

50-PAPT-5-00013

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/217,400 12/21/98 SINGH

M 128.00076

EXAMINER

WM01/0228

WOOD PHILLIPS VAN SANTEN CLARK
& MORTIMER
500 WEST MADISON STREET SUITE 3800
CHICAGO IL 60661

KNOWLEDGE

ART UNIT

PAPER NUMBER

2673

DATE MAILED:

02/28/01

4

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

Commissioner of Patents and Trademarks

MG

Office Action Summary	Application No. 09/217,400	Applicant(s) SINGH ET AL.
	Examiner Vincent E. Kovalick	Art Unit 2673

-- 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) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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).

Status

1) Responsive to communication(s) filed on _____.

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) 1-4 and 6-16 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-4 is/are allowed.

6) Claim(s) 6-16 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ 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 objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

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

 a) All b) Some * c) None of the CERTIFIED copies of the priority documents have been:

 1. received.

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

 3. 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.

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

Attachment(s)

14) Notice of References Cited (PTO-892)

15) Notice of Draftsperson's Patent Drawing Review (PTO-948)

16) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

17) Interview Summary (PTO-413) Paper No(s) _____

18) Notice of Informal Patent Application (PTO-152)

19) Other:

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DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment dated December 22, 2000 in response to PTO Office Action dated September 21, 2000. The amendment to claim 1; the rewriting of claim 4 in independent form; the cancellation of claim 5 and Applicant's remarks have been noted and reflected in the action set forth hereinbelow.

Applicant's remarks have been fully considered but are not persuasive. Relative to Applicant's remarks teaching "touch-responsive areas located in a section of the screen portion displaying a portion of said one discrete sub-page"; Henshaw (U.S. Patent No. 5,485,174) teaches "the four corners and the four sides of the visual representation of the control area offer control element areas in the form of "buttons" implemented as any other functional control area to be selected by a cursor, touch on a touch screen or the like." (col. 2, lines 57-61 and Figs. 2A-2C). Henshaw further teaches "Buttons on the four sides of the visual representation map control the horizontal and vertical implemental scrolling of the portion of the work object displayed within the work area window" (col. 2, lines 64-67). In that both the image being displayed and the buttons controlling the movement of the image (e.g. scrolling) are both displayed on the same screen (item 2 in Figs. 2A-2C) it would have been obvious to a person of ordinary skill in the art at the time of the invention that the image representing the buttons could

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have been displayed within the boundary that defines the area on the screen of the displayed image.

Regarding Applicant's remarks relative to Henshaw not teaching the means to place the display in a "move mode". Henshaw clearly teaches the control buttons to initiate scrolling (col. 2, lines 64-67) which initiates a control mode and the scrolling movement. It would have been obvious to a person of ordinary skill in the art at the time of the invention that if there was merit in having two separate action, one to set the mode and the second to start the movement, it would have been obvious to do so.

Claim Rejections - 35 USC § 103

2. 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.

3. Claims 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al.

Relative to claim 6, Henshaw et al. **teaches**, a data storage device including a screen portion for visually displaying a part of a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in said screen portion, and virtual page comprising a plurality of discrete sub-pages (col 3, lines 15-19), a display control structure comprising: a plurality of

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discrete touch-responsive areas in different sections of said screen portion, each of said touch-responsive areas being adapted to generate a page signal responsive to being touched by a user (col. 2, lines 57-67 and col. 3, lines 1-6); a sensor adapted to generate a panning signal responsive to selective input by a user (col. 6, lines 61-65); a first screen portion display control adapted to pan over the virtual page responsive to a panning signal (col. 2, lines 57-67), and display a selected part of one discrete sub-page responsive to a page signal generated in response to a user touching one of the discrete touch-responsive areas located in a section of the screen portion displaying a portion of said one discrete sub-page (col. 3, lines 15-19).

The difference between the teaching of Henshaw et al. and that of the instant invention is that Henshaw et al. teaches the panning signal being initiated by pressing a touch panel area as opposed to the panning signal being initiated by a signal generated by a sensor.

It would have been obvious to a person of ordinary skill in the art at the time of the invention that the signal generated by pressing an area of the touch panel (a virtual button) to generate the signal to initiate the panning action could be generated several ways including the said signal being generated from the output of various types of sensors.

Regarding claims 9-11, Henshaw et al. **teaches** the display control structure wherein: said virtual page comprises a plurality of sub-pages with each sub-page oriented side-by-side with at least one of the other of the sub-pages; said screen portion is substantially as large as each sub-page; and each sub-page is a logical unit of said virtual page (col. 3, lines 15-19).

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4. Claim 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al. as it applies to claim 6 in item 3 hereinabove and further in view of Reichlen (U.S. Patent No. 6,061,064).

Relative to claim 7, Henshaw et al. **does not teach** the display control structure wherein the sensor comprises: at least one orientation sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit motion signal indicative of said changes.

Reichlen **teaches** said control structure wherein said sensor comprises: at least one orientation sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit motion signals indicative of said changes (col. 3, lines 46-57).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Henshaw et al. the feature as taught by Reichlen in that having a motion sensor incorporated in the device as taught by Henshaw et al. would make the device more user friendly by reducing the number of actions a user would have to take in order to initiate a panning signal to the image display means. It would have been further obvious to a person of ordinary skill in the art at the time of the invention to include in the device as taught by Henshaw et al a control circuit adapted to generate a panning signal responsive to a motion signal in that it would reduce the number of actions the user would have to make in order to initiate the panning feature.

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With respect to claim 8, Henshaw et al. **teaches** a second screen portion display control including at least one touch-responsive first area on said screen portion adapted to selectively place said second screen portion display control in a panning mode whereby said screen portion pans over the virtual page responsive to said panning signal when touched by a user, and a touch-responsive second area on said screen portion adapted to selectively take said second screen portion display control out of said scanning mode when touched by a user; and a switch adapted to selectively connected one of said first and second screen portion display controls to said screen portion (col. 2, lines 57-67).

5. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichlen taken with Henshaw et al.

Relative to claim 12, Reichlen **teaches** a data storage device including a screen portion for visually displaying a pointer and a virtual page including command areas, said virtual page providing a user interface for generating a command signal to control a program in said device, and interface control structure comprising: a least one sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit signals indicative of said changes; a control circuit adapted to move said pointer in said screen portion responsive to signals from said sensor indicative of said position changes when said control circuit is in a move mode.

Reichlen **does not teach** a touch responsive first area adapted to maintain said control circuit in said move mode during touching of the first area by a user.

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Henshaw et al. **teaches** a touch-responsive first area adapted to maintain said control circuit in said move mode during touching of the first area by a user (col. 2, lines 57-61 and col. 3, lines 1-6).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device of Reichlen the feature as taught by Henshaw et al. in that it would afford the user hands on control of the duration of the move mode.

Regarding claim 13, Henshaw et al. **teaches** the interface control structure comprising a command control adapted to generate a program command signal responsive to the pointer being located in one of the command area of the virtual page when touching of the first area by a user ceases (col. 6, lines 61-65). It would have been obvious to a person of ordinary skill in the art at the time of the invention that when touching of the first area ceases, this release of the depressed area would generate a signal to stop the action associated with the area when the area is depressed.

With respect of claims 14-16, Henshaw teaches said interface control structure further comprising a touch-responsive second area adapted to generate a program command signal responsive to the pointer being located in one of the command areas when the second area is touched by a user (col. 6, lines 61-65 and sheet 2 of 9 Figs. 2A-2C); wherein said first and second areas comprise push buttons (col. 1, lines 57-67); and said screen portion is disposed on one side of said device and said push buttons are located on a side of said device different than the one side. (Sheet 2 of 9, figs. 2A-2C).

Allowable Subject Matter

6. Claims 1-4 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Relative to claim 1, the prior art of record **does not teach** a data storage device including a screen portion for visually displaying a part of a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in said screen portion, a display control structure comprising a touch-responsive second area on said screen portion, said second area when touched by a user placing a control circuit out of a panning mode and said second area being the part of a virtual page displayed on said screen portion when said device is in said panning mode.

Regarding claim 4, the prior art of record **does not teach** a data storage device including a screen portion for visually displaying a part of a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in the screen portion, a display control structure comprises a touch-responsive second area on said screen portion which is substantially the entirety of the screen portion when said device is in said panning mode, said second area when touched by a user placing said control circuit out of said panning mode.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U. S. Patent No.	5,841,078	Miller et al.
U. S. Patent No.	5,703,623	Hall et al.
U. S. Patent No.	5,648,642	Miller et al.
U. S. Patent No.	5,615,132	Horton et al.
U. S. Patent No.	5,528,285	Morikawa et al.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply 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 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Responses

9. Responses to this action should be mailed to: Commissioner of Patents and Trademarks Washington, D.C. 20231. If applicant desires to fax a response, (703) 308-9051 may be used for formal communications or (703) 308-6606 for informal or draft communications. NOTE: a Request for Continuation (Rule 609 or 62) cannot be faxed.

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Inquires


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is (703) 306-3020. The examiner can normally be reached on Monday-Thursday from 9:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938.

11. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Vincent E. Kovalick



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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#5

WOOD, PHILLIPS, VANSANTEN, CLARK & MORTIMER

FOUNDED IN 1876

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RETIRED
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SENT _____

NOT SENT _____

TELECOPIER

DATE: May 14, 2001
ATTENTION: Examiner Vincent E. Kovalick
FROM: Jeffrey L. Clark
RE: Singh et al - Serial No. 09/217,400
Our Ref: P10051-US - 1280.00076

PAGES TRANSMITTED: 6 + This Transmittal Page

ADDITIONAL MESSAGE:

This facsimile may contain PRIVILEGED AND CONFIDENTIAL INFORMATION intended only for the use by the person(s) named above. If you are not a person to whom this facsimile is addressed, you are hereby notified that any distribution, copying, or disclosure of the contents of this facsimile is strictly prohibited. However, any review of this facsimile by other than the person(s) identified above shall not constitute a waiver of privilege or confidentiality. If you have received this facsimile in error, please notify the sender immediately by telephone, collect, and return the original to the above address.

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EXPEDITED PROCEDURE
1280.00076
P10051-US-RMOT
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
MONA SINGH et al) DISPLAY CONTROL FOR HAND-
Serial No. 09/217,400) HELD DATA PROCESSING DEVICE
Filed December 21, 1998) Group Art Unit 2673
Examiner Vincent E. Kovalick

REQUEST FOR RECONSIDERATION AFTER FINAL OFFICE ACTION

Box AF
Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the FINAL Office Action dated February 28, 2001,

Applicants wish to respond as follows:

REMARKS

Applicant respectfully requests that the Final Rejection of pending claims 1-4 and 6-16 be reconsidered for the below reasons.

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being transmitted to Box AF, Commissioner for Patents, Attn: Examiner Kovalick at 703/308-9051 on May 14, 2001.

Signature: Karen Sanderson
Name: Karen Sanderson

EXPEDITED PROCEDURE

1280.00076

P10051-US-RMOT

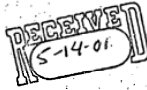
PATENT

Applicant respectfully submits that the suggested modifications of Henshaw suggested in the Final Office Action are (1) inappropriately based on hindsight rather than any proper suggestion in the art, and (2) even if made would not result in the structure recited in the rejected claims.

