single timeline for all the animators yields a completion at the same time (Simister, column 10, lines 39-46; column 11, lines 41-57).

Claim 2 adds into claim 1 “the synchronization call comprises a number of software applications that are requesting animation of the multiple views” (Calkins, column 7, lines 16-32).

Claim 3 adds into claim 2 “setting a set of attributes associated with each software application independently transferring a synchronization confirmation message when a synchronization flag is enabled based on the list of the software applications being synchronized; and updating the set of attributes associated with each process

Art Unit: 2628

independently; and transferring a start animation call to draw the requested animations” (Calkins, column 9, line 54 to column 10, line 58).

Claim 4 adds into claim 1 “transferring the synchronization call is either one of issuing, initiating, invoking or receiving the synchronization call” (Calkins, column 9, lines 64-66).

Claim 5 adds into claim 1 “the device is one of: a data processing device, a portable device, a portable data processing device, a multi touch device, a multi touch portable device, a wireless device, and a cell phone” (Calkins, column 4, lines 16-29).

Claims 6-10, 16-18, and 20-21 claim a computer readable medium which stores a computer software to perform the steps of claims 1-5; therefore, they are rejected under the same reason.

Claims 11 and 19 claim an apparatus which performs the steps of the method of claims 1-5; therefore, they are rejected under the same reason.

Due to the similarity of claims 12-15 to claims 1-5, they are rejected under the same reason.

Claims 22 and 23 claim a platform including processing unit and memory storing software programs (Calkins, figure 1) which performs the steps of the method of claims 1-5; therefore, they are rejected under the same reason.

Claim 24 claims a framework containing a directory or database having a computer readable medium which stores a computer software to perform the steps of claims 1-5; therefore, they are rejected under the same reason.

Claims 6, 16, and 20 are objected to because of the following informalities: To exclude the wave carrier as a computer-readable storage medium, the claimed medium should be amended as “a computer-readable **non-transitory** medium”. Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHU NGUYEN whose telephone number is (571)272-7645. The examiner can normally be reached on M-F/8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272 7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Phu K. Nguyen/
Primary Examiner, Art Unit 2628

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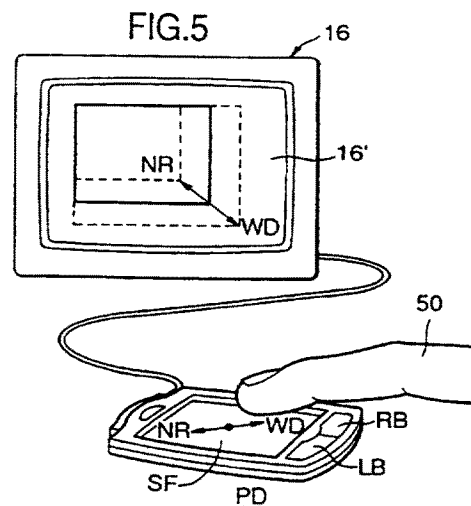
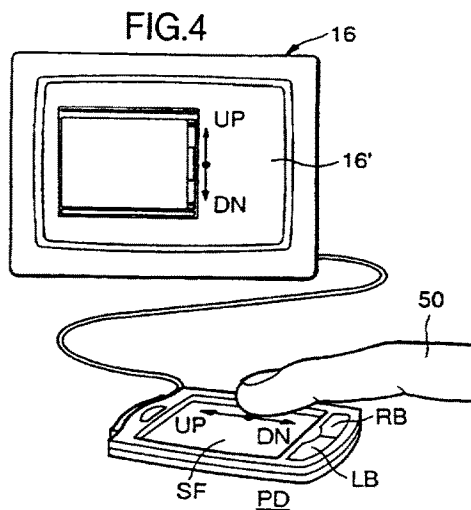
EP 0725331 A1 US 5428367 A US 4550221 A

(58) Field of Search

UK CL (Edition P) F2Y YTA YTB
INT CL⁶ G06F 3/033, G06K 11/18
Online:EDOC,WPI

(54) Coordinates input apparatus

(57) A coordinates input apparatus, whereby various operations on a screen can be carried out by a coordinates pointer such as a finger 50 and the number of operations reduced, comprises a detection section and an operating section. The detection section is provided with an operating surface SF for operation by the finger, and detects the operating conditions on the operating surface caused by the finger. The operating section executes screen operations corresponding to the operating condition detected by the detection section, and in response to tapping of the finger on the operating surface within one of a number of predetermined regions carries out previously determined processing (e.g. right button emulation) or changes to a previously determined mode (e.g. for generating a sound at the time of tapping).



