UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/228,460	04/15/94	BEERNINK	E P1017C053A

LAD, L EXAMINER

E6M1/0927

PAUL L. HICKMAN
HICKMAN & BEYER
P. O. BOX 61059
PALO ALTO, 94306

ART UNIT	PAPER NUMBER
2609	26

DATE MAILED: 09/27/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 7-12-96.

☐ This action is **FINAL.**

☐ 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 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-25 ~~is~~/are pending in the application.

Of the above, claim(s) 4, 12 and 21-23 ~~is~~/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-3, 5-11, 13-20 and 24-25. is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

★ U.S GPO 1996-409-290/40029

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

> 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 negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

2. Claims 1-3, 5-11, 13-20, 24 and 25 are rejected under 35 U.S.C. § 103 as being unpatentable over Agulnick et al in view of More et al.

Agulnick et al teach a method for providing a gesture sensitive button comprising a digital processor(50); a display screen(10) connected to the digital processor(50); a pointer(4)(see figures 1, 2 and column 6, lines 26-31); a touch sensitive surface(12)(see figures 1, 2 and column 8, lines 59-60) for detecting the position of pointer on the touch sensitive surface(12); a button image(190)(see figure 4) and gesture recognition means(70, 90)(see figure 4) for detecting gestures(single tap(621) and double-tap(622))(see figures 4, 45 and column 11, lines 4-18) made by the pointer(4). The

processor(50) can be able to response to at two different button gestures(a single tap(621) and a double tap(622)) made by the pointer(4) over the button image(190) without any intermediate input(see figures 3, 4, 45).

Agulnick et al fail to disclose a touch sensitive surface co-extensive with a display screen. More et al disclose a graphical interface system comprising a touch-sensitive surface(41-60, 62) for detecting the position of pointer(a pen or a finger). The surface(41-60, 62) is co-extensive with the display screen(1)(see figure 1 and column 12, lines 4-46). It would have been obvious the have modified Agulnick et al with the teaching of More et al, so as to distinguish the display area and touch sensing area.

As to claims 3, 11, 19, More et al teaches a pointer can be a stylus or a finger and the touch-sensitive surface(41-60, 62) with a bounding box(see figure 1 and column 1, lines 42-47).

As to claim 2, More et al teach a pointer(3) are part of a pen-base computer system(see figure 2 and column 12, lines 4-12).

As to claims 7 and 9-10, Agulnick et al teach a button image(180) for presenting an altered image(next page) based on the detection of a button gesture(see figure 4 and lines 17-28).

As to claims 5 and 13, More et al teach one of the button gesture is tap; e.g. select a button(45)(see figure 1).

As to claim 20, button gestures(a single tap and double tap) overlap at least approximately 40% of the bounding box(190)(see figure 4) is obvious design choice it would depend how large the pointer would be.

As to claims 6, 14, 15 and 25, Agulnick et al teach a computer system comprising a touch-sensitive surface(10), a pointer(stylus or pen) for entering check-marks(652) and X-marks(629) gestures to a computer(see figures 1, 2, 24, 45, 53, 54; column 6, lines 11-31; column 12, lines 3-7 and column 13, lines 28-39).

3. Applicant's arguments filed on July 12, 1996 have been fully considered but they are not deemed to be persuasive.

Applicants state that Agulnick's gesture areas do not corresponding to buttons which is cited in claims on page 3. The definition of applicants' button is a box-like area which can be responsive to at least two different button gestures made by a pointer without any intermediate input. Agulnick teaches a plurality of small box areas(190)(see figure 4) can be able to recognize two different gestures(single tap(621) and a double-tap(622)) which is same as applicants' button(see figure 45 and column 11, lines 4-18). Agulnick teaches a gesture can be drawn on both a gesture area and a button. In order to distinguish between a gesture area and a button, Agulnick designs to have a button can only respond to a tap(see column 10, lines 1-13).

However, Agulnick teach a small box area(190)(see figure 4) on a display(10) which meets the definition of applicants' button as cited in claims. Actually, Agulnick has a same ability as applicants to recognize different gestures on a touch panel display.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

5. Any inquiry concerning this communication should be directed to Lun-Yi, Lao at telephone number (703) 305-4873.

September 16, 1996
Lun-Yi Lao
Lun-Yi, Lao

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
GROUP 2600

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/228,480	04/15/94	BEERNINK E	P1017CU/SP

PAUL L. HICKMAN
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F6MI/1126

EXAMINER	
LAO,L	
ART UNIT	PAPER NUMBER
2609	27

DATE MAILED: 11/26/96

EXAMINER INTERVIEW SUMMARY RECORD

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

(1) Brian R. Coleman (3) Richard Hjerpe (PTO)

(2) LUN-YI LAO (PTO) (4)

Date of interview 11/5/96

Type: ☒ Telephonic ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☐ No. If yes, brief description:

Agreement ☐ was reached with respect to some or all of the claims in question. ☐ was not reached.