Specifically, it is first submitted that the modification of Henshaw which forms the basis of the rejection of claims 6 *et seq.* (*i.e.*, to move the button display areas into data display areas since they are displayed on the same screen) is not in any way suggested by Henshaw. Certainly there is no explicit teaching of it. In fact, all of the illustrated structures in Henshaw show the button display areas outside of the central data display area. Moreover, consistent with the second point discussed below, Henshaw essentially teaches away from moving the button display areas as suggested by the Office Action, since to move those areas in such a manner would significantly detract from the main display area, with the button display areas covering (and interrupting) the display of the page. Morris teaches placing the button display outside the outermost boundary of the main display, even if on the same screen, clearly because this will avoid the undesirable interrupted display.

Moreover, even if Henshaw were modified as proposed, it would not result in the claimed invention. That is, not only do both of the referenced sections (col. 2, lines 57-61 and col. 2, lines 64-67) teach positioning the

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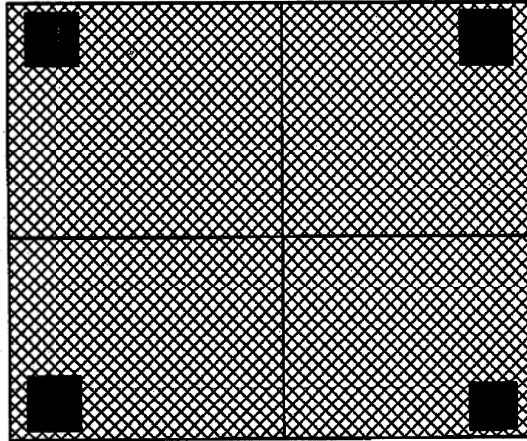
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control buttons outside of the displayed page portion, but, as illustrated in referenced Figs. 2A-2C, these "buttons" all have their own visual representation (*i.e.*, they can be seen). Therefore, even though the "image being displayed" and the "image representing the button" are included in the same screen (meaning only that they are on a continuous screen, as opposed to separate screens), it is a *non sequitur* to then conclude that modifying them as suggested (whether obvious or not) would result in the claimed invention because wherever the image representing the button is displayed is, ipso facto, not an area where the page image is being displayed. Perhaps more simply stated, even if the button image in Henshaw were to be moved inside of an outer boundary of a display of a page, then the area displaying the button image would cease to be an area where the page image is being displayed. Thus, even the modification to Henshaw suggested by the Office Action would not meet the claim recitation that the display control be adapted to respond "to a user touching one of the discrete touch-responsive areas located in a section of the screen portion displaying a portion of said one discrete sub-page", because the touch responsive area of the Henshaw button could not possibly be located in a section of the screen portion displaying a portion of [the page].

The Office Action states that it would be obvious to move the image representing the buttons "within the boundary that defines the area on

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PATENT

the screen of the displayed image" (Office Action, p. 2-3). However, the claim does not refer to an outer boundary - it refers to the screen portions containing display, which is something very different. By moving the Morris buttons into an outer "boundary", the result is to eliminate portions of the screen on which the page can be displayed as illustrated below. It is clear that such a result is particularly disadvantageous given the limited areas usually available for display in the first place.



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In the above representation of the modification of Henshaw which forms the basis of the rejection at issue, the cross-hatched portions represent areas displaying a page image and the solid portions represent areas displaying the button images. The solid areas are not a "section of the screen portion displaying a portion of [a page]" - they are sections of the screen displaying the buttons. The screen portion displaying a portion of the page is not a simple rectangle, but a rectangle with holes in it.

In short, since the modification to Henshaw is not suggested, and since even the modification to Henshaw would not result in the invention recited in claim 6 and its dependent claims 6-11, claim 6 is believed to be allowable.

With respect to the rejection of claim 12 *et seq.*, it is respectfully submitted that the suggested modifications are based on hindsight as already argued in Amendment "A". Moreover, contrary to the assertion in the Office Action, the buttons in Henshaw do not relate to a "move mode" during touching, but instead simply cause movement. The clear language of Applicant's disclosure is that a "move mode" is a condition in which movement may, but does not necessarily, occur depending upon a second input. If the Examiner agrees that this significant distinction (with two different elements [a sensor and a touch-responsive area] separately establishing the move mode and move-

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PATENT

ment) is patentable but does not agree that the present language is sufficient to establish that configuration as a part of claim 12, he is asked to call the undersigned so that suitable language can be agreed upon.

It is respectfully requested that the rejections of the claims be reconsidered and, in view of the above, pending claims 1-4 and 6-16 be allowed.

Respectfully submitted,

WOOD, PHILLIPS, VAN SANTEN,
CLARK & MORTIMER

By Jeffrey L. Clark
Jeffrey L. Clark
Reg. No. 29,141

May 14, 2001

500 West Madison Street
Suite 3800
Chicago, IL 60661-2511
(312) 876-1800



0-25-01

Docket No. P10051708

Handwritten notes: 26700, #101, 6-8-07, K.Purks

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mona Singh and Robert M. Lands	Examiner: Allyson Purnell
Filing Date: 12/21/1998	Attorney Docket: 1280.00076
Serial No.: 09217400	Art Unit: 2673
For: DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE	

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

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**REVOCATION AND POWER OF ATTORNEY
WITH STATEMENT UNDER 37 CFR 3.73 (b)**

Ericsson Inc., a corporation, certifies that it is the assignee of the entire right, title and interest in and to the above-entitled U.S. patent application, and the invention disclosed therein, by virtue of the assignment from the inventor(s) to Ericsson Inc. recorded in the Patent and Trademark Office at Reel 9733, Frame 0754. A copy of the assignment is attached hereto.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, Ericsson Inc. is the assignee of the entire right, title and interest in the U.S. patent application identified.

Ericsson Inc. hereby revokes all previous Powers of Attorney and appoints:

David E. Bennett (Reg. No. 32,194), Larry L. Coats (Reg. No. 25,620), John R. Owen (Reg. No. 42,055), David D. Kallish (Reg. No. 42,706), Taylor M. Davenport (Reg. No. 42,466), Edward H. Green, III (Reg. No. 42,604), Michael D. Murphy (Reg. No. 44,958), each registered to practice before the United States Patent and Trademark Office and practicing as the firm of **COATS & BENNETT, P.L.L.C.**, and Stephen A. Calogero (Reg. No. 41,491), David K. Purks (Reg. No. 40,133), Kevin A. Sembrat (Reg. No. 36,673), Debra K. Stephens (Reg. No. 38,211), Mark C. Terrano (Reg. No. 40,200), and Dennis J. Williamson (Reg. No. 32,338).

as its attorneys and/or agent with full power to handle all matters before the U.S. Patent and Trademark Office.

Please address all future correspondence to David E. Bennett at Coats & Bennett, 1400 Crescent Green, Suite 300, Cary, North Carolina 27511. Address all telephone inquiries to David Bennett at (919) 854-1844.

The undersigned is empowered to sign this statement on behalf of the assignee.

Date: 5/11/01

Signature of David K. Purks
David K. Purks
Assistant Secretary and Associate
General Patent Counsel

ASSIGNMENT

Serial No. 09/217,400

Filed 12-21-98

In consideration of One Dollar and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned inventor, or each inventor if more than one, hereby assigns to _____

ERICSSON INC.

its successors and assigns (hereinafter called "said assignee"), the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled, _____

DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE

executed by the undersigned on the 17th day of Dec., 1998, and in said application and any and all other applications for United States Letters Patent, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States which may be obtained on any of said applications, and in any reissue or extension thereof.

The undersigned hereby authorizes and requests the Commissioner of Patents to issue said Patent to said assignee.

The undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the date and serial number of said application.

For said consideration, the undersigned hereby agrees, upon the request and at the expense of said assignee, to execute any divisional, continuation or substitute application for said invention or improvements, and any oath, declaration or affidavit relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application, and, in the event of any application or Letters Patent assigned herein becoming involved in Interference, to cooperate to the best of the ability of the undersigned in the matters of preparing and executing the preliminary statement and giving and producing evidence in support thereof. The undersigned agrees to perform, upon request, any affirmative acts to obtain said Letters Patent of the United States and vest in said assignee all rights therein, whereby said Letters Patent will be held and enjoyed by said assignee, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same should have been held and enjoyed by the undersigned if this assignment had not been made.

And for said consideration, the undersigned hereby assigns to said assignee the entire right, title and interest in said invention or improvements for all foreign countries, including all priority rights under

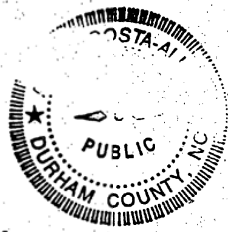
the International Convention, and agrees to execute, at the request of said assignee, all documents in connection with any application for foreign letters patent therefor.

Mona Singh

Mona Singh

Robert M. Lands

Robert M. Lands



December 17, 1998

STATE OF NORTH CAROLINA

COUNTY OF DURHAM

Before me, a Notary Public in and for the County and State aforesaid, appeared _____

to me personally known to be the signer, or signers, of the foregoing instrument, and acknowledged execution of said instrument as a free and voluntary act for the uses and purposes therein expressed.

Anna Acosta-Allen

Notary Public

MY APPOINTMENT EXPIRES SEPTEMBER 27 2003

WOOD, PHILLIPS, VanSANTEN, CLARK & MORTIMER
500 West Madison Street, Suite 3800
Chicago, Illinois 60661-2511



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/217,400	12/21/1998	MONA SINGH	128.00076

CONFIRMATION NO. 8372



DAVID E. BENNETT
COATS & BENNETT
1400 CRESCENT GREEN
SUITE 300
CARY, NC 27511

Date Mailed: 06/11/2001

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/23/2001.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Kim Paull GP2602

Customer Service Center
Initial Patent Examination Division (703) 308-1202

OFFICE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/217,400	12/21/1998	MONA SINGH	128,00076

CONFIRMATION NO. 8372



WOOD PHILLIPS VAN SANTEN CLARK
& MORTIMER
500 WEST MADISON STREET SUITE 3800
CHICAGO, IL 60661

Date Mailed: 06/11/2001

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/23/2001.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record (37 CFR 1.33).

Chris Farrell SP2600

Customer Service Center
Initial Patent Examination Division (703) 308-1202

OFFICE COPY



**UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/217,400	12/21/98	SINGH	M 128.00076

WM02/0611

DAVID E. BENNETT
COATS & BENNETT
1400 CRESCENT GREEN
SUITE 300
CARY, NC 27511

EXAMINER

KOVALICK, V

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 06/11/01

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

Commissioner of Patents and Trademarks

Advisory Action	Application No.	Applicant(s)	
	09/217,400	SINGH ET AL.	
	Examiner	Art Unit	
	Vincent E Kovalick	2673	

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

THE REPLY FILED 14 May 2001 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY (check only a) or b))

a) The period for reply expires 3 months from the mailing date of the final rejection.

b) In view of the early submission of the proposed reply (within two months as set forth in MPEP § 706.07 (f)), the period for reply expires on the mailing date of this Advisory Action, OR continues to run from the mailing date of the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37CFR 1.191(d)), to avoid dismissal of the appeal.

2. The proposed amendment(s) will be entered upon the timely submission of a Notice of Appeal and Appeal Brief with requisite fees.