GB 2 319 591 A

FIG.1

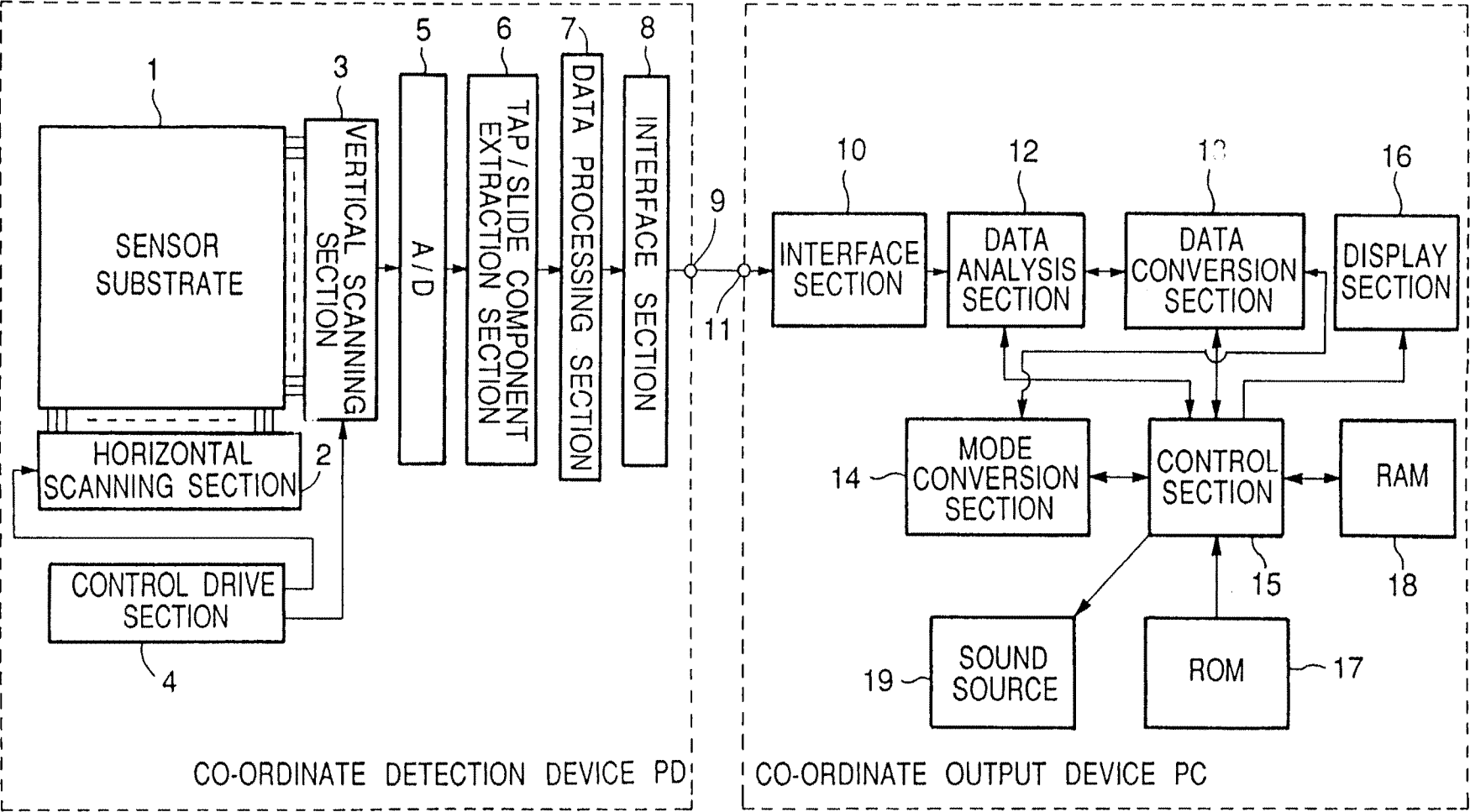


FIG.4

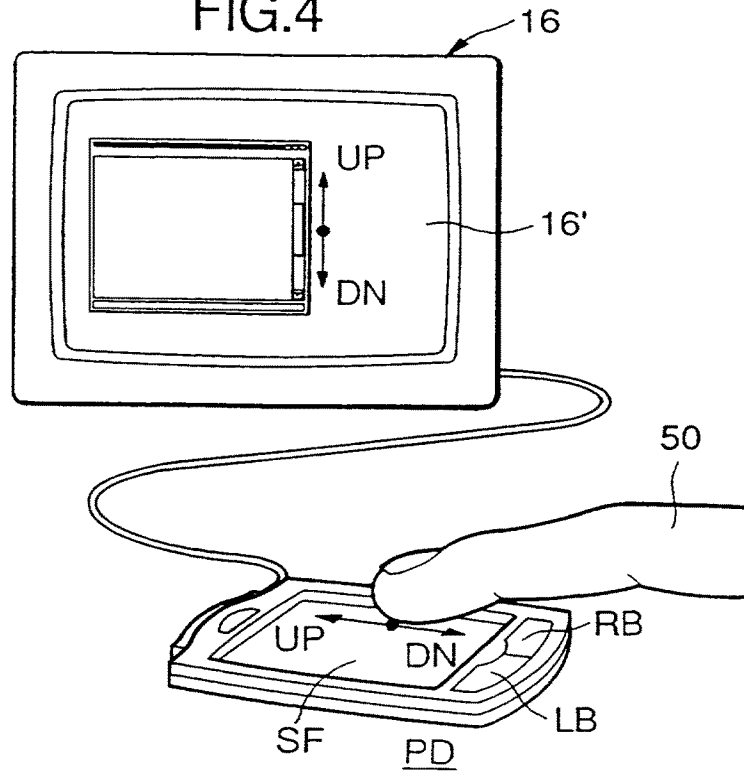
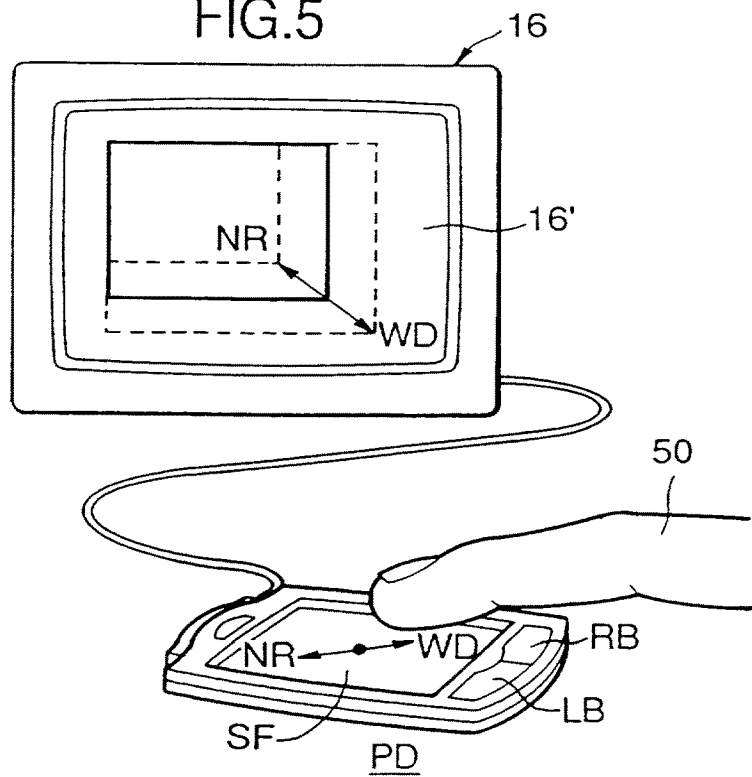