Claims discussed: 1, 8 and 19

Identification of prior art discussed:

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: If the new limitation of "feedback which is relative to the button confirming that said button image have been selected and also relative to the button indicative of the particular function associated with input gesture" in claims 1, 8 and 19, the application will placed for allowance. To await for applicant's further response.

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

Unless the paragraphs below have been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW (e.g., items 1–7 on the reverse side of this form). If a response to the last Office action has already been filed, then applicant is given one month from this interview date to provide a statement of the substance of the interview.

☐ It is not necessary for applicant to provide a separate record of the substance of the interview.

☐ Since the examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action.

Lun-Yi Lao
Examiner's Signature

PTOL-413 (REV. 1-84)

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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/228,460	04/15/94	BEERNINK, E.	P1017.P.P4

EGM1/1126

PAUL L. HICKMAN
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PALO ALTO, 94306

EXAMINER	
LAO, L	
ART UNIT	PAPER NUMBER
2609	28

DATE MAILED: 11/26/96

EXAMINER INTERVIEW SUMMARY RECORD

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

(1) Brian R. Coleman (3) _____

(2) LUN-YI LAO (PTO) (4) _____

Date of interview 11/20/96

Type: ☒ Telephonic ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☐ No. If yes, brief description: _____

Agreement ☒ was reached with respect to some or all of the claims in question. ☐ was not reached.

Claims discussed: 1, 24 and 19.

Identification of prior art discussed: _____

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's attorney agreed to amend claims 1, 19 and 24 as indicated in Examiner's amendment

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

Unless the paragraphs below have been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW (e.g., items 1–7 on the reverse side of this form). If a response to the last Office action has already been filed, then applicant is given one month from this interview date to provide a statement of the substance of the interview.

☒ It is not necessary for applicant to provide a separate record of the substance of the interview.

☐ Since the examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action.

Lun-Yi Lao
Examiner's Signature

PTOL-413 (REV 1-84)

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OFFICIAL

PATENT

In the United States Patent and Trademark Office

In re application of: BEERNINK et al.	Examiner: Lao, L.
Serial No: 08/228,460	Group Art Unit: 2609
Filed: April 15, 1994	Attorney Docket: P1017C/P053A
Title: GESTURE SENSITIVE BUTTONS FOR GRAPHICAL USER INTERFACES	

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being facsimile Transmitted to the United States Postal Service and is addressed to: Commissioner of Patents and Trademarks, BOX AF Washington, DC 20231 on November 5, 1996

Signed: _____

Brian R. Coleman

Amendment D

FAX RECEIVED
NOV 0 6 1996
GROUP 2600

Commissioner of Patents and Trademarks
BOX AF
Washington, D.C. 20231

Dear Sir:

In response to the Office Action dated September 27, 1996, please amend the above identified patent application as follows.

In the Claims:

1. (Thrice amended) A gesture sensitive button for a graphical user interface comprising:

a digital processor;

a display screen coupled to said digital processor;

e1 cont

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a pointer for pointing to locations on said display screen;

a button image displayed on said display screen, said digital processor being responsive without any intermediate input to at least two different button gestures made by said pointer on said display screen at any location over said button image; and

gesture recognition means for detecting gestures made on said display screen by said pointer and operative to initiate a process in said digital processor that is determined by a recognizable button gesture made with said pointer on said display screen which ~~both~~ selects said button image and which has meaning to said digital processor based upon a context associated with said button image wherein the gesture recognition means is arranged such that the function associated with each of said button gestures will be initiated and executed in an identical manner regardless of the location over the button image that the gesture was made,

wherein said digital processor is operable such that when said gesture recognition means recognizes a particular recognizable button gesture for said button image, said digital processor provides feedback relative to said button confirming that said button image has been selected, said feedback relative to said button also indicative of the particular function associated with said particular recognizable button gesture.