3. The proposed amendment(s) will not be entered because:

(a) they raise new issues that would require further consideration and/or search. (see NOTE below);

(b) they raise the issue of new matter. (see Note below);

(c) they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

(d) they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

4. Applicant's reply has overcome the following rejection(s): _____

5. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

6. The a) affidavit, b) exhibit, or c) request for reconsideration has been considered but does NOT place the application in condition for allowance because: applicant's arguments are not persuasive.

7. The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

8. For purposes of Appeal, the status of the claim(s) is as follows (see attached written explanation, if any):

Claim(s) allowed: 1-4.

Claim(s) objected to: _____


Claim(s) rejected: 6-16.

Claim(s) withdrawn from consideration: _____

9. The proposed drawing correction filed on _____ a) has b) has not been approved by the Examiner.

10. Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

11. Other: _____


BIPIN SHALWALA
 SUPERVISORY PATENT EXAMINER
 TECHNOLOGY CENTER 2600

OTIP
JUL 02 2001

#91205
Kovalick
Kovalick

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).

Application Number	09/217,400
Filing Date	12/21/98
First Named Inventor	Mona Singh
Group Art Unit	2673
Examiner Name	Kovalick, V.
Attorney Docket Number	4015-1328

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.
NOTE: 37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA. See Changes to Application Examination and Provisional Application Practice, Final Rule, 65 Fed. Reg. 50092 (Aug. 16, 2000); Interim Rule, 65 Fed. Reg. 14865 (Mar. 20, 2000), 1233 Off. Gaz. Pat. Office 47 (Apr. 11, 2000) which established RCE practice.

1. **Submission required under 37 C.F.R. § 1.114**

a. Previously submitted
 i. Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on Technology Center 2600
 (Any unentered amendment(s) referred to above will be entered).
 ii. Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
 iii. Other _____

b. Enclosed 07/05/2001 SSITHIB1 00000031 09217400

i. <input checked="" type="checkbox"/> Amendment/Reply	01 FC:179	710.00 OP
ii. <input type="checkbox"/> Affidavit(s)/Declaration(s)	02 FC:102	480.00 OP
iii. <input type="checkbox"/> Information Disclosure Statement (IDS)	03 FC:103	702.00 OP
iv. <input type="checkbox"/> Other	04 FC:998	2.00 OP

2. **Miscellaneous**

a. Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) required)

b. Other _____

3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.

a. The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. _____

i. RCE fee required under 37 C.F.R. § 1.17(e)

ii. Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)

iii. Other _____

b. Check in the amount of \$ 1,894.00 enclosed

c. Payment by credit card (Form PTO-2038 enclosed)

RECEIVED
JUL 06 2001
Technology Center 2600

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Michael D. Murphy	Registration No. (Attorney/Agent)	44,958
Signature	<i>Michael D. Murphy</i>	Date	June 28, 2001

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner For Patents, Box RCE, Washington, DC 20231, or facsimile transmitted to the U.S. Patent and Trademark Office on:

Name (Print/Type)	Michael D. Murphy	Date	June 28, 2001
Signature	<i>Michael D. Murphy</i>		

Burden-Hour Statement: This form is estimated to take 0.2 hours to complete. The will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND Fees and Completed Forms to the following address: Assistant Commissioner for Patents, Box RCE, Washington, DC 20231.



#10/Preanc
B
7-10-01
K. Powell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
Singh et al.)
Serial No. 09/217,400)
Filed: December 21, 1998)
For: **DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE**)

Examiner
Kovalick, V.
Art Unit 2673

Attorney's Docket No. 4015-1328

Raleigh, North Carolina
June 28, 2001

Commissioner for Patents
Box RCE
Washington, D.C. 20231

RESPONSE TO FINAL OFFICE ACTION MAILED ON FEBRUARY 28, 2001

Sir:

This response serves as the required submission under 37 CFR 1.114 for the REQUEST FOR CONTINUED EXAMINATION filed herewith for the above-identified application. Enclosed herewith is a check for \$1,894.00 to cover the basic filing fee under 37 CFR 1.16 in association with the RCE filing fee, fees for additional claims added by this amendment, and the fee for a one-month extension of time under 37 CFR 1.136(a). If the enclosed amount is insufficient to cover the costs associated with this response, the Commissioner is hereby authorized to charge any remaining balance to Deposit Account 18-1167.

The instant application is under Final Rejection and in the above Office Action, the Examiner allowed pending claims 1-4, and rejected pending claims 6-16. Applicant respectfully requests that Examiner consider Applicant's arguments for the allowance of claims 6-16 in the REQUEST FOR RECONSIDERATION AFTER FINAL, faxed to the

Examiner on May 14, 2001. Additionally, Applicant adds new claims in this amendment in accordance with the claim additions noted below. With these claim additions, the instant application has pending claims 1-4, 6-16, and 17-53.

In the Claims

Please add the following claims:

~~10~~¹⁷. A method of controlling a touch sensitive display screen to display a virtual page that is larger than said display screen, said method comprising:
defining said virtual page as a composite of two or more subpages;
displaying adjacent portions of at least two of said subpages on said display screen;
identifying a selected subpage by sensing a touch input in an area of said display screen where one of said subpages is displayed; and
displaying a predetermined portion of said selected subpage in response to said touch input.

B1
cont

~~18~~¹⁷. The method of claim ~~17~~¹⁶ further comprising panning over said virtual page in response to a control signal when placed in a panning mode.

~~19~~¹⁸. The method of claim ~~18~~¹⁷ further comprising entering said panning mode in response to a panning signal.

~~20~~¹⁹. The method of claim ~~19~~¹⁸ wherein further comprising generating said panning signal in response to a touch input detected in a first touch sensitive area of said display screen.

30

²⁰
21. The method of claim ¹⁹20 further comprising exiting said panning mode in response to a touch input detected in a second touch sensitive area of said display screen.

²¹
22. The method of claim ¹⁷18 further comprising sensing the orientation of a control device when placed in said panning mode, and generating said control signal responsive to the sensed orientation of said control device.

²²
23. A display controller to control a touch sensitive display screen to display a virtual page that is larger than the display screen, said display controller comprising a processor programmed to:

define said virtual page as a composite of two or more subpages;
display adjacent portions of at least two of said subpages on said display screen;
identify a selected subpage by sensing a touch input in an area of said display screen where one of said subpages is displayed; and
display a predetermined portion of said selected subpage in response to said touch input.

²³
24. The display controller of claim ²²23 wherein said processor is further programmed to pan over said virtual page in response to a control signal when placed in a panning mode.

²⁴
25. The display controller of claim ²³24 wherein said processor is further programmed to enter said panning mode in response to a panning signal.

B1
cont

31

²⁵
~~20~~ The display controller of claim ²⁴25 wherein said processor is further programmed to generate said panning signal in response to a touch input detected in a first touch sensitive area of said display screen.

²⁶
~~21~~ The display controller of claim ²⁵26 wherein said processor is further programmed to exit said panning mode in response to a touch input detected in a second touch sensitive area of said display screen.

²⁷
~~22~~ The display controller of claim ²⁴25 wherein said processor is further programmed to sense the orientation of a control device when placed in said panning mode, and to generate said control signal responsive to the sensed orientation of said control device.

B1
cont.

²⁸
~~23~~ A display device comprising:
a touch sensitive display screen having one or more touch sensitive areas;
a display controller to control the display of a virtual page larger than said display screen, said display controller programmed to:
define said virtual page as a composite of two or more subpages;
display adjacent portions of at least two of said subpages on said display screen;
identify a selected subpage by sensing a touch input in an area of said display screen where one of said subpages is displayed; and
display a predetermined portion of said selected subpage in response to said touch input.

²⁹
~~28~~ The display device of claim ²⁸~~29~~ wherein said display controller is further programmed to pan over said virtual page in response to a control signal when placed in a panning mode.

³⁰
~~29~~ The display device of claim ²⁹~~30~~ further comprising entering said panning mode in response to a panning signal.

³¹
~~30~~ The display device of claim ³⁰~~31~~ wherein said display controller is further programmed to generate said panning signal in response to a touch input detected in a first touch sensitive area of said display screen.

B1
cont

³²
~~31~~ The display device of claim ³¹~~32~~ wherein said display controller is further programmed to exit said panning mode in response to a touch input detected in a second touch sensitive area of said display screen.

³³
~~32~~ The display device of claim ³²~~33~~ wherein said display controller is further programmed to sense the orientation of a control device when placed in said panning mode, and to generate said control signal responsive to the sensed orientation of said control device.

Sub
C 2

~~34~~ A method of controlling a touch sensitive display screen to display a virtual page that is larger than said display screen, said method comprising:
defining said virtual page as a composite of two or more subpages;
associating a first touch sensitive area on said display screen with one of said subpages;
sensing a touch input in said first touch sensitive area; and

33

displaying a predetermined portion of the associated subpage in response to said touch input.

³⁵
~~36~~. The method of claim ³⁴~~35~~ wherein said first touch sensitive area is associated with a subpage displayed in said first touch sensitive area.

³⁶
~~37~~. The method of claim ³⁴~~35~~ further comprising panning over said virtual page in response to a control signal when placed in a panning mode.

³⁷
~~38~~. The method of claim ³⁶~~37~~ further comprising entering said panning mode in response to a panning signal.

B1 cont

³⁸
~~39~~. The method of claim ³⁷~~38~~ wherein further comprising generating said panning signal in response to a touch input detected in a first touch sensitive area of said display screen.

³⁹
~~40~~. The method of claim ³⁸~~39~~ further comprising exiting said panning mode in response to a touch input detected in a second touch sensitive area of said display screen.

⁴⁰
~~41~~. The method of claim ³⁷~~38~~ further comprising sensing the orientation of a control device when placed in said panning mode, and generating said control signal responsive to the sensed orientation of said control device.

Sub C3

~~42. A method of controlling a display screen to display a virtual page that is larger than the display screen, the method comprising:~~

34

enabling a panning mode responsive to a panning signal;
sensing an orientation of a device containing the display screen when the
panning mode is enabled; and
panning over the virtual page based on the orientation of the device.

⁴²
~~43.~~ The method of claim ⁴42 further comprising:
disabling the panning mode responsive to a subsequent panning signal; and
maintaining a current screen view on the display screen independent of the
orientation of the device containing the display screen when the panning
mode is disabled.

cont
44. The method of claim 42 wherein the display screen comprises one or more
touch-sensitive portions, and further comprising enabling and disabling the panning
mode based on sensing touch inputs in at least one touch-sensitive portion of the display
screen.

C
45. The method of claim 42 wherein the device containing the display screen
comprises one or more input buttons, and further comprising enabling and disabling the
panning mode responsive to actuation of at least one input button.

⁴³
~~46.~~ The method of claim ⁴¹42 wherein sensing an orientation of a device containing the
display screen comprises:
generating a control signal based on an orientation sensor contained in the
device; and
panning over the virtual page responsive to the control signal.

⁴⁴
~~44~~ The method of claim ⁴³~~46~~ wherein the control signal comprises a directional attribute based on the sensed orientation of the device, and further comprising panning over the virtual page in a direction determined by the directional attribute of the control signal.

Sub
C4

48. A control circuit for controlling a display screen to display a virtual page that is larger than the display screen, the control circuit comprising a processor programmed to: enable a panning mode responsive to a panning signal; determine an orientation of a device containing the display screen when the panning mode is enabled; and pan over the virtual page based on the orientation of the device.