FIG.5



4/6

FIG.6

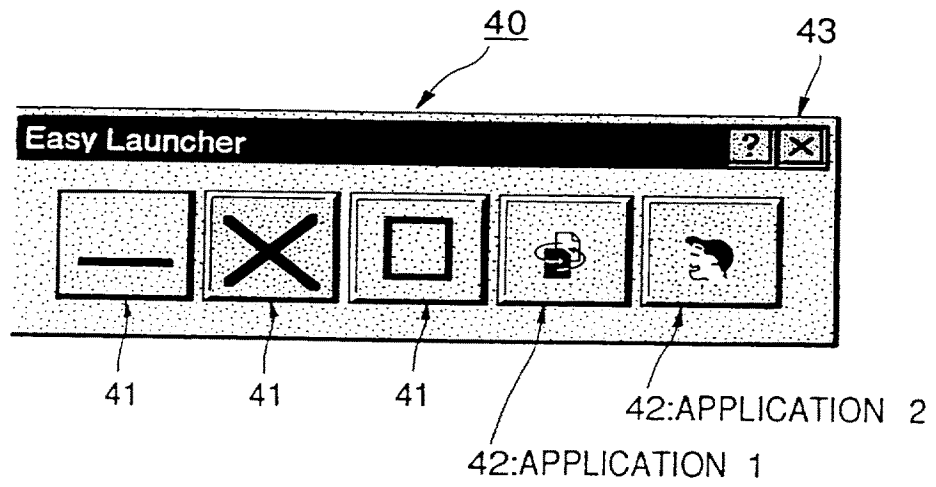
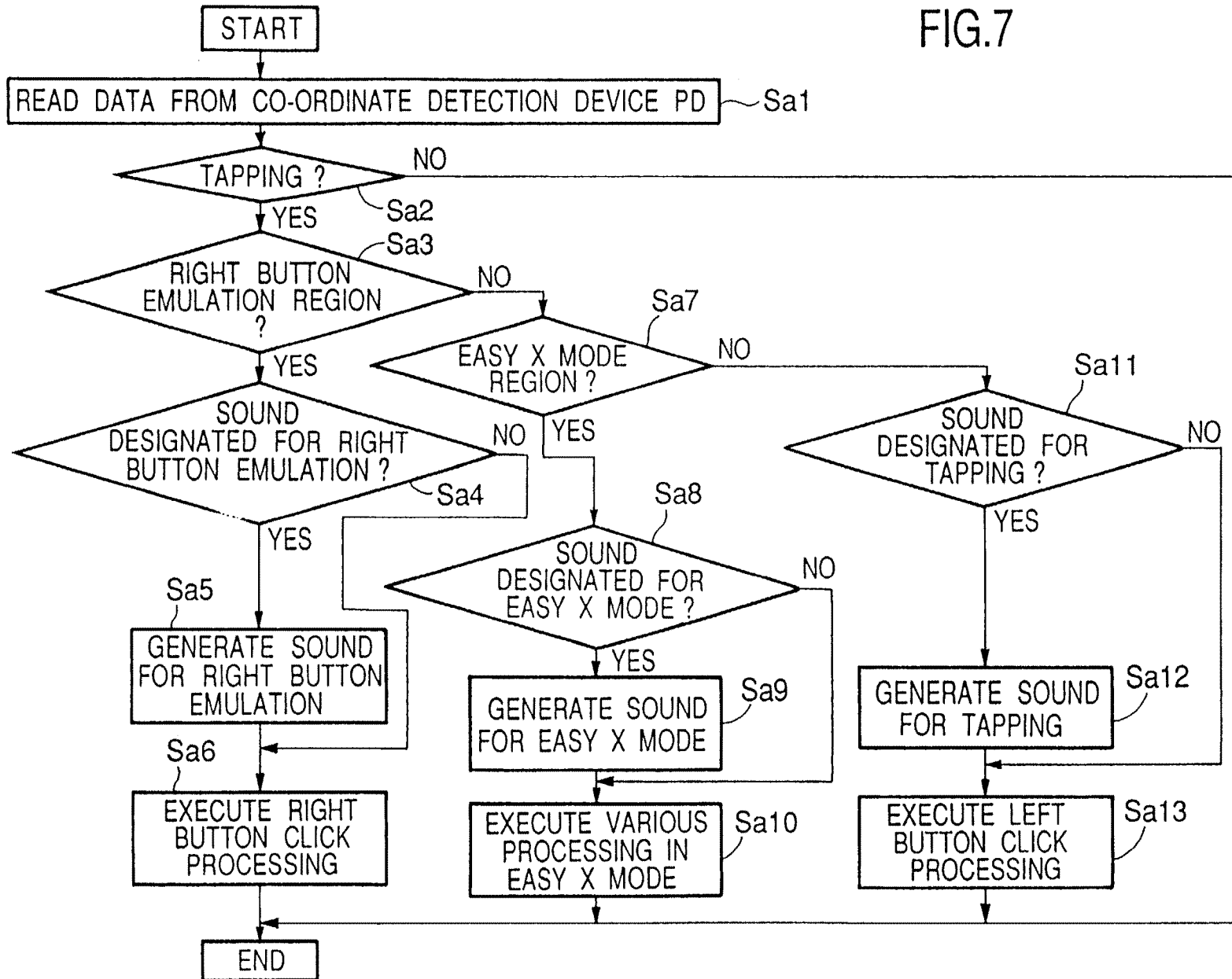
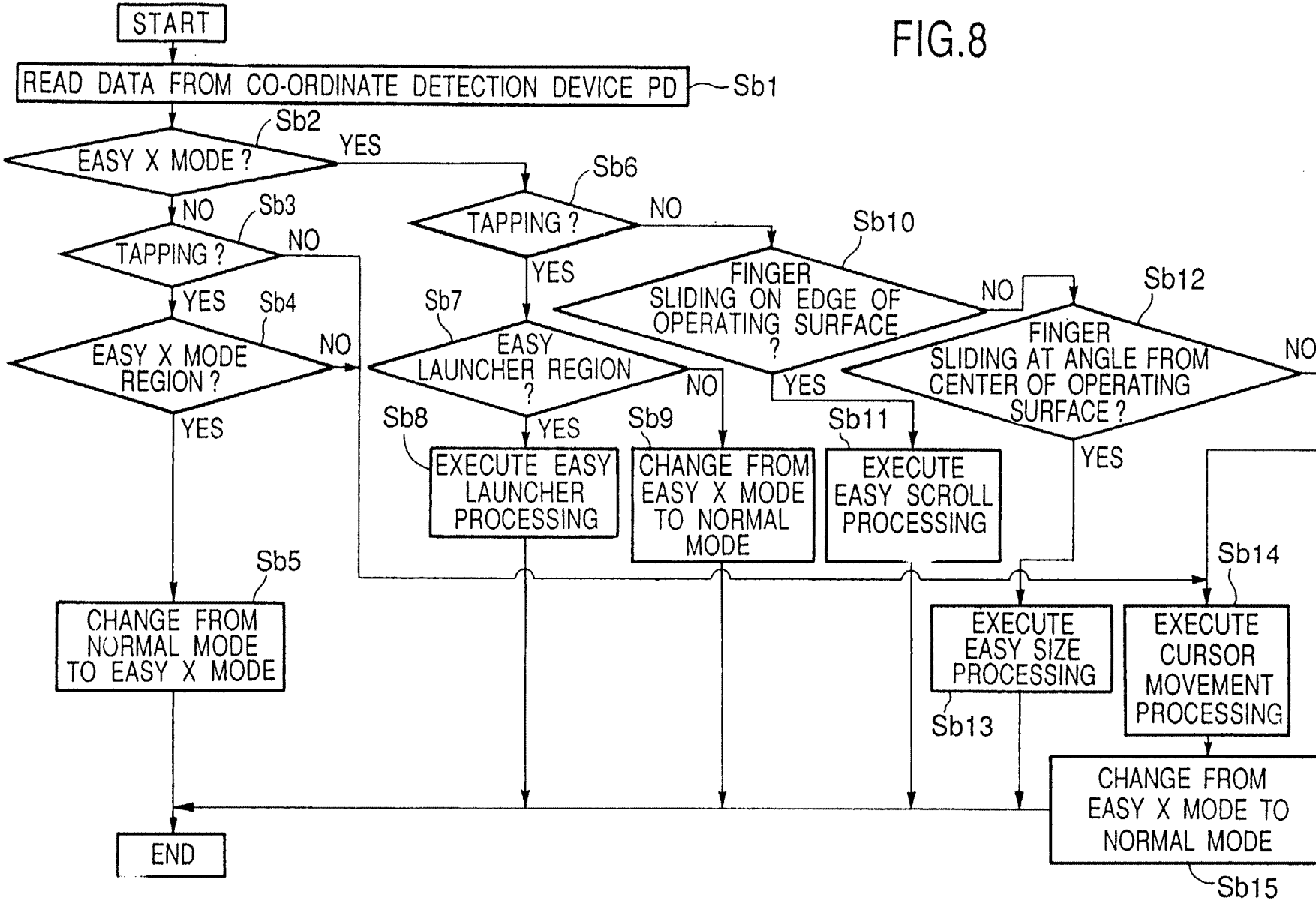


FIG.7



9/6

FIG.8



9/9

COORDINATES INPUT APPARATUS

The present invention relates to a coordinates input apparatus for operating such as a cursor or a window on a screen.

Conventionally a mouse or a track ball is used for the pointing device connected to a computer. Moreover, recently pointing devices such as pads, touch pads or track pads have also come to be used. The pad is used either in an integral form such as with a portable type computer, or in an externally attached form such as with a desk top type computer. Since it is not necessary to move the pad, as with a mouse, it has the feature that it can be operated even in a limited space such as on a desk-top without obstruction.

In moving a cursor (also referred to as a pointer) on a screen using such a pad, the finger may simply be placed on and slid over the small (a few square centimeters) operating surface on the pad. The pad is provided with left and right buttons as with mouse type devices, and in addition various operations the same as for left button clicking, such as selecting and moving an object displayed on the screen can be realized by lightly tapping the operating surface with the finger. This operation is in particular referred to as "tap" or "tapping." By means of this tapping operation, then as well as the above-mentioned clicking operation, operations such as left button double clicking where the left button is clicked two times in succession (used for example in starting an application), and drag (where the cursor is aligned with the screen object and the object moved to a desired location while pressing the left button) can be carried out with one finger.

By operating the operating surface of the pad with the finger above manner, the pad achieves the same function as the cursor moving and left button click operations using the mouse. However, with the conventional pad, the same function as the mouse right button click operation cannot be achieved by an operation on the operating surface. Hence it is necessary to click a right button provided on the pad with the finger, as with a mouse. To carry out the right button click operation, the following operations are required. First, in the case where the user wishes to operate the pad continuously using only one finger, the finger is moved from the operating surface to the right button location, and the right button then pressed with the finger to carry out the click operation. Moreover, in the case where the user operates the pad with two fingers, the operating surface is operated with one finger, while the other finger is placed at the right button location to carry out the click operation. Therefore, to carry out the right button click operation, it is necessary to either operate the pad with two fingers, or to move one finger back and forth between the operating surface and the right button. Hence, the advantages of the present pad in that it can be operated with only a minimal number of one finger operations is lessened.

Moreover, with the latest computers wherein operation of a window (that is to say a plurality of separate screens on the display unit) is a prerequisite, user operations such as adjusting the size of the window to suit the work conditions, scrolling the contents displayed in the window up and down or sideways within the window (the method of successively displaying the screen contents as a scroll), or closing an unnecessary window, are frequently carried out.