6 7. (Twice amended) A gesture sensitive button as recited in claim ~~5~~ 4 wherein said feedback confirming that said button image has been selected includes altering the appearance of said button image. [the appearance of said button image is altered upon the detection of a button gesture.]

7 8. (Thrice amended) A method for providing and utilizing a gesture sensitive button for a graphical user interface, wherein the gesture sensitive button has a plurality of distinct gestures associated therewith, each distinct gesture that is associated with the gesture sensitive button having a distinct process associated therewith, the method comprising the steps of:

providing a button image on a computer display screen;

detecting an inputted gesture made upon said computer display screen by a pointer;

determining whether said inputted gesture is associated with said button image by determining whether said gesture contacts said button image and determining whether said gesture is one of the distinct gestures that is associated with the gesture sensitive button; and

when the inputted gesture is determined to be associated with the button image, performing the following substeps of: (a) providing feedback relative to the button image confirming that the button image has been selected, (b) providing feedback relative to the button image indicative of the process associated with the inputted gesture, and (c) initiating the process associated with said inputted gesture and the button image.

9/10. (Twice amended) A method for providing a gesture sensitive button as recited in claim 8 wherein said feedback confirming that the button image has been selected includes [further comprising the step of] altering the visual representation of said button image [after said determining step determines that said gesture is associated with said button image].

17/19. (Twice amended) A method for initiating and executing one of a plurality of command sequences from inputs made with a stylus on a gesture sensitive button image displayed on a touch-sensitive display screen of a pen-based computer system, the method comprising the steps of:

displaying a button object having a button context on the display screen of the pen-based computer system, said button object having a button bounding box;

entering with the stylus a gesture object, having a gesture bounding box, anywhere over said button object;

determining whether said gesture bounding box substantially overlaps said button bounding box; and

[executing a command sequence in said pen-based computer system that is associated with the entered gesture without utilizing an intermediate input to the pen-based computer system] when the gesture bounding box is determined to substantially overlap the button bounding box, performing the steps of (a) providing feedback relative to the button confirming that said button object has been selected and (b) executing a command sequence in said pen-based computer system that is associated with the entered gesture without utilizing an intermediate input to the pen-based computer system;

wherein when a first gesture type is entered, the executed command sequence turns a function associated with said button object on if previously off and off if previously on; and

wherein when a second gesture type is entered, the executed command sequence brings up a choice palette wherein a further selection within the choice palette can be made and a function associated therewith executed.

REMARKS

The Examiner and her Supervisor Richard Hjerpe are thanked for the telephone interview with the undersigned on Tuesday November 5, 1996. In that interview the present amendments and the cited art was discussed. The Examiner is further thanked for the indication that the claims as amended are now in condition for allowance.

Claims 1, 7, 8, 10, and 19 have been amended. No new matter has been added. Claims 4, 12, and 21-23 were previously canceled. Claims 1-3, 5-11, 13-20, and 24-25 are pending.

The Examiner rejected claims 1-3, 5-11, 13-20, and 24-25 under 35 U.S.C. § 103 as allegedly unpatentable over Agulnick in view of More. The Applicants respectfully traverse these rejections. Further, the Applicants maintain their position on the patentability of the present invention as presented in earlier responses. However, in order to expedite prosecution, the claims have been amended to more particularly distinguish the present invention.

The Applicants wish to focus the Examiner's attention on the following patentable features found in each independent claim as amended. The independent claims each require initiating a desired computer processes utilizing a gesture sensitive button responsive to at least two different input gestures, wherein the desired computer process is determined by the specific input gesture entered. Furthermore, as amended, the independent claims require providing feedback relative to the button both confirming selection of the button and indicative of the desired computer process associated with the specific input gesture entered.

The primary reference, Agulnick, is broadly directed at control of a computer through a position-sensed stylus. As will be appreciated, the Agulnick teaching relates to Go Corporation's pen-based operating system "PenPoint," which is no longer available due in part to its inadequate functionality. In essence, the relevant portion of Agulnick teaches graphical user interfaces in which certain regions, called gesture areas, can accept and process different user gestures. However, Agulnick's relevant teaching seems to be inconsistent and at certain instances teaches away from the Applicants' invention. For example, Agulnick column 10, lines 1-14, states:

> Gestures have a strong advantage over visible controls. There may be, for a given computer action or command, both a gesture which can be drawn in a gesture area and a button or other command symbol which may be tapped to carry out the command. However, in the present invention, *the gesture area which is sensitive to the command gesture is preferably much larger than the corresponding button or the like which may be tapped to accomplish the same command.* This is due to the fact that a given region of the display can distinguish between many gestures and can display changeable information, while *a button must be labelled in some static way and can only accept a tap.* (Emphasis added.)