B1
C1

⁴⁶
~~46~~ The control circuit of claim ⁴⁵~~48~~ wherein the processor is further programmed to: disable the panning mode responsive to a subsequent panning signal; and maintain a current screen view on the display screen independent of the orientation of the device containing the display screen when the panning mode is disabled.

50. The control circuit of claim 48 wherein the display screen comprises one or more touch-sensitive portions, and wherein the processor is further programmed to enable and disable the panning mode based on sensing touch inputs in at least one touch-sensitive portion of the display screen.

34

51. The control circuit of claim 48 wherein the device containing the display screen comprises one or more input buttons, and wherein the processor is further programmed to enable and disable the panning mode responsive to actuation of at least one input button.

⁴⁷
~~52~~ The control circuit of claim ⁴⁵~~48~~ wherein the processor is further programmed to:
receive a control signal from a position sensor contained in the device;
determine a relative position of the device based on the control signal; and
pan over the virtual page based on the relative position of the device.

⁴⁷
~~53~~ The control circuit of claim ⁴⁷~~52~~ wherein the processor is further programmed to:
determine a directional attribute of the control signal; and
pan over the virtual page in a direction determined by the directional attribute of the control signal.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.

By:

Michael D. Murphy
Michael D. Murphy
Registration No. 44,958

P.O. Box 5
Raleigh, NC 27602
Telephone: (919) 854-1844

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS DOCUMENT IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, IN AN ENVELOPE ADDRESSED TO: **BOX RCE, COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231**.

SIGNATURE: *Michael D. Murphy*

DATE: 6/28/01

C



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MT

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/217,400	12/21/98	SINGH	M 128,00076
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EXAMINER

TM02/0815

DAVID E. BENNETT
COATS & BENNETT
1400 CRESCENT GREEN
SUITE 300
CARY NC 27511

KOVATICK, V

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED:

08/15/01

//

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

Commissioner of Patents and Trademarks

SM

Office Action Summary	Application No. 09/217,400	Applicant(s) SINGH ET AL.	
	Examiner Vincent E Kovalick	Art Unit 2673	

-- 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) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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 02 July 2001.

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) 1-4 and 6-53 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-4 is/are allowed.

6) Claim(s) 6-53 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ 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 objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) 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.

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

Attachment(s)

15) Notice of References Cited (PTO-892) 18) Interview Summary (PTO-413) Paper No(s) _____

16) Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) Notice of Informal Patent Application (PTO-152)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 20) Other:

Application/Control Number: 09/217,400

Page 2

Art Unit: 2673

DETAILED ACTION

Response to Final Office Action

1. This Office Action is in response to Applicant's response to Final Office Action dated July 2, 2001 in response to PTO Office Action dated February 28, 2001. Applicant's arguments as set forth in Applicant's fax dated May 14, 2000, and the addition of claims 17-53 have been noted. In that new prior art is introduced in the rejection of claims 6-16, Applicant's arguments relative to the previous rejection of said claims are considered moot. New claims 17-53 are entered in the record and are address herewith.

Claim Rejections - 35 USC § 103

2. 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.

3. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motosyuku et al. (U. S. Patent No. 5,602,566) taken with Boliek et al. (U. S. Patent No. 5,408,328) in view of Henshaw et al. (U. S. Patent No. 5,485,174).

Art Unit: 2673

Regarding claims 6-7 and 9-11, Motosyuku et al. **teaches** a small-sized information processor capable of scrolling screen in accordance with tilt, and scrolling method therefore (col. 1, lines 40-67; col. 2, lines 1-19 and Fig. 1).

Motosyuku et al. further **teaches** a data storage device (col. 3, line 3, and Fig. 1 item (101), including a screen portion (col.3, line 1 and Fig. 1 item (106) for visually displaying an image and a orientation sensor (col. 3, lines 12-13 and Fig. 1, item 104) mounted on the device and configured to sense changes in position of the device in a reference coordinate system adapted to generate and transmit a signal indicative of said change. It being obvious to a person of ordinary skill in the art at the time of the invention that the signal would be an action to the display such as a panning signal.

Motosyuku **does not teach** displaying a part of a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in said screen portion, said virtual page comprising a plurality of discrete sub-pages or a display control structure comprising: a plurality of discrete touch-responsive areas in different sections of said screen portion, each of said touch-responsive areas being adapted to generate a page signal responsive to being touched by a user; or the generation of a panning signal responsive to selective input by a user to initiate pan over the virtual page responsive to a panning signal; or displaying a selected part of one discrete sub-page responsive to a page signal generated in response to a user touching one of the discrete touch-responsive areas locate in a section of the screen portion displaying a portion of said one discrete sub-page.

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Boliek **teaches** an virtual image editing system (col 3, lines 55-68; col. 4, lines 1-68 and col. 5, lines 1-14). Boliek further **teaches** a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in said screen portion (col. 16, lines 64-65); it be obvious to a person of ordinary skill in the art at the time of the invention that the virtual page would have to be comprised of a plurality of discrete sub-pages for display in that the display screen can only display one defined portion of the virtual page at a time; in addition the sub-pages would have to be side-side with at least one of the other sub-pages in order to maintain continuity from sub-page to sub-page of the virtual image. Still further Boliek **teaches** panning over the virtual page responsive to a panning signal.(col. 16, lines 64-68 and col. 17 lines 1-3) it being obvious to a person of ordinary skill in the art at the time of the invention that the panning process would need a signal in order to be initiated.

Motosyuku et al. taken with Boliek et al. **does not teach** a plurality of discrete touch-responsive areas in different sections of said screen portion, each of said touch-responsive areas being adapted to generate a page signal responsive to being touched by a user; or displaying a selected part of one discrete sub-page responsive to a page signal generated in response to a user touching one of the discrete touch-responsive areas locate in a section of the screen portion displaying a portion of said one discrete sub-page.

Henshaw et al. **teaches** display scroll control and method (col. 2, lines 39-67; col. 3, lines 1-33 and Figs. 2A-2C and col. 14, lines 2-22).

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Henshaw et al. further **teaches** plurality of discrete touch-responsive areas in different sections of said screen portion, each of said touch-responsive areas being adapted to generate a page signal responsive to being touched by a user (col 2, lines 57-59), and displaying a selected part of one discrete sub-page responsive to a page signal generated in response to a user touching one of the discrete touch-responsive areas locate in a section of the screen portion displaying a portion of said one discrete sub-page (col 3, lines 15-19).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Motosyuku et al. the features as taught by Boliek et al and Henshaw in that it affords the user hands on control of the duration of the move mode.

Regarding claim 8, Henshaw et al. **teaches** a second screen portion display control including at least one touch-responsive first area on said screen portion adapted to selectively place said second screen portion display control in a panning mode whereby said screen portion pans over the virtual page responsive to said panning signal when touched by a user; and a touch-responsive second area on said screen portion adapted to selectively take said second screen portion display control out of said scanning mode when touched by a user; and a switch adapted to selectively connected one of said first and second screen portion display controls to said screen portion (col. 2, lines 57-67).

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4. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motosyuku et al. taken with Reichlen (U. S. Patent No. 6,061,064) in view of Boliek et al. taken with Henshaw et al.

Relative to claim 12, Motosyuku et al. **teaches** a small-sized information processor containing a sensor which when it is used while being held in a users hand permits a scrolling action that does not require any operation by the other hand (col. 1, lines 40-67; col. 2, lines 1- 19 and Fig. 1).

Motosyuku et al. further **teaches** a data storage device (col. 3, line 3 and Fig. 1, item 101, including a screen portion (col. 3, line 1, and Fig. 1, item 106), for visually displaying a pointer.

In addition, Motosyuku et al. **teaches** at least one sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit signals indicative to said changes (col. 3, lines 13 and 30-32 and Fig. 1, item 104);

further still, Motosyuku et al. **teaches** a switch adapted to maintain a move mode while the switch is depressed (col. 3, lines 35-37).

Motosyuku et al. **does not teach**, though he does suggest a pointing procedure (col. 3, lines 13 and 20) of a pointer on a screen, a virtual page including command areas or the display device being a touch sensitive display.

Reichlen **teaches** an apparatus and method for increasing the speed and ease with which a user can select and interact with computer applications and information (col. 2, lines 35-67 and col. 3, lines 45-57). Reichlen further **teaches** a pointer (col. 3, lines 49-50 and 52-54) and a control circuit adapted to move said pointer in said screen portion responsive to signals from said sensor

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indicative of said position changes when said control circuit is in a move mode (col. 3, lines 46-57).

Motosyuku et al. taken with Reclean **does not teach** a virtual page including command areas, said virtual page providing a user interface for generating a command signal to control a program in said device or the display screen being a touch sensitive device.

Boliek et al. **teaches** an virtual image editing system (col 3, lines 55-68; col. 4, lines 1-68 and col. 5, lines 1-14). Boliek et al. further **teaches** a virtual page (col. 16 lines 64-65).

Motosyuku et al. taken with Reichlen in view of Boliek et al. **does not teach** said virtual page including command areas and said virtual page providing a user interface for generating a command signal to control a program in said device; or said display said display screen being a touch sensitive screen.

Henshaw et al. **teaches** a virtual page (col. 14, lines 2-5) including command areas, said virtual page providing a user interface for generating a command signal to control a program in said device (col 2, lines 57-59) it being understood that when a sub-page of the virtual page is displayed, it is presented as a single image on the touch screen with command areas; Henshaw et al. **teaches** the display area indicating the control area identified with an image in the form of "buttons" (Figs. 2A-2C), it being further understood even if the image "form of buttons" is removed, the area still constitutes a control area on the display screen (col. 58-59); Henshaw et al. further teaches said display screen being a touch screen or the like (col. 2, lines 60-61).

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Motosyuku et al. the feature as taught by Reichlen taken with Henshaw et al. in that it would afford the user hands on control of the duration of the move mode.

Regarding claim 13, Henshaw et al. teaches the interface control structure comprising a command control adapted to generate a program command signal responsive to the pointer being located in one of the command area of the virtual page when touching of the first area by a user ceases (col. 6, lines 61-65). It would have been obvious to a person of ordinary skill in the art at the time of the invention that when touching of the first area ceases, this release of the depressed area would generate a signal to stop the action associated with the area when the area is depressed.

With respect of claims 14-16, Henshaw teaches said interface control structure further comprising a touch-responsive second area adapted to generate a program command signal responsive to the pointer being located in one of the command areas when the second area is touched by a user (col. 6, lines 61-65 and sheet 2 of 9 Figs. 2A-2C); wherein said first and second areas comprise push buttons (col. 1, lines 57-67); and said screen portion is disposed on one side of said device and said push buttons are located on a side of said device different than the one side. (Sheet 2 of 9, figs. 2A-2C); it being understood that the placement of the button on said device is a design option.

5. Claims 17-21, 23-27, 29-33 and 35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al. taken with Boliek et al.

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Relative to claims 17, 23, 29 and 35-36, Henshaw et al. **teaches** a computer display controller system for presenting within a first area of a touch sensitive display screen (col. 14, lines 2-22 and col. 1, lines 9-11) to control said touch sensitive display screen (col. 2, lines 60-61) to display an image, said display controller comprising a processor (col. 14, line 2). Henshaw et al. further **teaches** identifying a selected subpage by sensing a touch input in an area of said display screen where one of said subpages is displayed; and display a predetermined portion of said selected subpage in response to said touch input (col. 7, lines 53-57 Figs, 2A-2C).