Here adjustment of the window size is carried out for example by moving the cursor while clicking on the right hand lower corner of the window. Moreover, to scroll in the window, it is necessary to move the cursor to a so called scroll bar (or slide bar) provided at the right

edge or bottom edge of the window, and then click the scroll bar a required number of times. Furthermore, closing the window is carried out by moving the cursor to a small box, referred to as a close box, provided for example on the upper right corner of the window, and clicking on this box.

In carrying out the various window operations in this way, various combinations of cursor movement and the button clicking are required. Hence if the right button finger clicking operation is included, then the above-mentioned advantages of the pad are not fully realized. Moreover, positioning the cursor on the screen using the pad is not considered easy, even for a user skilled in pad operation, and hence considering a normal user these operations are quite complicated, thus putting a load on the user.

In view of the above, it is an object of the present invention to provide a coordinates input apparatus whereby various operations on a screen can be carried out where practicable with one finger, and the number of operations reduced, thus giving a marked improvement in user operability.

Accordingly, the coordinates input apparatus according to the present invention comprising detection means having an operating surface for operation by a coordinates pointer, and for detecting an operating condition on said operating surface caused by said coordinates pointer; and operating means for executing screen operations corresponding to said operating condition, wherein said operating means detects tapping of said coordinates pointer on said operating surface within a predetermined region, and carries out previously determined processing.

Moreover, the coordinates input apparatus according to the present invention comprising detection means having an operating surface for operation by a coordinates pointer, and for detecting an operating

condition on said operating surface caused by said coordinates pointer; and operating means for executing screen operations corresponding to said operating condition, wherein said operating means detects tapping of said coordinates pointer on said operating surface within a predetermined region, and changes to a previously determined mode.

In this way, with the present invention, it is possible to execute various processing and to change to a predetermined mode, by merely tapping a region on the operating surface with the coordinates pointer. Therefore, as well as negating the requirement as with the conventional coordinates input apparatus, of the complicated cursor positioning operation, it is not necessary to move the finger from the operating surface to the button and click the button. Hence basically an extremely simple operation using only one finger can be realized, the number of operations reduced, and the load on the user considerably lightened.

Embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

FIG. 1 is block diagram showing the structure of a coordinates input apparatus according to an embodiment of the present invention;

FIG. 2 is a plan view of a coordinates detection device PD of the embodiment;

FIG. 3 illustrates an example of a window showing a display section 16;

FIG. 4 is a diagram for explaining an operation in the embodiment for Easy Scroll;

FIG. 5 is a diagram for explaining an operation in the embodiment for Easy Size;

FIG. 6 illustrates an example of a dialog box shown on the screen in the Easy Launcher processing in the embodiment;

FIG. 7 is a flow chart for describing the operation of the coordinates input apparatus in the embodiment; and

FIG. 8 is a flow chart for describing details of the operation of the Easy X mode in the coordinates input apparatus of the embodiment.

An embodiment of the present invention will now be described with reference to the drawings. FIG. 1 is block diagram showing the structure of a coordinates input apparatus according to the embodiment. As shown in FIG. 1, the coordinates input apparatus is made up generally from two devices namely; a coordinates detection device PD, and a coordinates output device PC. The coordinates detection device PD is for example the above-mentioned pad, while the coordinates output device PC is for example a computer connected to the pad.

At first the various structural components of the coordinates detection device PD will be described, however before this a basic description of the mechanical structure of the coordinates detection device PD will be given. FIG. 2 shows a plan view of the coordinates detection device PD. A left button LB and a right button RB correspond respectively to the left and right buttons of a mouse, having the same functions as those of the respective mouse buttons. A rectangular region indicated by a symbol SF indicates an operating surface operated by a coordinates pointer (not shown in FIG. 2). The coordinates pointer mentioned here may for example be the finger of a user, and hereunder is described as such.

A sensor substrate 1 shown in FIG. 1, has a plurality of horizontal scanning lines (in the X axis direction in FIG. 2) and vertical scanning lines (in the Y axis direction in FIG. 2) formed into a matrix shape, the construction being such that touching a finger on the operating surface SF, causes the value of the current flowing in the respective scanning lines to change. To explain in more detail, the coordinates detection device PD of the present embodiment employs a device referred to as an electrostatic capacity type tablet. This device has electrodes provided

in matrix form on respective front and rear surfaces of an electrostatic film, and an electric field is formed by supplying a pulse signals from one side of the electrostatic film. Since with this arrangement touching the electrostatic film with the finger via the operating surface SF causes a drop in the electrostatic capacity of the touched portion, then converting the change in electrostatic capacity to a change in current value enables the position of the portion touched by the finger to be detected. That is to say, the coordinates position of the touched portion is indicated by the intersection of the horizontal scanning lines and the vertical scanning lines. Furthermore, if the separation of the finger after touching is detected, then the above-mentioned tapping operation can be detected. Moreover, the operation of sliding the finger on the operating surface SF can be detected by computing the positional change of the touched portion.

The pad need not be an electrostatic capacity type, but may for example adopt a pressure sensitive system or the like.

A horizontal scanning section 2 involves a circuit for horizontal scanning of the sensor substrate 1, and has a plurality of signal outputs connected to the horizontal scanning lines of the sensor substrate 1.

A vertical scanning section 3 involves a circuit for vertical scanning of the sensor substrate 1. This circuit has a plurality of signal inputs connected to the vertical scanning lines of the sensor substrate 1, and generates a serial detection signal showing the finger operating condition. The serial detection signal includes a tap component produced when the finger is tapped on the sensor substrate 1 via the operating surface SF, and a slide component produced when the finger is slid on the operating surface SF. The tap component includes an address component indicating the location on the operating surface SF where the finger contacts, while the slide component includes an address component indicating the "from and to" location of the finger sliding on the operating surface SF.

A control drive section 4 supplies respective scanning drive signals to the horizontal scanning section 2 and the vertical scanning section 3, to thereby drive the horizontal scanning section 2 and the vertical scanning section 3.

An A/D (analog/digital) conversion section 5 converts the serial detection signal generated by the vertical scanning section 3 into a digital signal.

A tap/slide component extraction section 6, extracts the before-mentioned tap component and slide component from the digital signal of the converted serial detection signal, and then separates these and converts them into three dimensional coordinates values, and outputs these coordinates values together with the tap component and the slide component.

A data processing section 7 determines whether or not tapping is being executed, based on the three dimensional coordinates values sent from the tap/slide component extraction section 6, and also eliminates noise from the slide component, thereby corrects the change in the finger position in the two dimensional coordinates (constituted by the X/Y axes) of the operating surface SF, into a smooth straight line or curve.

An interface section 8 involves a circuit for carrying out data transfer with the coordinates output device PC. Based on the information sent from the data processing section 7, the interface section 8 appends the tap ON/OFF information and the respective ON/OFF information related to the left button LB and the right button RB, for each of the corrected absolute coordinates (X, Y) of the two dimensional coordinates on the operating surface SF, and outputs this together with the tap component and the slide component, to an output port 9.

The various structural components of the coordinates output device PC will now be described.

An interface section 10 involves a circuit for carrying out data transfer with the coordinates detection device PD, receiving the above-mentioned respective information via an input port 11. If the coordinates output device PC is a personal computer, then the interface section 10 corresponds to the well-known serial port or the well-known mouse port.

A data analysis section 12 receives and analyzes information from the interface section 10 sent from the coordinates detection device PD. It carries out judgment processing such as determining if tapping is being executed, and if the finger is being slid within a range in a predetermined region of the operating surface SF. The judgment results are then sent to a data conversion section 13.

Based on the judgment results for the presence of tapping or finger sliding within a predetermined region analyzed by the data analysis section 12, the data conversion section 13 judges whether or not predetermined specific processing should be carried out. This predetermined processing involves for example, right button emulation processing and various processing in an Easy X mode. These processing will be discussed in detail later.