Thus it appears that an Agulnick button corresponds to only a single computer function, the Agulnick button merely responding to a single tap to perform a desired computer function. Corresponding to the Agulnick button is a larger gesture area responsive to other command gestures to "accomplish the same command" as the single tap. However, other portions of Agulnick teach that different gestures result in different commands being performed. Also, Agulnick teaches "tabs" responsive to both single and double taps, the different input resulting in performance of different computer functions. Agulnick column 11, lines 6-12. Hence it is uncertain how Agulnick's buttons actually operated, and what distinguished a button's responsiveness when compared to gestures entered elsewhere on the touch-screen.

The secondary reference, More, is relied upon as teaching a touch sensitive surface co-extensive with a display screen.

In contrast with the cited art, claims 1, 8, and 19 require that when a particular gesture is entered for a button, feedback relative to the button is provided confirming that the button has been selected. Agulnick, on the other hand, teaches bare execution of the desired process. See, i.e., column 11, lines 6-12. Hence the present invention provides feedback relative to the button useful for confirming proper selection of a button which is neither taught nor reasonably suggested in the cited art.

Further, claims 1, 8, and 19 require that when a particular gesture is entered for a button, feedback relative to the button is provided indicating which process is associated with the particular gesture. In contrast, Agulnick does not require such feedback. At best, in some instances Agulnick accidentally and indirectly provides feedback indicating which process is associated with the particular gesture since the process itself may provide feedback. However, the Applicant's claims require consistent provision of such feedback. Consistently providing feedback as to which process is associated with the particular gesture entered is especially valuable here where the button is responsive to different gestures. Such feedback relative to the button allows a user to verify proper gesture entry. This is neither taught nor reasonably suggested in the cited art.

Applicants' Figure 9 and the corresponding description on page 11 provide one particular embodiment supporting the present amendments. Figure 9 illustrates a script table 224 for a button responsive to three different gestures, a tap 226, a check-mark 228, and an X-mark 230. In response to a tap 226, the button highlights momentarily (feedback indicating selection) and then the button state is reversed (feedback indicating the process associated with the tap 226 gesture). In response to a check-mark 228, the button highlights momentarily (feedback indicating selection) and then a pop-up recognizer is displayed (feedback indicating the process associated with the check-mark 228 gesture). In response to an X-mark 230, the button highlights momentarily (feedback indicating selection) and then a recognizer button is displayed in an on state (feedback indicating the process associated with the X-mark 230 gesture). As will be appreciated, this

embodiment is merely illustrative and does not define the scope of the claimed invention. However, the present example does illustrate how the claimed invention provides the user feedback regarding input of a gesture, thereby allowing the user to determine immediately whether the proper gesture was entered.

Claims 2, 3, and 5-7, claims 9-11 and 13-18, and claims 20, 24 and 25, all depend either directly or indirectly from claims 1, 8, and 19, respectively. Accordingly, they are each submitted as patentable over the art of record for at least the reasons state above. Each of these claims adds additional limitations which, when viewed in light of the claimed combination, further patentably distinguish them.

In view of the foregoing, the Applicants submit that the pending claims are patentable over the cited art and respectfully requests that the rejection under 35 U.S.C. § 103 be withdrawn. Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below. The Commissioner is authorized to charge any fees that may be due to our Deposit Account No. 08-2120 (Order No. APL1P053A). A duplicate copy of this sheet is enclosed for this purpose.

Respectfully submitted,
HICKMAN BEYER & WEAVER

Brian R. Coleman
Reg. No. 39,145

P.O. Box 61059
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415-328-6500

OFFICIAL

Amendt / G

11/20/96

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please Enter it. 11/20/96 J.L.

EXAMINER'S COURTESY COPY

Date: November 5, 1996

CONFIDENTIALITY NOTE:

To: **Examiner Hjerpe** Date: November 5, 1996

Company: U.S. Patent & Trademark Office Pages (incl.): 7

Art Unit: 2609

FAX No.: (703) 305-9508

Message

Please deliver directly to Examiner Richard Hjerpe. Do not place with the file

Enclosed is a courtesy copy of an amendment I filed today by facsimile. If you have any questions or comments, please do not hesitate to contact me. Thank you.

Brian R. Coleman

G