Henshaw et al. **does not** specifically refer to a virtual page that is larger than the display screen but his total image is larger than can be displayed on the display screen at one time (col. 14, lines 2-5) and requires vertical and horizontal paging through the subpages in order to display the desired subpage; it then being obvious to a person of ordinary skill in the art at the time of the invention that the total page is defined as a composite of two or more subpages and that adjacent portions of at least two subpages can be sized to be displayed on the display screen. Henshaw et al. further **teaches** identifying a selected subpage by sensing a touch input in an area of said display screen where one of said subpages is displayed; and display a predetermined portion of said selected subpage in response to said touch input (col. 7, lines 53-7 and Figs. 2A-2C items 6 and 7).

Boliek et al. **teaches** a virtual image for display wherein the full image is divided into subpages (col. 16, lines 57-65).

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Henshaw et al. the feature as taught by Boliek et al. in order to facilitate being able to view the entire virtual page on a subpage basis.

Relative to claims 18-19, 24-25, 30-31 and 37-38, Boliek et al. **teaches** entering a panning mode and panning over a virtual page in response to being placed in a panning mode or in response to a panning signal. The procedure of a processor initiating an action on a display screen by generating a signal to initiate a mode is well known in the art and in common practice.

Regarding claims 20-21, 26-27, 32-33, and 39-40, Henshaw et al. **teaches** a processor controlled display system (col. 14, line 2) wherein the display unit is a touch sensitive device (col. 2, lines 60-61) having a plurality of touch sensitive areas defined as input command areas, with these means it would have been obvious to a person of ordinary skill in the art at the time of the invention to generate a panning signal in response to a touch input detected in a first touch sensitive area of said display screen and to exit said panning mode in response to a touch input detected in a second touch sensitive area of said display screen.

6. Claims 22, 28, 34 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al taken with Boliek et al. as applied to claims 18, 25, 31 and 38 respectively in item 5 hereinabove, and further in view of Motosyuku et al.

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Henshaw et al. taken with Boliek et al. **does not teach** said processor sensing the orientation of a control device when placed in a panning mode and generating a control signal responsive to the sensed orientation of said control device.

Motosyuku et al. teaches processor sensing the orientation of a control device when placed in a panning mode and generating a control signal responsive to the sensed orientation of said control device (col. 8, lines 17-28).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate with the device as taught by Henshaw et al taken with Boliek et al. the feature as taught by Motosyuku et al. in order to expand the application that the combined features can be applied to.

7. Claims 42, 47, 48 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boliek et al. taken with Motosyuku et al.

Relative to claims 42 and 48, Boliek et al. **teaches** means for controlling a display screen to display a virtual page that is larger than the display screen, the means comprising a processor programmed to enable a panning mode responsive to a panning signal (col. 16, lines 64-68 and col. 17, lines 17-28).

Boliek et al. **does not teach** determining an orientation of a device containing a display screen when the panning mode is enabled; and panning over the virtual page based on the orientation of the device.

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Motosyuku et al. **teaches** determining an orientation of a device containing a display screen when the panning mode is enabled; and panning over the virtual page based on the orientation of the device (col. 8, lines 17-28).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Boliek et al. the feature as taught by Motosyuku et al. in order to expand adapting the device to a larger number of applications. It would have been further obvious to a person of ordinary skill in the art at the time of the invention with a processor generating instructions, the system would have to incorporate the necessary control circuitry to cause the action to take place.

Relative to claims 46-47 and 52-53, Motosyuku et al. further **teaches** a processor sensing the orientation of a control device when placed in a panning mode and generating a control signal responsive to the sensed orientation of said control device (col. 8, lines 17-28).

8. Claims 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henshaw et al. taken with Boliek.

Relative to claims 43-45 and 49-51 Henshaw et al. **teaches** a processor controlled display system (col. 14, line 2) wherein the display unit, with input buttons defined in a plurality of areas, is a touch sensitive device (col. 2, lines 60-61) having a plurality of touch sensitive areas defined as input command areas, with these means it would have been obvious to a person of ordinary skill in the art at the time of the invention to generate a panning signal in response to a touch input detected in a first touch sensitive area of said display screen and to exit (disable) said panning

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mode in response to a touch input detected in a second touch sensitive area of said display screen. It would be further obvious to a person of ordinary skill in the art at the time of the invention to maintain the view that is currently displayed then a display mode is disabled, wherein the current image is maintained until the processor issues a new command to display a different image, this is well known in the art and in common practice.

Allowable Subject Matter

9. Claims 1-4 are allowed.

10. The following is an examiner's statement of reasons for allowance:

Relative to claim 1, the prior art of record **does not teach** a data storage device including a screen portion for visually displaying a part of a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in said screen portion, a display control structure comprising a touch-responsive second area on said screen portion, said second area when touched by a user placing a control circuit out of a panning mode and said second area being the part of a virtual page displayed on said screen portion when said device is in said panning mode.

Regarding claim 4, the prior art of record **does not teach** a data storage device including a screen portion for visually displaying a part of a virtual page larger than said screen portion whereby only a portion of the virtual page is displayed in the screen portion, a display control structure comprises a touch-responsive second area on said screen portion which is substantially the

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entirety of the screen portion when said device is in said panning mode, said second area when touched by a user placing said control circuit out of said panning mode.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	5,841,078	Miller et al.
U. S. Patent No.	5,703,623	Hall et al.
U. S. Patent No.	5,648,642	Miller et al.
U. S. Patent No.	5,615,132	Horton et al.
U. S. Patent No.	5,528,285	Morikawa et al.

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Responses

12. Responses to this action should be mailed to: Commissioner of Patents and Trademarks Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9314 may be used for formal communications or for informal or draft communications.

NOTE: a Request for Continuation (Rule 609 or 62) cannot be faxed.

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

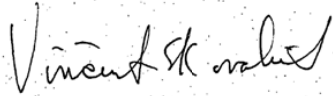
Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Inquires

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is (703) 306-3020. The examiner can normally be reached on Monday-Thursday from 9:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938.

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Vincent E. Kovalick



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

FORM PTO-892		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 09/217,400	GROUP ART UNIT 2673	ATTACHMENT TO PAPER NO. 11
NOTICE OF REFERENCES CITED				APPLICANT(S) Mona Singh et al.		
U.S. PATENT DOCUMENTS						
*		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS
	A	5,602,566	2/1997	Motosyuku et al.	345	123
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
FOREIGN PATENT DOCUMENTS						
*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS SUB- CLASS
	L					
	M					
	N					
	O					
	P					
	Q					
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)						
	R					
	S					
	T					
	U					
EXAMINER Vincent E. Kovalick			DATE August 13, 2001		Form892ccs2106b	
* A copy of this reference is not being furnished with this office action. (See Manual of Patent Examining Procedure, section 707.05(a).)						



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mg

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
Inventors: Singh, et al.)
Serial No: 09/217,400)
Filed: December 21, 1998)
For: Display Control for Hand-Held Data)
Processing Device)

Examiner: Kovalick, V. E.
Art Unit : 2673

RECEIVED
DEC 10 2001
Technology Center 2600

Attorney's Docket No. 4015-1328

Raleigh, North Carolina
October 25, 2001

Box Non Fee Amendment
Commissioner for Patents
Washington, D.C. 20231

RESPONSE TO OFFICE ACTION MAILED ON AUGUST 15, 2001

Applicants address each rejection raised by the examiner in the above-dated Office Action in the claim amendments and remarks below. If any fees for the Response are required, Applicants submit that this be considered a Petition therefore, and the Commissioner is hereby authorized to charge Deposit Account 18-1167.

12/10/2001 MGORDON 00000001 181167 09217400
01 FC:115 110.00 CH

IN THE CLAIMS

Please amend the claims as indicated below. See the attached section entitled "Marked-Up Claims" for marked-up versions of these amended claims.

Void date: 12/10/2001 MGORDON
12/10/2001 MGORDON 00000001 181167 09217400
01 FC:115 110.00 CR

11 42. (Twice Amended) In a data storage device including a screen portion for visually displaying a pointer and a virtual page including command areas, said virtual page providing a user interface for generating a command signal to control a program in said device, an interface control structure comprising:

- C1
- at least one sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit signals indicative of said changes;
 - a control circuit adapted to move said pointer in said screen portion responsive to signals from said sensor indicative of said position changes when said control circuit is in a move mode; and
 - a touch-responsive first area overlaying at least a portion of one or more said command areas of said virtual page and adapted to maintain said control circuit in said move mode during touching of the first area by a user.

34 35. (Amended) A method of controlling a touch sensitive display screen to display a virtual page that is larger than said display screen, said method comprising:

C2

- defining said virtual page as a composite of two or more subpages;
- displaying one or more subpages of said virtual page on said display screen;
- associating a first touch sensitive area on said display screen with one of said subpages, wherein said touch sensitive area overlays at least

a portion of the one or more subpages displayed on said display screen;
sensing a touch input in said first touch sensitive area; and
displaying a predetermined portion of the associated subpage in response to said touch input.

⁴¹
~~42~~ (Amended) A method of controlling a display screen to display a virtual page that is larger than the display screen, the method comprising:

⁴³
displaying one or more subpages on said display screen representing at least a portion of said virtual page;
generating a panning signal responsive to a touch input to a touch sensitive area of said display screen overlaying at least a portion of the one or more subpages;
enabling a panning mode responsive to the panning signal;
sensing an orientation of a device containing the display screen when the panning mode is enabled; and
panning over the virtual page based on the orientation of the device.

Cancel Claim 44.
Cancel Claim 45.

~~48~~ C4 A control circuit for controlling a display screen to display a virtual page that is larger than the display screen, the control circuit comprising a processor programmed to:

- display one or more subpages on said display screen representing at least a portion of said virtual page;
- generate a panning signal responsive to a touch input to a touch sensitive area of said display screen overlaying at least a portion of the one or more subpages;
- enable a panning mode responsive to the panning signal;
- determine an orientation of a device containing the display screen when the panning mode is enabled; and
- pan over the virtual page based on the orientation of the device.

Cancel Claim 50.
Cancel Claim 51.

REMARKS

The examiner has allowed Claims 1-4, but rejected the balance of the pending claims in the instant application. In this response, Claims 12, 35, 42, and 48 are amended, and Claims 44, 45, 50, and 51 are canceled. Applicants' remarks regarding these amendments and the examiner's rejections follow.

Claims 6-11 are rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,602,655 (Motosyuku) taken with U.S. Patent No. 5,408,328 (Boliek) in view of U.S. Patent No. 5,485,174 (Henshaw). One of the key inventive

aspects of the instant invention as claimed in rejected Claim 6 involves overlaying touch sensitive areas on the active portion of the display.

With this concept, the user touches one or more portions of the screen actively displaying virtual page information to navigate the sub-pages comprising the larger virtual page. This concept is not found or suggested in any combination of Motosyuku, Boliek, and Henshaw, despite the examiner's assertions otherwise.