A mode conversion section 14 stores various set values for the coordinates input apparatus. The arrangement is such that the data conversion section 13 converts the contents of the processing based on the set values sent from the mode conversion section 14. As described hereunder, these set values are for example, the range in a region on the operating surface SF tapped by the user when carrying out various processing in the right button emulation mode or the Easy X mode, and settings for whether or not the user is to be notified by sound that the various processing are being carried out. The set values are set for example by the user in the mode conversion section 14, by known processing for operating the menu on the computer screen.

A control section 15 is a circuit for controlling the respective sections of the coordinates output device PC, with the exception of the interface section 10.

A display section 16 is for example the display unit of a personal computer. This displays various images such as a window or a cursor on a screen 16' (see FIG. 4 and 5), following instructions from the control section 15.

A ROM (read only memory) 17 stores information such as the operating program for the control section 15, sound information used when a sound is generated from a sound source 19 (to be described later), the size of the operating surface SF itself specified by the format of the above-mentioned absolute coordinates (X, Y).

A RAM (random access memory) 18 is a memory circuit for temporarily holding data when the control section 15 is executing various processing.

The sound source 19 comprises for example a speaker and a speaker drive circuit, and generates various sounds based on sound information sent from the control section 15.

Next is a description of the operation of the coordinates input apparatus, with a preliminary description of the functions of the apparatus, to simplify understanding. With the coordinates input apparatus of the present embodiment, the user assigns a plurality of previously specified regions on the operating surface SF, and when tapping is executed on these regions, then respective previously determined processing corresponding to the tapped region is carried out.

One such processing is right button emulation. With this processing, clicking the right button RB (see FIG. 2) with the finger, is replaced by tapping within a range of a specified region on the operating surface SF for right button emulation. For this specified region, any region on the operating surface SF may be assigned. For example, the region at the upper left corner or the upper right corner of

the operating surface SF may be considered.

In addition, a mode referred to as an Easy X mode is provided in the coordinates input apparatus of the present embodiment. This mode is for simplifying the various window operations carried out by the user, in the case of computers which basically employ an operation for a window 30 as shown in FIG. 3. On the other hand, with the present embodiment, there is a normal condition referred to as a Normal mode, different from the Easy X mode.

The coordinates input apparatus is set to this Normal mode, immediately after switching on the power or executing the reset sequence for coordinates input apparatus. Changing from the Normal mode to the Easy X mode is the same as for right button emulation, and is realized by tapping in a specified region on the operating surface SF. The specified region for the Easy X mode is of course set so as not to overlap the region set for the right button emulation. Continuous supervision of whether the current condition is for the Easy X mode or the Normal mode, is carried out using a flag provided in the RAM in the coordinates output device PC. If the flag is ON, the conditions are for the Easy X mode while if the flag is OFF the conditions are for the Normal mode.

Three types of function are provided for the Easy X mode. These functions are realized after tapping to change from the Normal mode to the Easy X mode, by carrying out predetermined operations corresponding to the functions.

A first function is referred to as Easy Scroll. This emulates the operation at the point in time of proceeding to the Easy X mode, for operating the scroll bar 31 (also referred to as the slide bar) for the currently active window 30 (refer to FIG. 3), to thereby scroll the contents displayed in the window 30. When the scroll bar 31 is provided on the right edge of the screen as shown in FIG. 3, then this function is carried out with the mode changed to the Easy X mode, by

moving the finger to right edge of the operating surface SF as shown in FIG. 4 and then sliding the finger 50 in the up/down direction along the right edge. In this way, the slide amount and slide direction (UP<up> or DN<down> direction in FIG. 4) of the finger 50 in combination, are made the same as moving an index 32 of the scroll bar 31 in the vertical direction. The case may arise, depending on the window, where the scroll bar 31 is located for example at the bottom of the window 30. If in this case the finger 50 is slid along the bottom edge of the operating surface SF, then the operation of moving the index 32 in the horizontal direction can be emulated.

A second function is referred to as Easy Size. This emulates the operation for widening or narrowing of the window 30. This function is carried out with the mode changed to the Easy X mode, by placing the finger 50 near the center of the operating surface SF as shown in FIG. 5, and then sliding the finger at an angle towards the upper left corner or the lower right corner of the operating surface SF. In this way, the operation of moving the cursor to the size change corner 33 of the window 30, then moving the cursor to the upper left corner or the lower right corner while pressing the left button LB is emulated. The window 30 is then widened (the WD direction of FIG. 5) or narrowed (the NR direction of FIG. 5) corresponding to the slide amount and slide direction of the finger 50 sliding on the operating surface SF.

A third function is referred to as Easy Launcher. This function displays on the screen 16', as shown in FIG. 6, an enlarged dialog box 40 (a temporary window displaying specified information) in which is registered various buttons 41 and icons 42 (wherein the functions of the application program are simplified with pictures). The cursor moves automatically to inside the dialog box 40, and the various conventional processing corresponding to the button 41s or the icons 42 is executed by successively tapping on the button 41 or the icon 42. This an Easy Launcher is realized with the mode changed to the Easy X mode, by

tapping in a specified region on the operating surface SF for a second time.

Here the specified region may be any region on the operating surface SF. In practice this may be made the same as the region set for changing to the Easy X mode. If set in this way, then the Easy Launcher can be started by tapping twice in succession, on the same specified region on the operating surface SF.

The function for the buttons 41 and the icons 42 in the dialog box 40 may be any suitable function, the following being given as an example. The function where the window which is active prior to appearance of the dialog box 40 is replaced with an icon previously assigned to this window, and this icon is pasted on the screen. Moreover, there is the function for closing the window which is active prior to appearance of the dialog box 40. Furthermore, there is the function for starting the various application programs by clicking on the buttons 41 or the icons 42.

Next is a description of the operation of the coordinates input apparatus constructed as described above.

At first, the user carries out a prior setting as described below for the coordinates output device PC. A first setting involves individually setting the regions for carrying out the respective tapping, corresponding to various functions of right button emulation, change to the Easy X mode, and Easy Launcher start. In this way, the ranges of the respective tapping regions are stored in the mode conversion section 14. Here the width of the regions is made wide enough to facilitate finger positioning, yet narrow enough to ensure that the finger 50 does not enter erroneously under normal operation. In this respect it is convenient to define the various regions at for example the corners of the operating surface SF. The range of the various regions is stipulated by the absolute coordinates (X, Y) with the upper left corner of the operating surface SF as the origin. As an example, the absolute

coordinates of the upper left corner and the lower right corner of the respective regions are stored together in pairs.

A second setting involves setting for whether or not to generate a sound to advise the user at the time of tapping. This sound generation setting is variously carried out when tapping is executed for right button emulation, for changing to the Easy X mode, or for purposes other than these, and involves setting sounds of various different types. In this way, the settings for sound generation are stored in the mode conversion section 14 for each of the above mentioned three cases.

Processing for these settings is carried out by the user, for example by displaying a setting window on the screen. However since this operation involves well known conventional processing, detailed description is here omitted.

The operation of the coordinates input apparatus will now be described with reference to the flow charts of FIG. 7 and FIG. 8. In the following, the Normal mode is set for the initial condition.

At first, in step Sa1 of FIG. 7, data transfer from the coordinates detection device PD to the coordinates output device PC is carried out. This transfer processing will be explained hereunder with reference to FIG. 1. In the coordinates detection device PD, the horizontal scanning section 2 and the vertical scanning section 3 are scan driven by the drive signal output from the control drive section 4. When scanning signals are being supplied from these scanning sections to the respective scanning lines of the sensor substrate 1, then if the user touches the finger 50 on a desired position on the sensor substrate 1 (that is to say the operating surface SF), a serial detection signal corresponding to the position touched by the finger 50, is output to the vertical scanning section 3. This serial detection signal is converted to a digital signal by the A/D converter section 5, and a tap component and slide component are extracted therefrom in the tap/slide component extraction section 6. The data processing section 7 then sends the tap

component as is, to the interface section 8, and sends the slide component to the interface section 8 after first carrying out noise removal correction. The interface section 8 then generates tap ON/OFF information and button ON/OFF information, appends these information to the data sent from the data processing section 7, and then supplies this to the output port 9 for transmission to the coordinates output device PC.