More particularly, Henshaw teaches away from overlying the active display area with touch sensitive display controls. Every embodiment disclosed or even alluded to in Henshaw uses separate screen areas for active content display and display view control. Henshaw absolutely misses the point of using the active display area to receive view control inputs from the user. Without this teaching, Motosyuku, Boliek, and Henshaw taken together fail to disclose the invention as claimed.

For convenience, the examiner is directed to the Claim 6's language, which reads in relevant part, "to display a selected part of one discrete sub-page responsive to a page signal generated in response to a user touching one of the discrete touch-responsive areas *located in a section of the screen portion displaying a portion of said one discrete sub-page.*" (emphasis added). The examiner cannot sustain an obviousness rejection using prior art that does not disclose or suggest the invention *as claimed*. As this is at least the second time that the examiner looks to Henshaw for substantive elements of his obviousness

arguments, Applicants urge the examiner to re-evaluate Henshaw to better understand what it does and does not disclose.

Claims 12-16 are rejected as obvious over Motosyuku taken with U.S. Patent No. 6,061,064 (Reichlen) in view of Boliek taken with Henshaw. Reichlen discloses a virtual reality environment that associates physical locations (e.g., things) with representations in the virtual environment. Reichlen does teach the use of movement sensing as an input control but discloses nothing regarding the use of touch-sensitive display screens.

While Henshaw does disclose touch sensitive screens, Henshaw teaches away from the use of user-interface or control touch areas overlaying the information content portion of the display screen. For example, the drawings and discussion in Henshaw disclose using visible representations of navigation buttons on dedicated areas of the touchscreen apart from or surrounding the portion used to display information to the user.

With the amendment above, Claim 12 now makes clear that the "first area" responsive to user touch input overlays at least a portion of some of the touchscreen's command areas. This change is in keeping with the novel step of avoiding wasted display screen area given over to sensing touch-based panning and/or command inputs. Amended Claim 12 and its dependents are now believed to be in condition for allowance and reconsideration as such is respectfully requested.

Claims 17-21, 23-27, 29-33, and 35-40 are rejected as obvious over Henshaw taken with Boliek. The examiner argues that Henshaw (Col. 7, lines

53-57 and Figs. 2A-2C, Items 6 and 7) discloses responding to input touch directed to a displayed portion of a subpage. This assertion is simply wrong and, again, Applicants urge the examiner to carefully review Henshaw to gain a better understanding of that reference.

The very sections of Henshaw pointed to by the examiner teach away from the instant invention as claimed. For example, at Col. 7, lines 9-11, Henshaw discloses that "[t]he improved control element of the present invention appears as a scrolling map in a secondary display and control window on the face of the computer display." This passage gives meaning to the passage at Col. 7, line 53-57, as cited by the examiner, wherein Henshaw discloses that "[p]ositioned within the window border are shown a plurality of scrolling control button zones 5 in FIGS. 2 through 2C. Additionally, spin controls, which are paging buttons for horizontal paging or for vertical paging, are also shown as buttons 6 and a page indicator 7."

As evident from the examiner's own citations, Henshaw discloses a display system using a first portion of the computer display to display object information and a separate portion of the display to show a navigation map with explicitly drawn scroll buttons for scrolling information in the first display portion. The disclosures cited by the examiner do not make obvious Applicants' use of touch inputs directed to the active information portion of the display screen.

In contrast to the combinations cited by the examiner, Claim 17 specifies "identifying a selected subpage by sensing a touch input in an area of said display screen *where one of said subpages is displayed*" (emphasis added).

Independent Claims 23, 29, and amended-claim 35 include similar limitations regarding sensing touch inputs directed to screen areas used to display subpages of a larger virtual page.

Because the examiner's attempted combinations fail to disclose the instant invention as claimed in independent Claims 17, 23, 29, and 35 (as amended), the various rejections of dependent claims (e.g., 18-19, 24-25, 30-31, and 37-38 over Boliek and Henshaw, and 22, 28, 34, and 41 over Henshaw, Boliek, and Motosyuku) are moot. Applicants believe that Claims 17, 23, 29, and 35, along with their associated dependent claims, are in condition for allowance and reconsideration as such is respectfully requested.

In his rejections of Independent Claims 42 and 48, and respective dependent Claims 47 and 53, the examiner combines Boliek with Motosyuku. As amended, independent Claims 42 and 48 include the limitation of using the active display portion of the display screen to receive touch inputs in conjunction with controlling panning over the virtual page. None of the cited references discloses or suggests overlaying touch-sensitive screen portions with screen areas actively displaying information from the virtual page to maximize active screen space.

Amended Claims 42 and 48 now include the limitation of receiving panning control touch inputs to areas of the display screen displaying virtual page information. As such, these amended claims and their dependents are believed to be in condition for allowance. These amendments also address further rejections of dependent Claims 43-45 and 49-51. Applicants note that

09/217,400, Filed 12/21/98
Response to Office Action Mailed 8/15/01

Claims 44-45 and 50-51 are canceled in this amendment because the related independent Claims 42 and 48 are amended to incorporate similar limitations.

Applicants believe that the above amendments and arguments address each rejection in the examiner's Office Action. Applicants believe that all claims now pending in the instant application stand in condition for allowance and respectfully request the examiner to reconsider his rejections. Should any issues remain unresolved to the examiner's satisfaction, Applicants respectfully request that the examiner call the undersigned agent.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.

By:



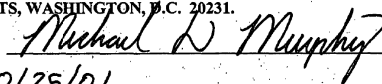
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Telephone: (919) 854-1844

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS DOCUMENT IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, IN AN ENVELOPE ADDRESSED TO: BOX NON FEE AMENDMENT, COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231.

SIGNATURE: _____



DATE: 10/25/01

Marked Up Claims

12. (Twice Amended) In a data storage device including a screen portion for visually displaying a pointer and a virtual page including command areas, said virtual page providing a user interface for generating a command signal to control a program in said device, an interface control structure comprising:

at least one sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit signals indicative of said changes;

a control circuit adapted to move said pointer in said screen portion responsive to signals from said sensor indicative of said position changes when said control circuit is in a move mode; and

a touch-responsive first area overlaying at least a portion of one or more said command areas of said virtual page and adapted to maintain said control circuit in said move mode during touching of the first area by a user.

35. (Amended) A method of controlling a touch sensitive display screen to display a virtual page that is larger than said display screen, said method comprising:

defining said virtual page as a composite of two or more subpages;

displaying one or more subpages of said virtual page on said display screen;

associating a first touch sensitive area on said display screen with one of
said subpages, wherein said touch sensitive area overlays at least
a portion of the one or more subpages displayed on said display
screen;
sensing a touch input in said first touch sensitive area; and
displaying a predetermined portion of the associated subpage in response
to said touch input.

42. (Amended) A method of controlling a display screen to display a virtual
page that is larger than the display screen, the method comprising:
displaying one or more subpages on said display screen representing at
least a portion of said virtual page;
generating a panning signal responsive to a touch input to a touch
sensitive area of said display screen overlaying at least a portion of
the one or more subpages;
enabling a panning mode responsive to [a] the panning signal;
sensing an orientation of a device containing the display screen when the
panning mode is enabled; and
panning over the virtual page based on the orientation of the device.

48. A control circuit for controlling a display screen to display a virtual page that is larger than the display screen, the control circuit comprising a processor programmed to:

display one or more subpages on said display screen representing at least a portion of said virtual page;

generate a panning signal responsive to a touch input to a touch sensitive area of said display screen overlaying at least a portion of the one or more subpages;

enable a panning mode responsive to [a] the panning signal;

determine an orientation of a device containing the display screen when the panning mode is enabled; and

pan over the virtual page based on the orientation of the device.

Transaction History Date 2002-02-08
 Date information retrieved from USPTO Patent
 Application Information Retrieval (PAIR)
 system records at www.uspto.gov

Notice of Allowability	Application No.	Applicant(s)	
	09/217,400	SINGH ET AL.	
	Examiner Vincent E Kovalick	Art Unit 2673	

(f)

-- 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 applicant's amendment dated 12/6/01.
2. The allowed claim(s) is/are 1-4, 6-43, 46-49 and 52-53.
3. The drawings filed on _____ are accepted by the Examiner.
4. 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: _____

5. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) The translation of the foreign language provisional application has been received.
6. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

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.**

7. 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.
8. CORRECTED DRAWINGS 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. 2
 - (b) including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. 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 <input type="checkbox"/> Notice of References Cited (PTO-892) 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____ 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ 6 <input type="checkbox"/> Examiner's Amendment/Comment 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9 <input type="checkbox"/> Other
--	---

Application/Control Number: 09/217,400

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And DETAILED ACTION

1. This Office Action is in response to Applicant's Amendment dated December 6, 2001 in response to PTO Office Action dated August 15, 2001. The amendments to claims 12, 35, 42 and 48; the cancellation of claims 44-45 and 50-51 have been noted and entered in the record placing the application in a condition for allowance as indicated herein below.

Allowable Subject Matter

2. Claims 1-4, 6-43, 46-49 and 52-53 are allowed.

3. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5,485,174, Henshaw, et al. and USP 5,408,328, Boliek et al.) is that said prior art of record **does not teach** a data storage device including: a screen for visually displaying a part of a virtual page larger than said screen including a touch-responsive second area on said screen portion, said second area when touched by a user placing a control circuit out of a panning mode and said second area being the part of the virtual page displayed on said screen portion when said device is in said panning mode

Relative to claim 4, the major difference between the instant invention and the prior art of record

Art Unit: 2673

(USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a data storage device including a screen for visually displaying a part of a virtual page larger than said screen including: at least one touch-responsive first area on said screen portion, said first area when touched by a user placing said control circuit in said panning mode; and a touch-responsive second area on said screen portion which is substantially the entirety of the screen portion when said device is in said panning mode, said second area when touched by a user placing said control circuit out of said panning mode.

Regarding claim 6, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a data storage device including: displaying a selected part of one discrete sub-page responsive to a page signal generated in response to a user touching one of the discrete touch-responsive areas located in a section of the screen portion displaying a portion of said one discrete sub-page.

Relative to claim 12, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a data storage device including a screen for visually displaying a part of a virtual page larger than said screen including: a touch-responsive first area overlaying at least a portion of one or more command areas of a virtual page.

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Regarding claim 17, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a data storage device including: identifying a selected sub-page by sensing a touch input in an area of said display screen where one of said sub-pages is displayed; and displaying a predetermined portion of said selected sub-page in response to said touch input.

Relative to claim 23, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a display controller to control a touch sensitive display screen to display a virtual page larger than said screen, said display controller comprising a processor programmed to identify a selected sub-page by sensing a touch input in an area of said display screen where one of said sub-pages is displayed.

Regarding claim 29, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a display device including: identifying a selected sub-page by sensing a touch input in an area of said display screen where one of said sub-pages is displayed.

Regarding claim 35, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a method of

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controlling a touch sensitive display screen to display a virtual page that is larger than said display screen including the method step wherein said touch sensitive area overlays at least a portion of the one or more sub-pages displayed on said display screen.