In the coordinates output device PC, the information given to the input port 11 is supplied to the data analysis section 12 via the interface section 10. This completes the processing in the coordinates output device PC of transferring data from the coordinates detection device PD. With the conventional arrangement, the supplied tap component and slide component are sent to the control section 15. The control section 15 then carries out processing to convert these to suitable data for picture display, and supplies this to the display section 16. As a result, for example the appearance of the moving cursor on the screen of the display section 16 corresponds to movement of the finger 50 on the operating surface SF.

Then in FIG. 7, control proceeds to step Sa2, where the data analysis section 12 refers to the tap ON/OFF information included in the transferred information, and judges if tapping has been executed. If tapping has not been executed, then the processing is terminated as is, processing thus being executed the same as for the conventional arrangement. On the other hand, if tapping has been executed, then it is judged if the tapped position on the operating surface SF is within the range of some specified region designated beforehand by the user.

For this judgment, control first proceeds to step Sa3 where the data analysis section 12 judges if tapping has been carried out in the region for right button emulation. That is to say, the data analysis section 12 takes the absolute coordinates for the upper left corner and the lower right corner of the relevant region, stored in the mode conversion

section 14. Here the absolute coordinates are assumed as (X_a, Y_a) and (X_b, Y_b) . The data analysis section 12 then judges if the absolute coordinates (X, Y) of the tapped position satisfy $X_a < X < X_b$ and $Y_a < Y < Y_b$, to thereby determine if the tapped position is within the region for right button emulation.

If the judgment result shows that the tapped position is within the designated range, then an operation the same as for when the right button RB is clicked is emulated. For this emulation, control first proceeds to step Sa4 where the data analysis section 12 accesses the mode conversion section 14 to judge if sound generation when right button emulation is recognized has been designated. If sound generation has been designated, the data analysis section 12 gives instructions to the data conversion section 13 for sound generation. Control therefore proceeds to step Sa5 where the data conversion section 13 extracts the sound type set for right button emulation, from the mode conversion section 14. The data conversion section 13 then outputs instructions to the control section 15 to read out sound information corresponding to the type of sound, from the ROM 17 and send this to the sound source 19 to generate a sound.

When the processing for sound generation of step Sa5 has been completed, or when in step Sa4, right button sound generation is not designated, control proceeds to step Sa6 where processing for when the right button RB is clicked is initiated. The processing corresponding to the right button depends on the application running, and since this involves conventional processing, description is here omitted.

Referring back to step Sa3, if the result of the judgment is that the tapped position is not within the range of the region for right button emulation, control proceeds to step Sa7. Then following the same procedure as for the processing of step Sa3, it is judged if the tapped position is within the range of the region for the Easy X mode.

If the tapped location is in the relevant region, control proceeds to step Sa8 where with the same processing as in Sa4, it is judged if sound generation when the Easy X mode is recognized has been designated. If sound generation has been designated, control proceeds to step Sa9 where, following the same procedure as for the processing of step Sa5, the sound prepared for the Easy X mode is generated from the sound source 19.

When the processing for sound generation of step Sa9 has been completed, or if in step Sa8, sound generation for the Easy X mode was not designated, control proceeds to step Sa10 where the various processing in the Easy X mode is carried out. Since this processing is described later in detail with reference to FIG. 8, description is here omitted.

Referring back to step Sa7, if the judgment is that the tapped position is also not in the region for the Easy X mode, then this means that the tapping is the conventional designated tapping corresponding to clicking the left button LB. Hence in this case control proceeds to step Sa11 where it is judged in the above-mentioned manner, if sound generation for tapping has been designated. If sound generation has been designated, control proceeds to step Sa12 where the sound for tapping is generated.

When the processing for sound generation of step Sa12 has been completed, or if in step Sa11 sound generation for tapping was not designated, control proceeds to step Sa13 where processing for when the left button LB is clicked is initiated. This processing also, as with the processing for when the right button RB is clicked, involves various processing, and details are omitted.

The operation of the coordinates input apparatus in relation to the Easy X mode, will now be described in detail with reference to FIG. 8. At first, in step Sb1, as with the above-mentioned step Sa1, data is transferred from the coordinates detection device PD.

Control then proceeds to step Sb2 where the data analysis section 12 examines, via the control section 15, the condition of the flag stored in the RAM 18 to determine if the apparatus is in the Normal mode or the Easy X mode condition. As mentioned above, at this point in time the apparatus is in the Normal mode and hence the flag is in the off condition. Control therefore proceeds to step Sb3 to judge, in the same way as for step Sa2, if tapping has been carried out. Here the judgment denotes that the user has tapped in the region for changing to the Easy X mode. Hence, control proceeds to step Sb4 where the data analysis section 12 verifies that the tapping is being carried out in the region for the Easy X mode, after which control continues on to step Sb5 where the flag is changed to the ON condition, and the apparatus is changed from the Normal mode to the Easy X mode.

After this, control again proceeds to step Sb1 to transfer data from the coordinates detection device PD, and then proceeds on to step Sb2. At this point in time, since the apparatus has been changed to the Easy X mode, control proceeds to step Sb6 to judge if tapping has been carried out. If tapping has been carried out (that is to say tapping has been carried out two times in succession), control proceeds to step Sb7 where it is judged if the tapped position is within the range of the region set for the Easy Launcher.

If so, control proceeds to step Sb8 to start the Easy Launcher processing. As a result, the data conversion section 13 outputs instructions to the control section 15 to display the screen corresponding to the dialog box 40 shown in FIG. 6 on the display section 16. Moreover, the data conversion section 13 outputs instructions to the control section 15 to start conventional cursor movement processing, to forcibly move the cursor to the dialog box 40. Thereupon, the user moves the cursor in the dialog box 40 and clicks on the desired button 41 or icon 42 to carry out processing such as; forming an icon for the window, closing the window, or starting up

various applications. The Easy Launcher processing is then completed when the user either taps the operating surface SF, or clicks the close box 43 provided in the dialog box 40 using the left button LB.

If the judgment result in step Sb7 is that a second tapping has not been carried out in the region for the Easy Launcher, control proceeds to step Sb9 where the flag is changed to the OFF condition to cancel the Easy X mode and return to the Normal mode.

On the other hand, in the case where a second tap is not detected in the judgment processing in step Sb6, control proceeds to step Sb10. The data analysis section 12 then judges if the user is sliding the finger 50 on the right hand edge of the operating surface SF, based on information for the size of the operating surface SF, stored in the ROM 17.

If sliding operation is detected, control proceeds to step Sb11 to execute the Easy Scroll processing. That is to say, the data conversion section 13 computes the distance and direction that the user slides the finger 50, from the slide component taken from the data analysis section 12. The data conversion section 13 then outputs instructions to the control section 15 to move the index 32 of the scroll bar 31 shown in FIG. 3 in the vertical direction corresponding to the computed distance and direction, and to simultaneously scroll the contents displayed on the window 30 in proportion to the amount of movement of the index 32. Since this involves conventional processing, description is here omitted.

On the other hand, if in step Sb10, sliding on the right hand edge of the operating surface SF is not detected, control proceeds to step Sb12 where the data analysis section 12 determines if the user has slid their finger at an angle from near the center of the operating surface SF to the upper left corner or the lower right corner.

If this sliding operation is detected, control proceeds to step Sb13 to execute the Easy Size processing. That is to say, the data

conversion section 13 starts the conventional cursor movement processing via the control section 15, to move the cursor to the size change corner 33 of the window 30. The data conversion section 13 then computes the distance and direction that the user slides the finger 50, based on the slide component obtained from the data analysis section 12, and moves the position of the size change corner 33 (for example the bottom right corner of the window 30) correspondingly so that the window 30 is widened or narrowed, and starts the cursor movement processing so that the cursor remains at the size change corner 33, simultaneously following the changing size of the window 30. Since this processing is also conventional processing, detailed description is here omitted.

On the other hand, if in step Sb12, the expected slide operation is not detected, control proceeds to step Sb14. The data conversion section 13 then examines the slide component, and determines if the operation of sliding the finger 50 on the operating surface SF is being carried out. If so, the cursor is moved on the screen in accordance with the movement of the finger 50. When this processing is completed, control proceeds to Sb15 where the flag is changed to the OFF condition to cancel the Easy X mode and return to the Normal mode.

Referring back to step Sb3 and step Sb4, when in step Sb3 tapping is not detected, and when in step Sb4 tapping is not carried out in the region for the Easy X mode, then the processing set of steps Sb14 and Sb15 is executed. The former processing is a simple cursor movement operation, while the latter corresponds to the tapping operation equivalent to clicking the left button LB. Consequently, when this simple cursor movement operation, or tapping equivalent to clicking the left button LB is executed after carrying out any one of the Easy Launcher, Easy Scroll, or Easy Size, then the apparatus returns to the Normal mode.

As described above the operation corresponding to clicking the right button click is realized by tapping once with one finger. Hence it is not necessary to move the finger away from the operating surface SF, thus negating the requirement for two or more fingers to operate the apparatus.

Moreover, operations such as forming an icon for the window, window scroll processing, or starting up specific applications, can be carried out by tapping the operating surface SF twice to display the dialog box, then moving the cursor (namely, finger) a short distance on the operating surface and tapping for the button or the icon. Consequently, there is no requirement as with the conventional arrangement to move the cursor to the corner of the window, and also the complex operation of positioning in the close box is unnecessary.

Furthermore, the operation for the scroll bar provided in the window is executed by a series of operations of; tapping once, moving the finger to the edge of the operating surface SF, and sliding the finger on the edge. Consequently, it is not necessary to carry out the complex operation of positioning the cursor on the scroll bar. Moreover, since the finger sliding operation is always carried out on the edge of the operating surface, the finger can be simply moved to the edge of the control surface without the need for intricate positioning, thus relieving the load on the user.

In addition, window size adjustment is realized by tapping once and then sliding at an angle on the operating surface. Consequently, it is not necessary to carry out the complex operation of positioning the cursor in the size change corner of the window.

CLAIMS

1. A coordinates input apparatus, comprising:

detection means having an operating surface for operation by a coordinates pointer, and for detecting an operating condition on said operating surface caused by said coordinates pointer; and

operating means for executing screen operations corresponding to said operating condition,

wherein said operating means detects tapping of said coordinates pointer on said operating surface within a predetermined region, and carries out previously determined processing.

2. A coordinates input apparatus according to claim 1, wherein said operating surface has said predetermined region, and an operating region for operation by said coordinates pointer at the time of normal operation.

3. A coordinates input apparatus according to claim 1, wherein said detection means has a left button and a right button for respective predetermined processing, and said previously determined processing is the same processing as that carried out at the time of clicking said right button with said coordinates pointer.

4. A coordinates input apparatus according to claim 1, wherein said predetermined region is large enough to be touched with a finger.

5. A coordinates input apparatus, comprising:

detection means having an operating surface for operation by a coordinates pointer, and for detecting an operating condition on said operating surface caused by said coordinates pointer; and

operating means for executing screen operations corresponding to said operating condition,

wherein said operating means detects tapping of said coordinates pointer on said operating surface within a predetermined region, and changes to a previously determined mode.

6. A coordinates input apparatus according to claim 5, wherein said predetermined region is large enough to be touched with a finger.

7. A coordinates input apparatus according to claim 5, wherein said operating means, after changing to said previously determined mode, detects if said coordinates pointer is again tapped within said predetermined region, and carries out predetermined processing.

8. A coordinates input apparatus according to claim 7, wherein said predetermined processing is processing to display a predetermined dialog box on said screen.

9. A coordinates input apparatus according to claim 8, wherein said predetermined dialog box includes at least one of; a button for forming an icon for the window displayed on the screen, a button for closing said window, or an icon for starting up various applications.

10. A coordinates input apparatus according to claim 7, having notifying means for notifying at the time of carrying out said predetermined processing, that said predetermined processing is being carried out.

11. A coordinates input apparatus according to claim 10, wherein said notifying means carries out notification by generating a sound which has been set corresponding said predetermined processing.

12. A coordinates input apparatus according to claim 10, wherein whether or not to carry out said notification is set for each of said predetermined processing.
13. A coordinates input apparatus according to claim 5, wherein said operating means, after changing to said previously determined mode, detects if a specific slide operation is being carried out by said coordinates pointer on said operating surface, and carries out predetermined processing.
14. A coordinates input apparatus according to claim 13, wherein said slide operation involves sliding said coordinates pointer along an edge of said operating surface,
and said predetermined processing is processing to scroll the contents of a window displayed on said screen, corresponding to the position on said edge and the movement of said coordinates pointer.
15. A coordinates input apparatus according to claim 13, wherein said slide operation involves sliding said coordinates pointer from near the center of said operating surface towards an outer edge portion,
and said predetermined processing is processing to adjust the size of a window displayed on said screen corresponding to movement of said coordinates pointer by said slide operation.
16. A coordinates input apparatus substantially as hereinbefore described with reference to, and as illustrated by, the accompanying drawings.



Application No: GB 9723838.0
Claims searched: 1-15

Examiner: Peter Squire
Date of search: 23 March 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK Cl (Ed.P): F2Y YTA YTB
Int Cl (Ed.6): G06F 3/033 G06K 11/18
Other: Online: EDOC, WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	EP 0725331 A1 (L G Electronics) see e.g. Figs. 4 and 5 and col. 7 lines 48-56	1-6
X	US 5428367 (Mikan) see Figs. 4, 5, and 7	1-6
X	US 4550221 (Mabusth) see e.g. col. 4 lines 6-17 and col. 5 lines 40-64	1-6

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Andrew Platzer

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INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed for applications filed after June 30, 2003). It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

I hereby certify that this correspondence is being submitted electronically via EFS Web to the United States Patent and Trademark Office on the date shown below.

July 16, 2010

(Date of Deposit)

Jeremy A. Schweigert

(Typed or printed name of person mailing correspondence)

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(Signature of person mailing correspondence)

July 16, 2010

(Date)

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

37 C.F.R. §1.97(b).

37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:

A statement pursuant to 37 C.F.R. §1.97(e) or

The Director is Authorized to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p).

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- (1) A statement pursuant to 37 C.F.R. §1.97(e); and
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If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: July 16, 2010

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Electronic Patent Application Fee Transmittal

Application Number:	11620717
Filing Date:	07-Jan-2007
Title of Invention:	Application Programming Interfaces for Scrolling Operations
First Named Inventor/Applicant Name:	Andrew Platzer
Filer:	Jeremy A. Schweigert/Leslie Rogan
Attorney Docket Number:	04860.P4895

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Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

Electronic Acknowledgement Receipt

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Application Number:	11620717
International Application Number:	
Confirmation Number:	9801
Title of Invention:	Application Programming Interfaces for Scrolling Operations
First Named Inventor/Applicant Name:	Andrew Platzer
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Payment was successfully received in RAM	\$180
RAM confirmation Number	4861
Deposit Account	022666
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	4860P4895_IDS_and_1449.pdf	57955	no	3
			a51c6d87a08f4be3d779b3e554f9e824c1ea3fc3		
Warnings:					
Information:					
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2	NPL Documents	GB2319591.pdf	1254548	no	31
			ee591379c4e868fdaa1354c549810215903819		
Warnings:					
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3	NPL Documents	NPL_P5054_OA_6-8-2010.pdf	220897	no	7
			578077bdb5b7a5c692a0b294f0854cc028d2a59		
Warnings:					
Information:					
4	NPL Documents	NPL_P5060_OA_6-9-2010.pdf	226682	no	7
			340533ee2810e19c8c8b5533d144080746fbeddb		
Warnings:					
Information:					
5	Fee Worksheet (PTO-875)	fee-info.pdf	29984	no	2
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Total Files Size (in bytes):			1790066		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>	<i>Complete if Known</i>	
	Application Number	11/620,717
	Filing Date	January 7, 2007
	First Named Inventor	Platzer, Andrew
	Group Art Unit	2179
	Examiner Name	Bautista, Xiomara
Sheet 1 of 1	Attorney Docket No: 4860P4895	

US PATENT DOCUMENTS					
Examiner Initial *	Cite No ¹	USP Document Number	Publication or Issue Date MM-DD-YYYY	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-6,957,392	10-18-2005	Simister et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No ¹	Foreign Patent Document Country Code/Number/Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ²
		GB-2 319 591 A	05/27/1998	Alps Electric Co., Ltd.		