Regarding claims 42 and 48, the major difference between the instant invention and the prior art of record (USP 6,061,064, Reichlen; USP 5,602,566, Motosyuku et al.; USP 5485,174, Henshaw, et al. and USP 5,408, 328, Boliek et al.) is that said prior art of record **does not teach** a control circuit for controlling a display screen to display a virtual page that is large than the display screen, the control circuit comprising a processor programmed to generate a panning signal responsive to a touch input to a touch sensitive area of said display screen overlaying at least a portion of the one or more sub-pages. :

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Application/Control Number: 09/217,400

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	6,061,064	Reichlen
U. S. Patent No.	5,602,566	Motosyuku et al.
U. S. Patent No.	5,485,174	Henshaw et al.
U. S. Patent No.	5,408,28	Boliek et al.

Application/Control Number: 09/217,400

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Responses

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vincent E. Kovalick** whose telephone number is **(703) 306-3020**. The examiner can normally be reached Monday-Thursday from 9:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Bipin Shalwala**, can be reached at **(703) 305-4938**.

Any response to this action should be mailed to:

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

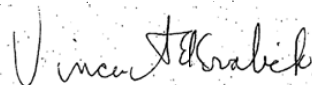
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Inquires

6. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is **(703) 306-0377**.



Vincent E. Kovalick



**BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 02/08/2002
DAVID E. BENNETT
COATS & BENNETT
1400 CRESCENT GREEN
SUITE 300
CARY, NC 27511

EXAMINER

KOVALICK, VINCENT E

ART UNIT CLASS-SUBCLASS

2673 345-685000

DATE MAILED 02/08/2002

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Values: 09/21/2000, 12/21/1998, MONA SINGH, 128.00076, 8372

TITLE OF INVENTION: DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE

Table with 7 columns: TOTAL CLAIMS, APPLN. TYPE, SMALL ENTITY, ISSUE FEE, PUBLICATION FEE, TOTAL FEE(S) DUE, DATE DUE
Values: 48, nonprovisional, NO, \$1280, \$0, \$1280, 05/08/2002

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 REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

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 changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

B. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

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 the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

[] Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. 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.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box 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.

AT B - FEE(S) TRANSMITTAL

Complete and mail this form, together with applicable fee(s), to: **Box ISSUE FEE
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7590 02/08/2002

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/217,400	12/21/1998	MONA SINGH	128.00076	8372

TITLE OF INVENTION: DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE

TOTAL CLAIMS	APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
48	nonprovisional	NO	\$1280	\$0	\$1280	05/08/2002

EXAMINER	ART UNIT	CLASS-SUBCLASS
KOVALICK, VINCENT E	2673	345-685000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.

Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (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.

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. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. 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

4a. The following fee(s) are enclosed:

Issue Fee

Publication Fee

Advance Order - # of Copies _____

4b. Payment of Fee(s):

A check in the amount of the fee(s) is enclosed.

Payment by credit card. Form PTO-2038 is attached.

The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

The COMMISSIONER OF PATENTS AND TRADEMARKS is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

(Date)

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.

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending on the needs of the individual case. Any comments on the amount of time required to complete this form should be sent to the Chief Information Officer, United States Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND FEES AND THIS FORM TO: Box Issue Fee, Assistant Commissioner for Patents, Washington, D.C. 20231

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United States Patent and Trademark Office
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Washington, D.C. 20231
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/217,400	12/21/1998	MONA SINGH	128.00076	8372
7590	02/08/2002		EXAMINER	
DAVID E. BENNETT COATS & BENNETT 1400 CRESCENT GREEN SUITE 300 CARY, NC 27511 UNITED STATES			KOVALICK, VINCENT E	
			ART UNIT	PAPER NUMBER
			2673	
			DATE MAILED: 02/08/2002	

Determination of Patent Term Extension under 35 U.S.C. 154 (b)
(application filed after June 7, 1995 but prior to May 29, 2000)

The patent term extension is 0 days. Any patent to issue from the above identified application will include an indication of the 0 day extension on the front page.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term extension 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) system. (<http://pair.uspto.gov>)

B MA #14

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Singh et al.

Serial No.: 09/217,400

Filed: December 21, 1998

Confirmation No.: 8372

For: Display Control for Hand-Held Data
Processing Device

Attorney Docket No.: 4015-1328



)
) Official Draftsperson
) Art Unit: 2673
)
)
)
)
)
)
)

Cary, North Carolina
April 4, 2002

Official Draftsperson
Assistant Commissioner for Patents
Washington, D.C. 20231

SUBMISSION OF FORMAL DRAWINGS

Sir:

In response to the Notice of Allowance dated February 8, 2002, relating to the above-identified U.S. Patent Application, please find enclosed 1 copy of corrected drawings, Figures 1 through 6, as requested by the Patent Draftsperson.

Respectfully submitted,
COATS & BENNETT, P.L.L.C.

By:

A handwritten signature in cursive script that reads "David E. Bennett".

David E. Bennett
Registration No. 32,194

Telephone: (919) 854-1844
Facsimile: (919) 854-2084

02-02



CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE WITH SUFFICIENT POSTAGE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: **OFFICIAL DRAFTSPERSON, ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231**

ON: APRIL 4, 2002

NAME: Alfonso G. Sandoval

SIGNATURE: Alfonso G. Sandoval

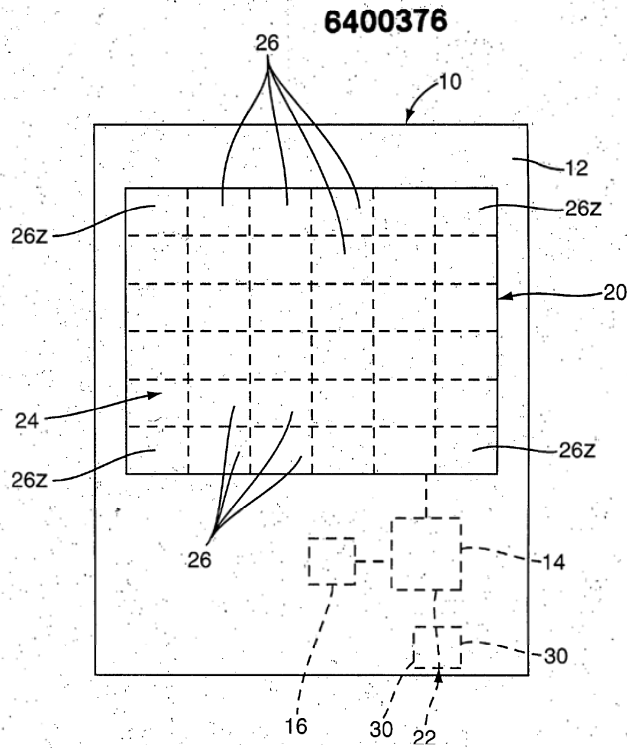


FIG. 1

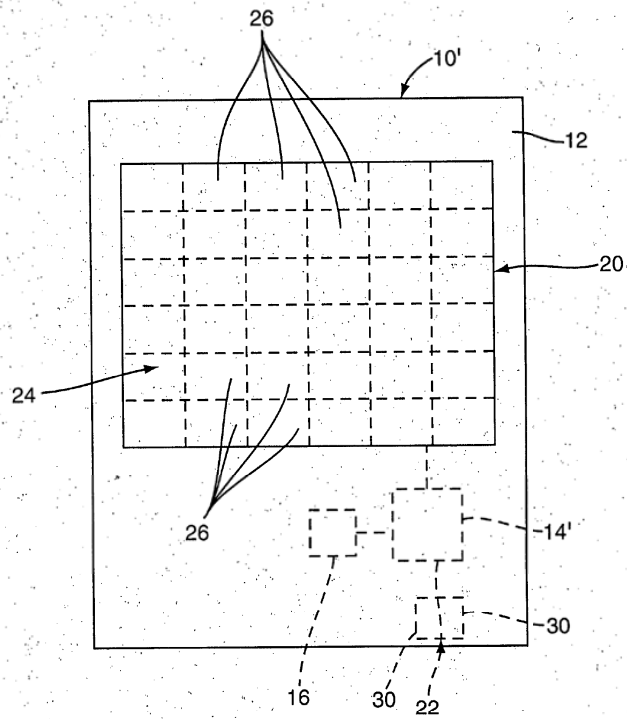


FIG. 2

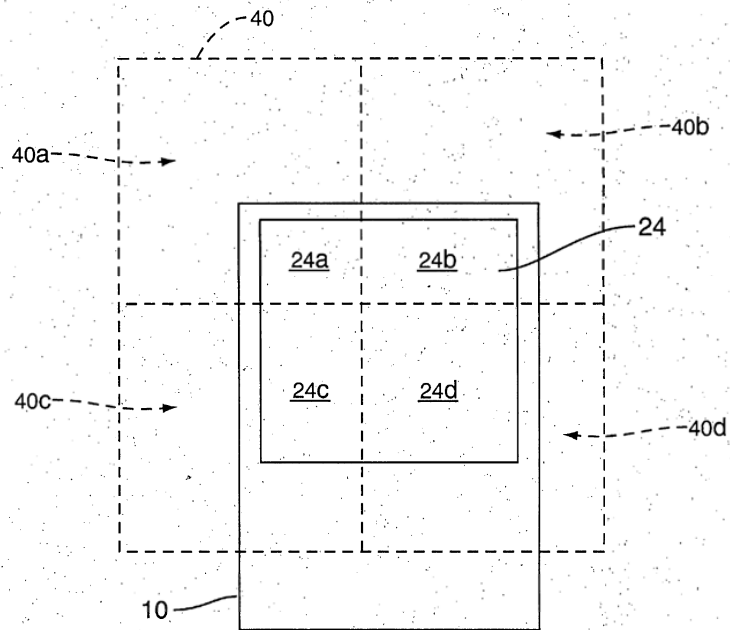


FIG. 3

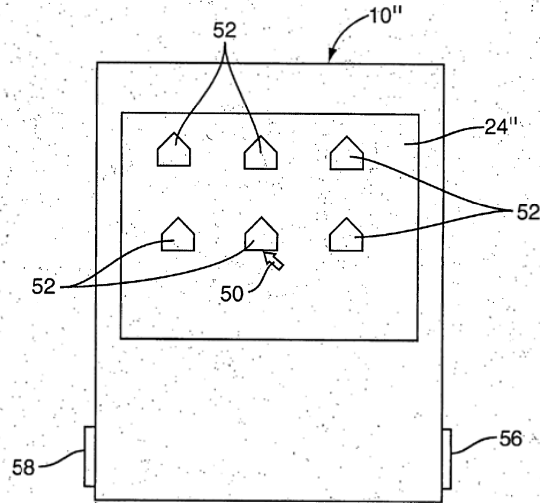


FIG. 4

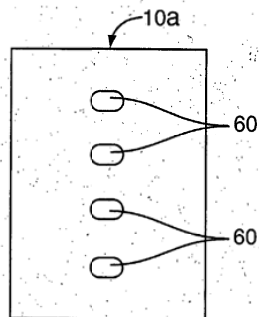


FIG. 5

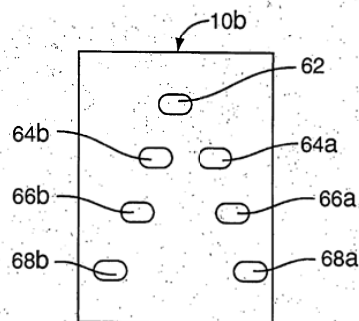


FIG. 6



PART B - FEE(S) TRANSMITTAL

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CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

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Certificate of Mailing
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 Box Issue Fee address above on the date indicated below.

ALFONSO G. SANDOVAL (Depositor's name)
Alfonso G. Sandoval (Signature)
4-12-2002 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/21/400	12/21/1998	MONA SINGH	128.00076	8372

TITLE OF INVENTION: DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE

TOTAL CLAIMS	APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
48	nonprovisional	NO	\$1280	\$0	\$1280	05/08/2002

EXAMINER	ART UNIT	CLASS-SUBCLASS
KOVALICK, VINCENT E	2673	345-685000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (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.

COATS & BENNETT, P.L.L.C.
P.O. BOX 5
RALEIGH, NC 27602

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. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

ERICSSON INC.

RESEARCH TRIANGLE PARK, NORTH CAROLINA

Please check the appropriate assignee category or categories (will not be printed on the patent) individual corporation or other private group entity government

4a. The following fee(s) are enclosed:

Issue Fee
 Publication Fee
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4b. Payment of Fee(s):

A check in the amount of the fee(s) is enclosed.
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(Authorized Signature) *Alfonso G. Sandoval* (Date) 4/12/2002

04/19/2002 INQUIRY# 0000160 09217400

01 FC:142 1280.00 OP
02 FC:361 15.00 OP

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PTOL-85 (REV. 07-01) Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

CHECKLIST FOR PROCESSING NEW APPLICATIONS

SERIAL NUMBER 09/217400

INSTRUCTIONS:

1. Make a checkmark beside each item IF verified.
2. If corrections are required, write notes to the examiner or supervisor on reverse side.

1. FACE OF THE FILE

1. Printed and stamped serial numbers match the bar code label.
2. Filing Date present.
3. Class/Subclass present.
4. Applicant(s) name present.
5. Total number of drawings present.
6. Total number of claims present.
7. Total number of independent claims present.
8. Filing fee received present.
9. Mailing address present.
10. Title of invention present.

2. CENTER OF THE FILE

A. DRAWINGS

1. None (go to E)
2. Serial Number present and correct on each sheet.
3. Number of sheets entered on line 1 of contents.

B. SMALL ENTITY STATEMENT

1. None and not recorded on face of file (go to C)
2. Statement present.
3. Small Entity recorded on face of file.

C. DECLARATION OR OATH

1. Title matches face of file and specification.
2. Declaration phrase present. (I hereby declare all...)
3. (Original and first inventor or inventors...) phrase present.
4. (Reviewed and understand the contents of the application, including claims...) phrase present.
5. (Acknowledge duty to disclose information in accordance with 1.56(a)...) phrase present.
6. Residence, citizenship, post office address of all applicants present.
7. Signed by all applicants.
8. Less than 3 months before filing date, or less than six months after filing date.

D. CLAIMS (as filed)

1. Complete form 1360 and 875. (forms on right side of file)
2. Circle independent claims on the Index of Claims.
3. Draw line under the last claim number on the Index of Claims.

E. SPECIFICATION

1. Serial Number present and correct.
2. Specification in permanent ink.
3. Brief Description of each drawing figure.
4. No missing or duplicate pages.
5. No holes punched in text.

F. ABSTRACT

1. None (go to G)
2. Serial Number present and correct.
3. Abstract on separate page.
4. 25 lines or less.
5. One paragraph ONLY.

G. PTO-1556

1. Present

H. PRE-AMENDMENTS (found on right side of file)

1. None (go to I)
2. Enter on Contents of filewrapper.
3. Instruction to cancel claims.
4. Claims canceled on Index of Claims.
5. Instruction to add claims.
6. Circle new independent claims on the Index of Claims.
7. Draw line under the new last claim number on Index of Claims.
8. Complete forms 1360 and 875.

I. PTO-948

1. Present

J. RIGHT SIDE OF FILE

1. PALM File Data sheet present.
2. Transmittal letters present.
3. Forms 1360 & 875 present/complete.
4. Miscellaneous Papers present/catered.
5. Petition to Make Special present. (Enter and place in the center)
6. Drawing prints present. (2 copies)

FEES

1. Correct filing fee paid.
2. Excess claims fees paid:
 - a. Excess total claims more than 20.
 - b. Excess independent claims more than 3.
 - c. First multiple dependent claim fee paid.
3. Miscellaneous paper fee paid.

FINAL STEPS

1. Sign and date center of filewrapper, under flap.
2. Docketed to examiner.

NOTES TO SUPERVISOR:

NOTES TO EXAMINER:

SIGNATURE OF PREPARER:

an

DATE:

3-16-99

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET (FOR USE WITH FORM PTO-876)						SERIAL NO.	FILING DATE						
						APPLICANT(S)							
CLAIMS													
	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT			*		*		*	
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND.	DEP.	IND.	DEP.	IND.	DEP.
1													
2							51						
3							52						
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50							99						
							100						
TOTAL IND.	3						TOTAL IND.						
TOTAL DEP.	13						TOTAL DEP.						
TOTAL CLAIMS	16						TOTAL CLAIMS						

PTO-1500 (3-78)

*MAY BE USED FOR ADDITIONAL CLAIMS OR AMENDMENTS

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

PATENT APPLICATION FEE DETERMINATION RECORD

Effective November 10, 1998

Application or Docket Number

69/217400

CLAIMS AS FILED - PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	16 minus 20 = *	/
INDEPENDENT CLAIMS	3 minus 3 = *	/
MULTIPLE DEPENDENT CLAIM PRESENT		

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE OR

OTHER THAN SMALL ENTITY

RATE	FEE
	380.00
X\$ 9=	
X39=	
+130=	
TOTAL	

RATE	FEE
	760.00
X\$18=	/
X78=	/
+260=	/
TOTAL	760

CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* 10 Minus	** 20 =	/
Independent	* 4 Minus	*** 3 =	1
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	
+130=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X78=	80.00
+260=	
TOTAL ADDIT. FEE	

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* Minus	** =	
Independent	* Minus	*** =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	
+130=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X78=	
+260=	
TOTAL ADDIT. FEE	

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* Minus	** =	
Independent	* Minus	*** =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

RATE	ADDITIONAL FEE
X\$ 9=	
X39=	
+130=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X78=	
+260=	
TOTAL ADDIT. 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.

MPI Family Report (Family Bibliographic and Legal Status)

In the MPI Family report, all publication stages are collapsed into a single record, based on identical application data. The bibliographic information displayed in the collapsed record is taken from the latest publication.

Report Created Date: 2012-12-07

Name of Report:

Number of Families: 1

Comments:

Table of Contents

1.	US6400376B1	20020604	ERICSSON INC	US	
	Display control for hand-held data processing device				1

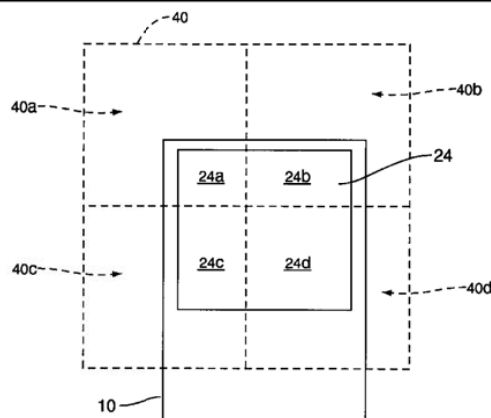


Family1**1 records in the family.****US6400376B1 20020604****(ENG) Display control for hand-held data processing device****Assignee:** ERICSSON INC US**Inventor(s):** SINGH MONA US ; LANDS ROBERT M US**Application No:** US 21740098 A**Filing Date:** 19981221**Issue/Publication Date:** 20020604

Abstract: (ENG) A display control for a data storage device which includes a screen portion for visually displaying a part of a virtual page. The display control includes at least one sensor mounted on the device and configured to sense changes in position of the device in a reference coordinate system and transmit signals indicative of the changes. A control circuit is adapted to pan the virtual page over the screen portion responsive to signals from the sensor indicative of the position changes when the control circuit is in a panning mode. At least one touch-responsive first area on the screen portion when touched places the control circuit in the panning mode, and a touch-responsive second area on the screen portion when touched placing the control circuit out of the panning mode. The touch-responsive areas may also be adapted to generate a page signal responsive to being touched by a user, with the screen portion display control adapted to display a selected part of one discrete sub-page of the virtual page responsive to a user touching one of the touch-responsive areas located in a section of the screen portion displaying a portion of the one discrete sub-page. Further, a pointer displayed on the screen portion may be controlled by the sensor, with the pointer adapted to move during user touching of a first area. A program command signal may also be generated responsive to the pointer being located in one of the command areas of the virtual page when touching of the first area by a user ceases.

Priority Data: US 21740098 19981221 A Y;**IPC (International Class):** G06F003033; G06F00116; G06F003048**ECLA (European Class):** G06F003048A1S; G06F00116P3; G06F00116P9K; G06F00116P9P7; G06F003048A3T**US Class:** 345685; 345156; 345157; 345158; 345173; 715790; 715794; 715857; 715863**Agent(s):** Coats & Bennett, P.L.L.C.

0

Examiner Primary: Shalwala, Bipin**Examiner Assistant:** Kovalick, Vincent E.**Assignments Reported to USPTO:****Reel/Frame:** 09733/0754 **Date Signed:** 19981217 **Date Recorded:** 19990201**Assignee:** ERICSSON INC. 7001 DEVELOPMENT DRIVE RESEARCH TRIANGLE PARK NORTH CAROLINA 27709**Assignor:** LANDS, ROBERT M.; SINGH, MONA**Corres. Addr:** WOOD, PHILLIPS, VANSANTEN, CLARK ET AL DEAN A. MONCO 500 WEST MADISON STREET, SUITE 3800 CHICAGO, ILLINOIS 60661**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Legal Status:

Date	+/-	Code	Description
19990201	()	AS	New owner name: ERICSSON INC., NORTH CAROLINA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SINGH, MONA;LANDS, ROBERT M.;REEL/FRAME:009733/0754; Effective date: 19981217;
20051205	()	FPAY	Year of fee payment: 4;
20100526	()	REAN	Year of fee payment: 8;
20100526	()	SULP	Year of fee payment: 7;



USPTO Maintenance Report

Patent Bibliographic Data			12/07/2012 03:08 PM		
Patent Number:	6400376	Application Number:	09217400		
Issue Date:	06/04/2002	Filing Date:	12/21/1998		
Title:	DISPLAY CONTROL FOR HAND-HELD DATA PROCESSING DEVICE				
Status:	12th year fee window opens: 06/04/2013		Entity:	LARGE	
Window Opens:	N/A	Surcharge Date:	N/A	Expiration:	N/A
Fee Amt Due:	Window not open	Surchg Amt Due:	Window not open	Total Amt Due:	Window not open
Fee Code:	1553	MAINTENANCE FEE DUE AT 11.5 YEARS			
Surcharge Fee Code:					
Most recent events (up to 7):	05/26/2010 05/26/2010 01/11/2010 12/05/2005	7.5 yr surcharge - late pmt w/in 6 mo, Large Entity. Payment of Maintenance Fee, 8th Year, Large Entity. Maintenance Fee Reminder Mailed. Payment of Maintenance Fee, 4th Year, Large Entity. --- End of Maintenance History ---			
Address for fee purposes:	DAVID E. BENNETT COATS & BENNETT 1400 CRESCENT GREEN SUITE 300 CARY NC 27511				