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		OFFICE ACTION, U.S. Ser. No. 11/620,723, mailed June 8, 2010, 7 pages.	
		OFFICE ACTION, U.S. Ser. No. 11/620,709, mailed June 9, 2010, 7 pages.	

EXAMINER

DATE CONSIDERED

Based on PTO/SB/08A(09-06) - Substitute Disclosure Statement Form (PTO-1449) as modified by BSTZ 03/26/07
 * EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional) ² Applicant is to place a check mark here if English language Translation is attached



NOTICE OF ALLOWANCE AND FEE(S) DUE

45217 7590 07/20/2010

APPLE INC./BSTZ
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUITE 300
SUNNYVALE, CA 94085-4040

EXAMINER
BAUTISTA, XIOMARA L
ART UNIT PAPER NUMBER

2179
DATE MAILED: 07/20/2010

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

TITLE OF INVENTION: APPLICATION PROGRAMMING INTERFACES FOR SCROLLING OPERATIONS

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

45217 7590 07/20/2010

APPLE INC./BSTZ
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
 1279 OAKMEAD PARKWAY
 SUITE 300
 SUNNYVALE, CA 94085-4040

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/620,717	01/07/2007	Andrew Platzer	04860.P4895	9801

TITLE OF INVENTION: APPLICATION PROGRAMMING INTERFACES FOR SCROLLING OPERATIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/20/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
BAUTISTA, XIOMARA L	2179	715-781000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____</p> <p>3 _____</p>
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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY and STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent) : Individual Corporation or other private group entity Government

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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5. **Change in Entity Status** (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
11/620,717 01/07/2007 Andrew Platzer 04860.P4895 9801

45217 7590 07/20/2010
APPLE INC./BSTZ
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUITE 300
SUNNYVALE, CA 94085-4040

Table with 2 columns: EXAMINER, ART UNIT, PAPER NUMBER
EXAMINER: BAUTISTA, XIOMARA L
ART UNIT: 2179
PAPER NUMBER: (blank)

DATE MAILED: 07/20/2010

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 278 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 278 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No. 11/620,717	Applicant(s) PLATZER ET AL.	
Examiner X. L. Bautista	Art Unit 2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. This communication is responsive to amendment filed 05/20/2010.
- 2. The allowed claim(s) is/are 1-14 and 89-95.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 3/29/2010 and 7/16/2010
- 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- 6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____.

/X. L. Bautista/
Primary Examiner, Art Unit 2179

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jeremy Schweigert on 07 July 2010.

Claims 15-88 are cancelled.

Claims 1, 8, and 89 have been amended as follows:

1. (Currently amended) A machine implemented method for scrolling on a touch-sensitive display of a device comprising:

receiving a user input, the user input is one or more input point applied to the touch-sensitive display that is integrated with the device;

creating an event object in response to the user input;

determining whether the event object invokes a scroll or gesture operation by distinguishing between a single input point applied to the touch-sensitive display that is interpreted as the scroll operation and two or more input points applied to the touch-sensitive display that are interpreted as the gesture operation;

issuing at least one scroll or gesture call based on invoking the scroll or gesture operation;

responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object based on an amount of a scroll with the scroll stopped at a predetermined position in relation to the user input; and

responding to at least one gesture call, if issued, by scaling the view

associated with the event object based on receiving ~~a plurality of~~ the two or more input points in the form of the user input.

8. (Currently amended) A machine readable storage medium storing executable program instructions which when executed cause a data processing system to perform a method comprising:

receiving a user input, the user input is one or more input point applied to a touch-sensitive display that is integrated with the data processing system;

creating an event object in response to the user input;

determining whether the event object invokes a scroll or gesture operation by distinguishing between a single input point applied to the touch-sensitive display that is interpreted as the scroll operation and two or more input points applied to the touch-sensitive display that are interpreted as the gesture operation;

issuing at least one scroll or gesture call based on invoking the scroll or gesture operation;

responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object; and

responding to at least one gesture call, if issued, by scaling the view associated with the event object based on receiving ~~a plurality of~~ the two or more input points in the form of the user input.

89. (Currently amended) An apparatus, comprising:

means for receiving, through a hardware device, a user input on a touch-sensitive display of the apparatus, the user input is one or more input point applied to the touch-sensitive display that is integrated with the apparatus;

means for creating an event object in response to the user input;

means for determining whether the event object invokes a scroll or gesture operation by distinguishing between a single input point applied to the

Art Unit: 2179

touch-sensitive display that is interpreted as the scroll operation and two or more input points applied to the touch-sensitive display that are interpreted as the gesture operation;

means for issuing at least one scroll or gesture call based on invoking the scroll or gesture operation;

means for responding to at least one scroll call, if issued, by scrolling a window having a view associated with the event object; and

means for responding to at least one gesture call, if issued, by scaling the view associated with the event object based on receiving a plurality of the two or more input points in the form of the user input.

Reasons for Allowance

2. **Claims 1-14 and 89-95** are allowed.
3. The following is an examiner's statement of reasons for allowance: Prior art of record fails to teach the combination of claimed elements including creating an event object in response to a user input; determining whether the event object invokes a scroll operation or a gesture operation; distinguishing between a single input point and a two or more input points applied to a touch-sensitive display, wherein a single input point is interpreted as a scroll operation and two or more input points are interpreted as a gesture operation.

Lii (US 7,576,732 B2) discloses a scroll control method using a touchpad for executing a scroll function wherein the touchpad has predefined regions to trigger a scroll function in response to landing and then sliding the user's finger on the touchpad, which causes scroll control for the window.

Holleman et al (US 2007/0252821 A1) discloses a method for detecting multiple finger input on a touch screen of a display. The method identifies at least two points on a sensing grid indicating locations of the display screen that have been touched by a user and identifies a geographic portion of the display screen based on the at least two points. A touch mechanism determines the placement of the fingers on the grid; a square formed by the two finger touch causes selection of items displayed within this square in order to select, zoom (scaling), drag, rotate, etc. Holleman discloses Z-coordinates that are used to zoom (scale) wherein the distance of the fingers from the screen can be scaled to provide a variable zoom based on two finger

input.

Tadamitsu Sato et al (GB 2319591 A) discloses a coordinates input apparatus having a detection section and an operating section. The detection section has an operating surface for operation by a user's finger, which detects the operation conditions on the operating surface caused by the user's finger. The operating section executes screen operations corresponding to the operation condition in response to tapping of the finger within predetermined regions of the operating surface, and carries out predetermined processing or changes to a predetermined mode. Tapping and sliding the finger within a predetermined region causes (easy scroll mode) an active window to scroll the displayed contents in the window; and placing the finger near the center of the operating surface and then sliding the finger at an angle towards the upper left corner of the lower right corner of the operating surface (easy size mode) causes the window to be widened or narrowed corresponding to the slide amount and direction of the finger on the operating surface.

4. Lii, Hollemans, and Sato fail to teach or suggest creating an event object in response to a user input; determining whether the event object invokes a scroll operation or a gesture operation; distinguishing between a single input point and a two or more input points applied to a touch-sensitive display, wherein a single input point is interpreted as a scroll operation and two or more input points are interpreted as a gesture operation.